

# Environmental and Social Management System Arrangement (Update)

---

Project Number: 50096-002  
May 2020

## Proposed Loan

People's Republic of China: Air Quality Improvement  
in the Greater Beijing–Tianjin–Hebei Region  
—China National Investment and Guaranty  
Corporation's Green Financing Platform Project

Prepared by China National Investment and Guaranty Corporation for the Asian Development Bank.

This environmental and social management system arrangement is a document of the borrower. The views expressed herein do not necessarily represent those of ADB's Board of Directors, Management, or staff, and may be preliminary in nature.

In preparing any country program or strategy, financing any project, or by making any designation of or reference to a particular territory or geographic area in this document, the Asian Development Bank does not intend to make any judgments as to the legal or other status of any territory or area.

## **CURRENCY EQUIVALENTS**

(as of 20 May 2020)

Currency unit	–	yuan (CNY)
Currency unit	–	euro/s (€)
CNY1.00	=	€0.1301
€1.00	=	CNY7.6842
\$1.00	=	CNY7.1019

## **NOTE**

In this report, "\$" refers to US dollars and "€" refers to Euros

## ABBREVIATIONS

ACEE	–	Appraisal Center for Environment and Engineering
ADB	–	Asian Development Bank
BOB	–	Bank of Beijing
BTH	–	Beijing–Tianjin–Hebei
CAP	–	corrective action plan
CHUEE	–	China Utility-Based Energy Efficiency Finance
CRVA	–	climate risk and vulnerability assessment
EHS	–	environmental, health and safety
EIA	–	environmental impact assessment
EMP	–	Environmental management plan
EMoP	–	Environmental monitoring plan
ESCOs	–	energy service companies
I&G	–	China National Investment and Guaranty Corporation
IEE	–	initial environmental examination
IFC	–	International Financial Corporation
EPB	–	Environmental Protection Bureau
ESMS	–	environmental and social management system
GEF	–	Global Environment Facility
GFP	–	green financing platform
GRM	–	grievance redress mechanism
LIEC	–	loan implementation environmental consultants
MEP	–	Ministry of Environmental Protection
NDRC	–	National Development and Reform Commission
PIAL	–	prohibited investment activities list
PPTA	–	project preparatory technical assistance
PRC	–	People's Republic of China
SDIC	–	State Development & Investment Corporation
SEIA	–	strategic environmental Impact assessment
SMEs	–	small and medium-sized enterprise
SPS	–	Safeguards Policy Statement

## **CONTENTS**

<b>I.</b>	<b>INTRODUCTION</b>	<b>1</b>
A.	The Project	1
B.	Project Implementation Arrangement	2
C.	Environmental and Social Management System	4
<b>II.</b>	<b>ENVIRONMENTAL AND SOCIAL MANAGEMENT DUE DILIGENCE OF RELEVANT INSTITUTIONS</b>	<b>9</b>
A.	State Development & Investment Corp.	9
B.	China National Investment and Guaranty Corporation	11
C.	Bank of Beijing	15
D.	Appraisal Center of Environment and Engineering	18
E.	Applicable Environmental and Social Regulations in the PRC	20
<b>III.</b>	<b>ENVIRONMENTAL AND SOCIAL MANAGEMENT POLICY AND APPLICABLE REQUIREMENTS</b>	<b>22</b>
A.	ESMS Policy	22
B.	GFP Environmental and Social Safeguard Requirements	25
<b>IV.</b>	<b>ENVIRONMENTAL AND SOCIAL MANAGEMENT PROCEDURES</b>	<b>27</b>
A.	Screening and Categorization	27
B.	Due Diligence for Entrusted Loans and Guarantees	31
C.	Due Diligence for Early Stage Investment (General Corporate Finance)	33
D.	Due Diligence for ESCOs with Subprojects (Corporate Finance for Specific Subproject)	34
E.	Due Diligence of Financial Leasing (Sub-FI)	34
F.	Selection of Subprojects	34
G.	Compliance Monitoring and Reporting	37
H.	Information Disclosure	38
I.	Grievance Redress Mechanism	38
J.	Categorization, Due Diligence, Selection, and Monitoring and Reporting for Subprojects through Financial Leasing Companies (Subprojects under Sub-FI)	41
<b>V.</b>	<b>INSTITUTIONAL RESPONSIBILITY, STAFFING, AND TRAINING</b>	<b>42</b>
A.	Organization and responsibilities	42
B.	Capacity and resources	42
<b>VI.</b>	<b>ASSURANCES OF THE FUND</b>	<b>47</b>
	<b>APPENDIX 1. LIST OF APPLICABLE NATIONAL ENVIRONMENTAL, HEALTH AND SAFETY REGULATIONS</b>	<b>48</b>
	<b>APPENDIX 2. ASIAN DEVELOPMENT BANK PROHIBITED INVESTMENT ACTIVITIES LIST</b>	<b>55</b>
	<b>APPENDIX 3. ADB ENVIRONMENTAL AND SOCIAL SAFEGUARDS REQUIREMENTS</b>	<b>56</b>
	<b>APPENDIX 4. ENVIRONMENTAL SAFEGUARD SCREENING CHECKLISTS</b>	<b>85</b>
	<b>APPENDIX 5. SOCIAL SAFEGUARD SCREENING CHECKLISTS</b>	<b>127</b>
	<b>APPENDIX 6. SUBPROJECT SELECTION CRITERIA</b>	<b>134</b>
	<b>APPENDIX 7. ADB EIA/IEE REQUIREMENTS</b>	<b>140</b>
	<b>APPENDIX 8. A SAMPLE LIST OF INFORMATION AND DOCUMENTS REQUIRED FOR ENVIRONMENTAL AUDIT OF EXISTING FACILITY</b>	<b>144</b>
	<b>APPENDIX 9. A SAMPLE ENVIRONMENTAL, HEALTH, AND SAFETY AND SOCIAL CONSULTATION INTERVIEW QUESTIONNAIRE</b>	<b>147</b>
	<b>APPENDIX 10. INTERVIEW QUESTIONNAIRE WITH LOCAL ENVIRONMENTAL PROTECTION BUREAU AND ENVIRONMENTAL MONITORING STATIONS DURING ENVIRONMENTAL AUDIT</b>	<b>151</b>

APPENDIX 11.SUGGESTED SCOPE FOR ENVIRONMENTAL AND SOCIAL MONITORING REPORT FOR SUBPROJECT COMPANY	153
APPENDIX 12. ENVIRONMENTAL INCIDENT REPORT FORM	154
APPENDIX 13. OUTLINE OF AN ENVIRONMENTAL AND SOCIAL MANAGEMENT SYSTEM IMPLEMENTATION REPORT	156
APPENDIX 14. OUTLINE OF AN ENVIRONMENTAL AND SOCIAL MANAGEMENT SYSTEM FOR A FINANCIAL LEASING COMPANY	158

## INTRODUCTION

### A. The Project

1. The Air Quality Improvement in the Greater Beijing–Tianjin–Hebei (BTH) Region—China National Investment and Guaranty Corporation's Green Financing Platform (GFP) Project (the project) will use the financial intermediation loan modality to establish a dedicated GFP to the BTH region for green and pollution reduction projects in key sectors, such as agriculture, energy, environment, transport, and urban.<sup>1</sup> The greater BTH region is one of the most important economic regions in the People's Republic of China (PRC), generating more than a third of the country's gross domestic product. But this region also consistently experiences poor air quality. It will also address market failures that have inhibited investment flows in energy efficiency, and will target emission reduction from small and medium-sized enterprises (SMEs).<sup>2</sup>

2. The GFP will help industries become low-carbon, low-emission and highly efficient, thereby improving the air quality in the BTH region. The GFP will offer a complete set of tailored financial products and instruments<sup>3</sup> meeting specific needs of diverse projects, such as, (i) provide credit guarantees to technically sound and financially viable subprojects with high energy saving and pollution reduction potential to enable commercial financing from banks; (ii) scale-up cash flow based lending through a mix of unsecured and secured entrusted loans for a range of low-carbon and low-pollution subproject;<sup>4</sup> (iii) financial leasing obviating need for large capital for SMEs/energy service companies (ESCO);<sup>5</sup> and (iv) short-term equity investments in some promising start ups specializing in advanced low-carbon technologies.<sup>6</sup>

3. The impacts will be reduced air pollution and improved public health in the BTH region. The outcome will be accelerated air quality improvements and carbon dioxide (CO<sub>2</sub>) emission reduction through scaled up investments in green and pollution-reduction projects in the BTH region.

4. The outcome will be achieved through the following outputs:

- (i) **Output 1: Established green financing platform and leveraged commercial financing for pollution reduction projects.** The BTH region-dedicated platform will scale up investments in sectors responsible for about 95% of the region's pollution. By 2022, at least CNY6 billion will be leveraged from cofinanciers.
- (ii) **Output 2: Lowered barriers and scaled-up financing for small and medium-sized enterprises and energy service companies from the green financing platform.** By 2022, SMEs and ESCOs will receive at least CNY1 billion investment from and as a result of the GFP. By working closely with domestic banks, the project will strengthen their capacity and interest in SMEs and ESCOs financing.

---

<sup>1</sup> The greater Beijing–Tianjin–Hebei region (referred to as BTH region) includes Beijing and Tianjin municipalities; Hebei, Henan, Shandong, Shanxi and Liaoning provinces; and Inner Mongolia Autonomous Region.

<sup>2</sup> For industrial sector, enterprises with less than 1,000 employees and total asset of CNY400 million are SMEs.

<sup>3</sup> These are broadly in line with G20/OECD guidance note on diversification of financial instruments for infrastructure and SMEs.

<sup>4</sup> An entrusted loan refers to extension of credit by a bank as an agent of entrusted funds from the GFP. The bank will administer the debt but assumes no credit risk.

<sup>5</sup> In leasing arrangement, the equipment is owned by the GFP. SME/ESCO will need no capital to participate and may gain an immediate reward through reduced energy cost and compliances with environmental standards.

<sup>6</sup> This shall allow overcoming barriers of lack of credit history and the collaterals needed to mitigate high risk profile.

- (iii) **Output 3: Strengthened capacity in new financial products, and to appraise and implement green financing projects.** By working closely with financial intermediary and partner entrusted banks build capacity in new financial products, enhanced safeguard measures as reflected in the Environment and Social Management System (ESMS) and help them to better understand how to underwrite and appraise green and pollution reduction projects and their implementation.<sup>7</sup>

## B. Project Implementation Arrangement

5. The state-owned China National Investment and Guaranty Corporation (I&G) was selected by the government to set up the GFP because its core business areas are credit enhancement, assets management, and provision of investment and guarantee in many sectors. I&G will be the financial intermediary and the executing and implementing agency. The State Development & Investment Corporation (SDIC), the parent state-owned enterprise for I&G, will provide credit enhancement for I&G.<sup>8</sup> To assist I&G in its debt financing operation, the Bank of Beijing (BOB) has been selected through a competitive process to act as one of the entrusted banks.<sup>9</sup> In order to identify and effectively address potential impacts from subproject funded by ADB funds including equity investment, entrusted loans, guarantees and investments for ESCO or subprojects through financial leasing, this ESMS has been formulated which is in compliance with PRC national laws and ADB's Safeguard Policy Statement (SPS) 2009.

6. I&G will be responsible for day-to-day project management implementation, and monitor the implementation and performance of subprojects, including measurement and verification of emission and pollution reduction. With the assistance of consultants through a grant provided by ADB, I&G will assess, appraise, and approve (only if all environmental and social due diligence are complete and satisfactory per the ESMS requirements) individual subprojects to mitigate the technical and financial risks.

7. The roles and responsibilities of the different entities involved in project implementation and oversight are summarized in Table I-1 and described in detail in the project administration manual.

**Table I-1: Roles and responsibilities related to ESMS**

<b>Project Implementation Organizations</b>	<b>Management Roles and Safeguards Responsibilities</b>
SDIC	➤ Ensures compliance with ADB SPS (2009) and other requirements relating to environmental and social safeguards.
I&G	➤ Adopts the ESMS as part of its overall management system. ➤ Duly and diligently implement and meet all the requirements of ESMS, which can be revised by ADB if necessary.

<sup>7</sup> A capacity development technical assistance is being processed (50096-003) to strengthen GFP implementation and provide essential risk-mitigating measures. It aims to (i) improve the GFP's reach across all sectors, provinces and cities through a targeted outreach efforts; (ii) increase readiness of the subprojects; (iii) design and develop an information technology-based online platform for application by potential subprojects; and (iv) improve the capacity of the executing and implementing agencies, participating banks and financial institutions, and subborrowers in appraising such projects and implementing an environmental and social management system (ESMS).

<sup>8</sup> SDIC is one of the PRC's largest investment corporations with \$76.2 billion equivalent total assets in 2015

<sup>9</sup> BOB, as entrusted bank, will act as the agent of I&G (the principal). BOB will administer the entrusted loans according to terms and rates agreed with I&G, which will bear the loan risks. BOB will also cofinance projects and in this regard a memorandum of understanding was signed with BOB on 3 November 2016.



	<ul style="list-style-type: none"> <li>➤ Ensure financial leasing companies and all subprojects to duly and diligently implement and meet all the relevant requirements of ESMS.</li> <li>➤ Takes ultimate responsibility for ESMS implementation.</li> <li>➤ Maintains a safeguard unit with suitably qualified and experienced full time staff including an ESMS Manager.</li> <li>➤ Enters into long-term consulting services agreements with ACEE to provide expertise in environment due diligence assessment and monitoring and engage loan implementation environmental consultants on need basis.</li> <li>➤ Reviews subproject applications, appraises them, and selects subprojects in accordance with the selection criteria, due diligence and approval procedures that are described in the PAM and the ESMS.</li> <li>➤ If any subproject is categorized as A for environment, ensure it meets all Safeguard Requirement 1 requirements, including submission and obtaining ADB approval of environmental impact assessment reports (including environmental audits if required) and disclosing it for 120 days on ADB website before final approval.</li> <li>➤ Supervises and monitors the ESMS implementation progress of subprojects, including compliance with the terms and conditions of the subproject agreements.</li> <li>➤ Conducts regular site visits and safeguard review missions in accordance with ESMS requirements.</li> <li>➤ Requests remedial actions in the event of noncompliance with the obligations under subproject agreement with respect to ESMS implementation.</li> <li>➤ Ensures environmental and social safeguards compliance of all subprojects in accordance with PIAL, the PRC laws and regulations.</li> <li>➤ Submits all reporting requirements including ESMS reporting requirements to ADB and retains supporting documentation for ADB to examine at any time.</li> </ul>
Bank of Beijing	<ul style="list-style-type: none"> <li>➤ Participate in subproject financial due diligence along with I&amp;G for subprojects with cofinancing.</li> </ul>
Financial Leasing Companies	<ul style="list-style-type: none"> <li>➤ Adopts the ESMS policies and all the relevant requirements under their own version of this ESMS, including GRM, as part of its overall management.</li> <li>➤ Diligently implement and meet all the requirements of ESMS for all their subprojects.</li> <li>➤ Maintains a safeguard unit with suitably qualified and experienced full time staff including an ESMS Manager.</li> <li>➤ Prepares due diligence reports for subprojects and submits them to I&amp;G for no-objection before final approval.</li> <li>➤ Supervises and monitors the implementation progress of subprojects, including compliance with the terms and conditions of the agreements.</li> <li>➤ Conducts regular site visits and safeguard review missions in accordance with ESMS requirements.</li> <li>➤ Requests remedial actions in the event of noncompliance with the obligations under leasing agreement with respect to ESMS implementation.</li> <li>➤ Ensures environmental and social safeguards compliance of all subprojects in accordance with PIAL, the PRC laws and regulations.</li> <li>➤ Submits all reporting requirements including ESMS reporting requirements to I&amp;G and retains supporting documentation for ADB to examine at any time.</li> </ul>
Subborrowers (end borrowers of ADB loan, including equity, loans, investments for ESCO or subprojects through financial	<ul style="list-style-type: none"> <li>➤ Provide information and reports required under the ESMS to I&amp;G.</li> <li>➤ Get required approvals from relevant authorities such as local EPBs in accordance with all the relevant PRC laws and regulations.</li> <li>➤ Implement subprojects in accordance with the subloan agreements and subproject agreement, including financial leasing agreement.</li> <li>➤ Ensure the subprojects comply with the requirements assigned to sub-borrowers under the ESMS.</li> <li>➤ Provide monitoring and evaluation information and participate in the completion review of the subproject.</li> </ul>

leasing, guarantees)	➤ Adhere to PRC laws and regulations and PIAL.
ADB	<ul style="list-style-type: none"> <li>➤ Supports I&amp;G by providing advice, guidance, and supervision and monitoring on the ESMS implementation in accordance with SPS requirements so that ADB interests are safeguarded on all ADB's investment.</li> <li>➤ Conducts regular site visits and safeguard review missions in accordance with SPS requirements.</li> <li>➤ Reviews EIA report (including audit report if required) of any project with Category A for environment, performs quality control of the EIA report, and approves it, while ensuring the subproject to meet 120 days disclosure requirement before providing no objection to final approval.</li> <li>➤ Reviews project progress reports, environmental and social monitoring reports, and ESMS implementation reports.</li> <li>➤ Monitors implementation of ESMS.</li> <li>➤ Reviews and endorses applications of new subprojects.</li> <li>➤ Requires I&amp;G to develop corrective action and act on any non-compliance issues in a timely manner.</li> <li>➤ Organizes PCR jointly with various agencies and project stakeholders.</li> </ul>

ACEE = Appraisal Center for Environment and Engineering, ADB = Asian Development Bank, ESMS = environmental and social management system, EIA = Environment Impact Assessment, EPB = environmental protection bureau, ESCO = energy service companies, FIL = Financial Intermediation Loan, GFP = green financing platform, GRM = grievance redress mechanism, I&G = China National Investment and Guaranty Corporation, MOF = Ministry of Finance, NDRC = National Development Reform Commission, PAM = project administration manual, PCR = project completion report, PIAL = prohibited investment activities list, SDIC = State Development and Investment Corporation, SPS = ADB Safeguard Policy Statement (2009).

Source: ADB Estimates.

## C. Environmental and Social Management System

### 1. The purpose of the ESMS

8. A number of energy efficiency and emission reduction subprojects in various sectors in the BTH region will be funded by the GFP. This ESMS document is prepared for the GFP in accordance with the ADB Safeguards Policy Statement (SPS) (2009). This ESMS will be maintained and implemented by I&G as part of the overall management systems of the GFP to comply with the relevant PRC laws and regulations as well as ADB SPS (2009) requirements. The ESMS will apply to subprojects (including equity, subloans, investments for ESCO or subprojects through financial leasing or guarantees) supported by the GFP using (i) ADB loan proceeds in the initial batch of subprojects; (ii) the revolving fund established with reflows from the initial batch of subprojects; and (iii) credit guarantees backed by cash deposits funded with ADB loan proceeds or the revolving fund established with reflows from initial batch of subprojects.

9. The screening and categorization procedure established under this ESMS will ensure that all subprojects (including equity, loans, investments for ESCO or subprojects through financial leasing, guarantees) will be screened, categorized, pre-selected and properly appraised in terms of their environmental and social impacts as well as the potential improvement of energy efficiency and emission reductions by these subprojects. This ESMS contains (i) environmental and social policies; (ii) screening, categorization, and review procedure; (iii) organizational structure and staffing, including training; (iv) environmental impact assessment (EIA) requirements; and (v) monitoring and reporting. The ESMS shall serve as the basis for subprojects screening and categorization, due diligence and review, supervision and monitoring for all potential subprojects.

10. As there is a gap between the PRC environmental, health and safety (EHS) regulations and the ADB SPS (2009), for instance, public consultation, grievance redress mechanism,

community health and safety is not critical components in the PRC EHS regulations but in the ADB SPS (2009), this ESMS provides an enabling mechanism to meet both PRC and ADB environmental and social safeguard requirements on subprojects that will be financed by the GFP. This ESMS defines roles, responsibilities, and provides procedures to avoid, minimize, and mitigate any (i) direct, indirect, cumulative, and induced adverse impacts/risks on the environment; (ii) adverse impacts and risks of involuntary resettlement; and (iii) adverse impacts on ethnic minority peoples and their communities that may arise from the implementation of such subprojects.

11. This ESMS will be (i) established and documented as part of the GFP's overall management systems; (ii) agreed by the I&G, prior to loan effectiveness; and (iii) adopted and implemented by I&G before the first disbursement of ADB loan.

## **2. ESMS Implementation Arrangement**

12. I&G will take ultimate responsibility for the ESMS implementation and also perform the day-to-day ESMS implementation tasks. I&G will adopt the ESMS as part of its overall management system for the GFP. I&G will review environmental and social due diligence of candidate subprojects to be financed by the GFP and will select them if they meet the selection criteria.

13. The day-to-day implementation of ESMS will be performed by an EHS team at I&G, consisting of suitably qualified and experienced ESMS manager and designated staff at I&G, designated specialists from Appraisal Center of Environment and Engineering (ACEE), and loan implementation environmental consultants (LIECs). The following table summarizes the tasks and responsibilities of the GFP stakeholders in terms of ESMS implementation.

**Table I-2: The ESMS Implementation Arrangement**

<b>Tasks</b>	<b>Task execution (responsible/focal person)</b>	<b>Implementation Responsibility (Sign-off authority)</b>	<b>Ultimate Responsibility</b>
Screening subprojects	Subproject (EHS manager or designated staff)	I&G or Designated specialists	I&G
Preparation and submission of environmental and social checklists with detailed project description of subprojects	Subproject (EHS manager or designated staff)	I&G or Designated specialists	I&G
Initial site visits of subprojects	Designated specialists and/or ESMS manager or designated staff of I&G	I&G	I&G
Preparation and submission of environmental and social categorization with detailed project description of subprojects	I&G ESMS manager or designated staff with support from designated specialists	I&G	I&G
<b>Tasks</b>	<b>Task execution (responsible/focal person)</b>	<b>Implementation Responsibility (Sign-off authority)</b>	<b>Ultimate Responsibility</b>
If a pre-selected subproject is categorized as A for the environment, inform ADB and implement gap filling measures	I&G ESMS manager	I&G	I&G
Conducting all the required environment and social due diligence and preparing relevant reports of pre-selected subprojects	I&G ESMS manager or designated staff with support from designated specialists	I&G	I&G
If a pre-selected subproject is categorized as A for the environment, submit the EIA report to ADB for no objection and ensure 120 days disclosure requirement met before final approval	I&G ESMS manager or designated staff with support from designated specialists	I&G	I&G
Preparation and submission of environmental and social due diligence reports to ADB	I&G ESMS manager or designated staff with support from designated specialists	I&G	I&G
Final selection of subprojects	I&G ESMS manager	I&G	I&G
Subproject specific EMP, EMoP ESMS, and GRM implementation, as required in this ESMS version	Subproject, I&G ESMS manager or designated specialists	I&G	I&G
Preparation and submission of subproject-specific environmental and social monitoring reports to I&G (semi-annual reports)	Subproject (ESMS manager or designated staff)	I&G	I&G

Regular subproject visits to check EMP, EMoP, ESMS, GRM performance	I&G ESMS manager or <i>designated specialists</i>	I&G	I&G
Preparation and submission of consolidated environmental and social monitoring reports as required in the ESMS	I&G ESMS manager or <i>designated specialists</i>	I&G	I&G
Preparation and submission of ESMS implementation reports as required in the ESMS ( semi-annually)	I&G or <i>designated specialists</i>	I&G	I&G

ACEE = Appraisal Center for Environment and Engineering, ADB = Asian Development Bank, EHS = environment, health, and safety, EIA = environmental impact assessment, EMP = environmental management plan, EMoP = environmental monitoring plan, ESMS = environmental and social management system, GRM = grievance redress mechanism, I&G = China National Investment and Guaranty Corporation.

Source: ADB

**Table I-3: ESMS Managers and/or Designated Sign-off Authority for ESMS**

<b>Organization</b>	<b>Name</b>	<b>Title</b>	<b>Contact Information</b>
SDIC	Mr. Xiaotian Liu	Manager, Strategic Development	Email: <a href="mailto:liuxiaotian@sdic.com.cn">liuxiaotian@sdic.com.cn</a> Tel: +86-10-66579547
I&G	Mr. Daqi Suo	ESMS co-manager	Email: <a href="mailto:suodq@guaranty.com.cn">suodq@guaranty.com.cn</a> Tel: +86-10-88822809
	Ms. Xinting Huang	ESMS co-manager	Email: <a href="mailto:huanxt@guaranty.com.cn">huanxt@guaranty.com.cn</a> Tel: +86-10-88822778
BOB	Mr. Dong Lu	Manager, Business Development	Email: <a href="mailto:ludong@bankofbeijing.com.cn">ludong@bankofbeijing.com.cn</a> Tel: +86-10-66225097
ACEE	Mr. Jieshan Cui	EHS Manager	Email: <a href="mailto:cuijs@acee.org.cn">cuijs@acee.org.cn</a> Tel: +86-10-84912908

Source: ADB

## **ENVIRONMENTAL AND SOCIAL MANAGEMENT DUE DILIGENCE OF RELEVANT INSTITUTIONS**

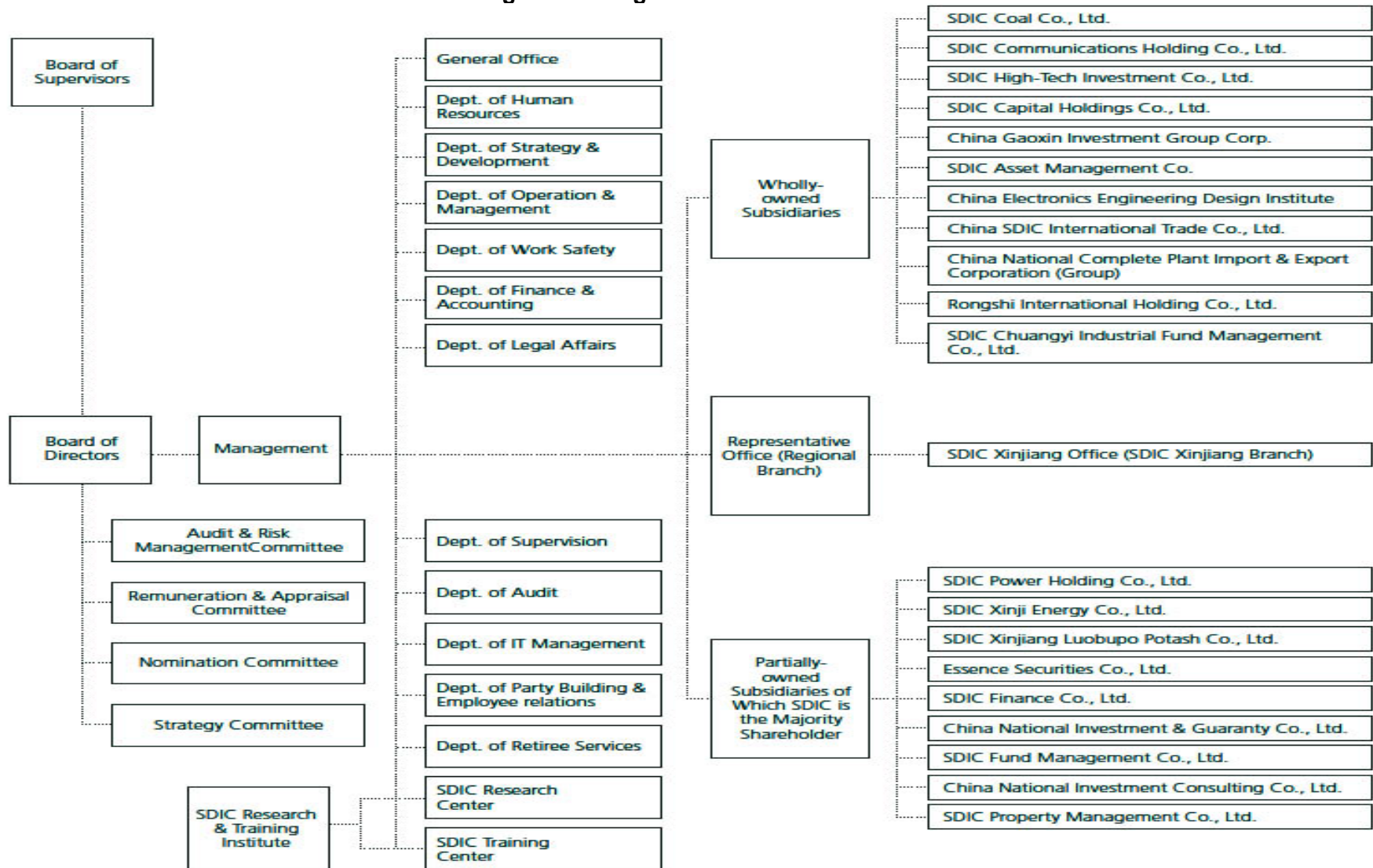
14. Prior to the environmental and social management policy and applicable requirements for the GFP being developed, environmental and social management due diligence was conducted for the financial institutions that will involve in or associated with the implementation of the project. In addition, the EA has made a contract with ACEE to supplement the capacity of environmental due diligence and management of potential subprojects. This chapter discusses existing environmental and social management policy and applicable requirements in perspective of these institutions.

### **A. State Development & Investment Corporation**

15. SDIC is a state-owned investment holding company approved by the State Council of the PRC and is one of the major state-owned enterprises directly controlled by the central government of the PRC. SDIC will be the oversight body of the project. SDIC was founded on 5 May 1995 with a registered capital of CNY19.47 billion and total assets CNY461.7 billion. SDIC is mainly engaged in tri-pillared business framework, namely domestic industrial investment, financial services and international services.

16. SDIC has 14 administrative departments at its headquarters in Beijing. It has 11 wholly-owned subsidiaries and 12 controlling subsidiaries. In total, there are 184 tier-3 enterprises, which SDIC either wholly owns or controls. As a holding company, SDIC does not involve the day-to-day business management of its subsidiaries. The organization chart of SDIC is presented in Figure II-1.

Figure II-1: Organization chart of SDIC





17. **International cooperation.** SDIC's international cooperation is a combination of direct investment, international trade, and international cooperation including overseas engineering contract and government aid programs. It's business covers over 100 countries and regions. SDIC has been sticking to the pattern of large commodities, big market, and huge client. It has established an operation mode of modern international trade featuring professionalism, information, and finance-oriented.

18. **Environmental protection.** SDIC attaches importance to environmental protection to some extent. Before a project's construction, SDIC requires its subsidiaries to actively conduct assessments of the project's impact on ecological environment and choose more environmentally-friendly plans and/or approaches. SDIC set mandatory targets for subsidiary companies to reduce emission. SDIC continues to optimize its power generation composition and gives priority to clean energy including hydropower, wind power, solar energy, shale gas, and bio-energy.

19. **Corporate safety.** SDIC is committed to observing the work safety law, fulfilling safety responsibilities, and promoting safety management. SDIC adopts the detailed management procedures for work safety and keeps increasing the expenses on work safety for key areas and projects. In 2014, such expenses totally around CNY1.258 billion.

20. **Energy efficiency and green financing.** SDIC has always required its subsidiaries to ensure its projects are in line with the requirement for energy conservation and consumption reduction during projects' construction and operation. It continues to increase technical and financial input and close down outdated facilities, and develops a circular economy. It incorporate sustainable development principles into its business practices, including developing new energy, conducting technical retrofitting for energy conversation and emission reduction, improving the efficiency of resources usage, and striving to protect biodiversity.

21. **Corporate Social responsibility.** SDIC works hard on public interest activities such as targeted poverty reduction and financial aid to poor students. It takes an active part in local community building, drives the development of the local economy and creates new jobs for local residents with investment projects.

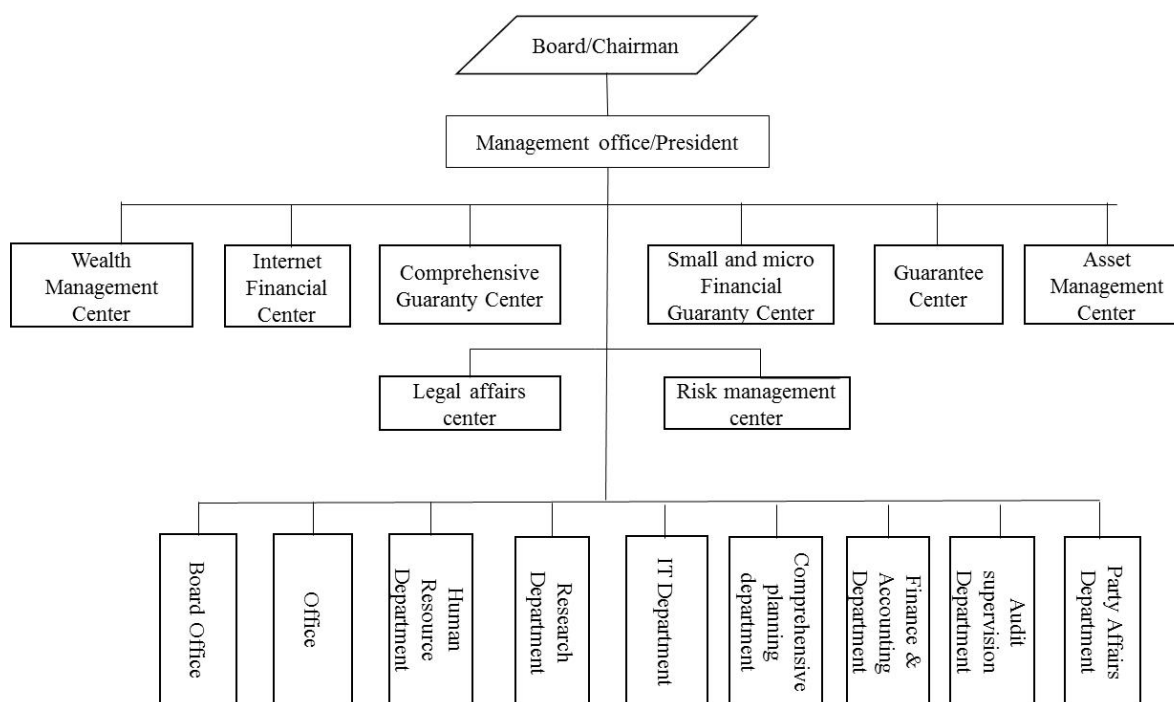
## **B. China National Investment and Guaranty Corporation**

22. China National Investment and Guaranty Corporation (I&G) is the executing and implementing agency of the project. I&G was established in 2013, as a state-owned enterprise formed by Ministry of Finance and National Development Reform Commission (NDRC). It is owned by institutional investors' with SDIC being the largest shareholder with 47.2% of total shares as of the end of 2015. It provides non-standard financial services to large as well as small and medium-sized enterprises (SMEs). It's the first national professional guaranty organization for credit enhancement of SMEs. I&G participated in the development of the guaranty law and regulations and standardized the guaranty industry in the PRC. As of the end of 2015, the company has registered capital of CNY4.5 billion and a total asset of CNY10.4 billion.

23. As the project executing and implementation agency, I&G is tasked to implement the ADB loan and the project including subproject screening, selection, due diligence, subloan processing, subproject implementation management and monitoring, reporting to ADB on project progress

and ESMS implementation progress. I&G has eight business centers and nine departments as shown in Figure II-2.

**Figure II-2: Organization structure of I&G**



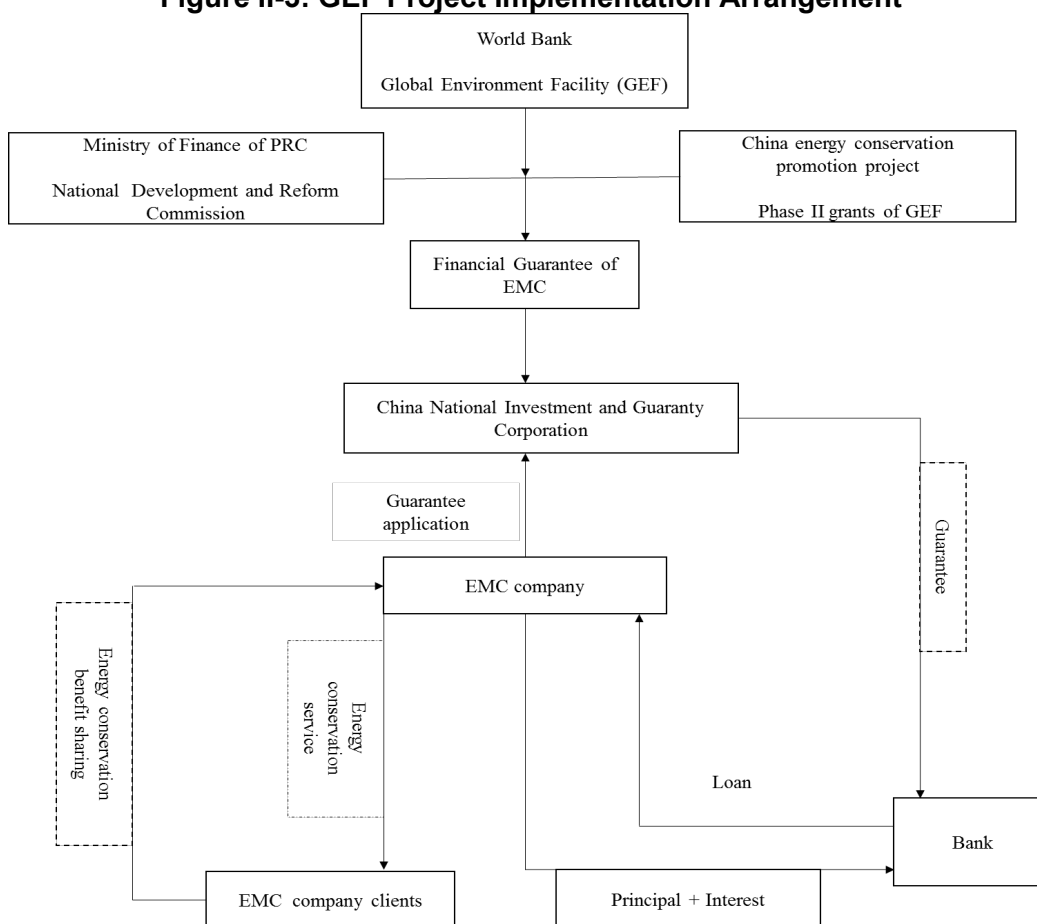
24. **Strategy and main business.** I&G has focused its main business on credit enhancement and promoting sustainable development and it has due responsibilities of following government policy directions as well as creating value for shareholders. I&G has established 5-year plan and 10-year outlook and each business center has established such plans and outlooks. Business strategy and business plans are reviewing periodically.

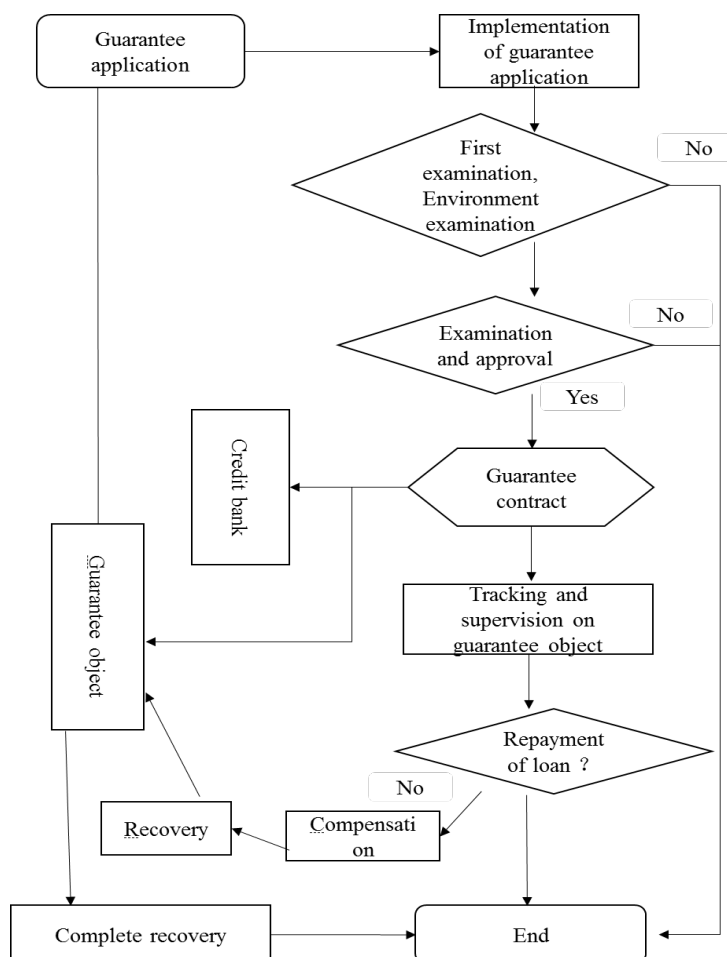
25. I&G's main business includes three aspects: (i) asset management; (ii) financing; and (iii) guarantee services and credit enhancement. It follows the policies and directions from the PRC central government. For example, it offers its product and services to the high tech sector as well as environmental friendly small and micro enterprises as they are encouraged by the government. It also focuses on eight new emerging technology sectors identified by the NDRC, including new energy, new materials, energy efficiency and environmental protection, new/advanced information technology, biology, advanced equipment manufacturing, electrical and alternative energy vehicle, and culture sectors. I&G also cooperates with local governments, such as Beijing and Shanghai municipal governments. I&G also involves in government and large company bonds. It invests in property development through special purpose vehicles.

26. **Working with SMEs.** I&G has a long history working with SMEs. During 2003–2011, I&G implemented a Global Environment Facility (GEF) energy efficiency project financed by the World Bank (WB). GEF provided \$22 million reserve fund and \$2 million grant for project management, capacity building, and technical assistance. The main focus of the GEF project was to make EE improvement in industries through ESCOs as they did not adequate financial resources to carry out these energy efficiency improvement projects. The GEF project helped many ESCOs to become established businesses and made the sector bigger and heather. In total, 43 companies

and 148 projects participated in the GEF project. Nine out of 10 types of energy efficiency improvements promoted by NDRC were involved in the project with the exception of combined heat and power technology because those projects typically require large amount of investment. The total guaranty amount was CNY560 million and leveraged CNY900 million related investment. Figure II-3 shows all parties involved in the GEF project implementation. The procedure and main steps for ESCOs to apply and receive a loan and/or financial guarantee for energy efficiency projects under the GEF project is shown in Figure II-4.

**Figure II-3: GEF Project Implementation Arrangement**



**Figure II-4: Procedure for Reviewing and Approval of Loan/Guarantee**

27. In addition, the GEF project also built the capacities of local banks, organized many workshops, developed new market in energy efficiency improvement, provided technical assessment of potential projects, and promoted sustainable development.

28. **I&G's project financing practice.** After the completion of the WB/GEF project, I&G has continued its business in similar areas and has done many commercial business deals with a total investment of CNY1.1 billion in energy efficiency and renewable energy.

29. **Project selection.** I&G has established a very detailed criteria for selecting projects to be financed. First of all, the project must be consistent with the government strategy and supported by the government. The project company must have good management team. Then I&G will ask applicants the following three questions:

- (i) What do you want to do with the money?
- (ii) What is your business model and how to repay the money?
- (iii) What if you can't pay the money?

30. The procedures for selecting and approving projects as a part of I&G's normal business practice are as follows:

- (i) Understand the project and business;

- (ii) Screen and assign the project to a project manager;
- (iii) Evaluate the project sector based on handbook/guidance document issued by the risk management committee;
- (iv) Make a decision whether the project can be considered for formal project initiation by the department;
- (v) Department manager will propose the project to the business center;
- (vi) Conduct due diligence by a project appraisal team consisting of a project manager, representatives from legal and risk management centers including site visit as well as checking government approvals;
- (vii) If the project passes the due diligence, the team present the project to the business center;
- (viii) If approved by the business center, the project will be presented to the verification committee consisted of seven managers of different centers; and
- (ix) Finally, the project will be presented to the project approval committee.

31. The process usually takes about 2 months. For SMEs, a green channel has been established for speedy approval. For project less than CNY5 million, it can be approved by the business center; For project within the range of CNY5–20 million, it can be approved by a management committee of three directors from micro-business center and risk management center and risk management committee) and it only takes 1 to 2 weeks.

32. Based on the assessment of I&G during the project preparatory technical assistance (PPTA), it is concluded that I&G is experienced in project screening, financial due diligence, and project selection. They have gained very valuable experience through the WB/GEF project implementation. I&G has established an ADB project group dedicated to implement the project. The leader of the group also participated in the WB/GEF project implementation. However, they do not have specialized staff to deal with environmental and social due diligence in depth and are not familiar with ADB's requirements, especially requirements on environment and social safeguards. Therefore, I&G will enter into a long-term partnership and contract with ACEE for ESMS implementation on behalf of I&G. At I&G, an ESMS focal staff was assigned, who will closely work with ACEE. Institutional due diligence of ACEE was conducted during the PTTA and the result is provided below.

33. Capacity building and training of I&G staff on environmental and social safeguard related issues were provided during the PPTA. Additional capacity building and training during the implementation of the project will be necessary and they are specified in Chapter IV of this ESMS.

### **C. Bank of Beijing**

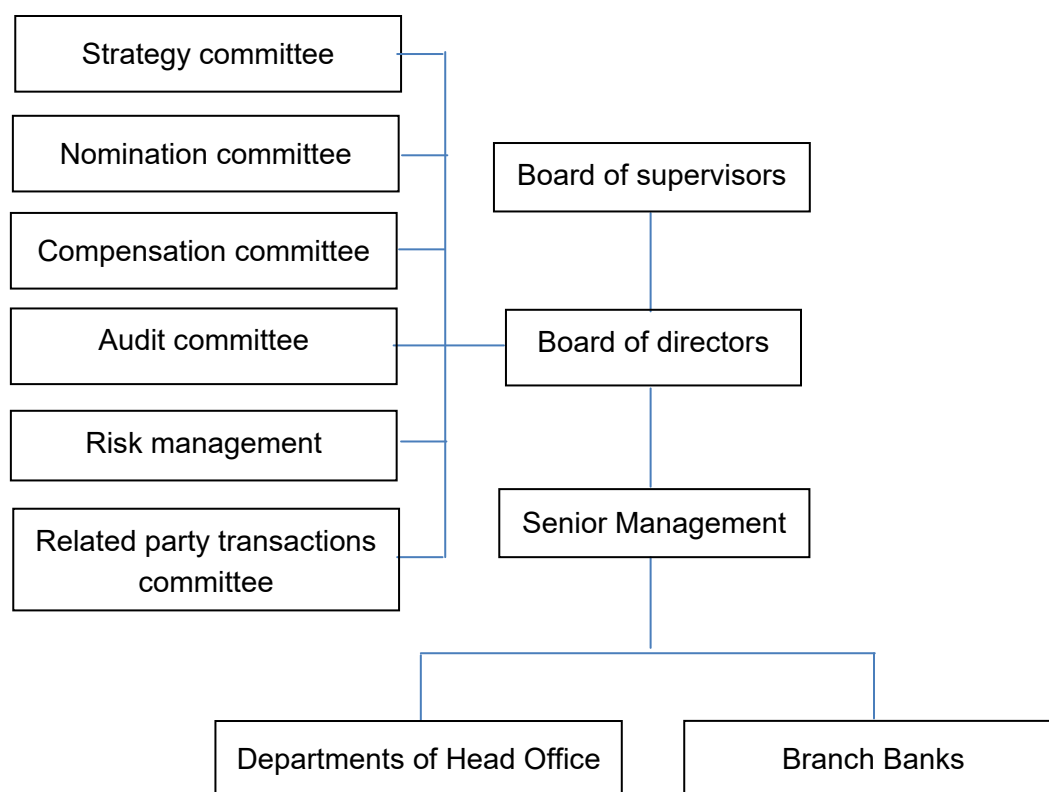
34. BOB will be a cofinancier and business partner of I&G for the GFP. BOB was founded on 29 January 1996 with its headquarters in Beijing and it is a shareholding commercial bank listed in Shanghai Stock Exchange. BOB has entered a partnership with I&G to implement the GFP and it will be involved carrying out financial due diligence of potential subprojects with I&G.

35. BOB's development goal is to become a modern commercial bank with well-known brand and overall value creation capabilities. BOB has developed three development strategies of "Brand Establishment, Regionalization, and Integration" to enhance its market competitiveness. BOB's service principles are to become a trustable local bank, deepen service concept of "customer-centricity", strengthen business characteristics, service management and brand management, and strive to become a community bank and a SME focused bank. BOB's strategy is to "Ground in Beijing, radiate to the Nation and face the World." BOB actively explores and

develops new financial services to meet increasingly diverse financial needs of enterprise customers as well as individual customers. In recent years, it has strengthened the comprehensive operation, enhanced the banking as its core business, and built an integrated financial service platform with insurance, funds, consumer finance, financial leasing, and rural banks.

36. The organization chart of BOB is presented in Figure II-5. Most branches of BOB are located in Beijing area but BOB also has branches in Tianjin, Shanghai, Xi'an, Shenzhen, Hangzhou, Changsha, Nanjing, Jinan, Nanchang, and Hong Kong. BOB has loans in the amount of CNY276.05 billion in Beijing-Tianjin-Hebei Region.

**Figure II-5: Organization Chart of Bank of Beijing**



37. BOB's business comprise of corporation banking (fortune plus corporate banking service, group customer finance, trade finance and SMEs service), personal banking (deposit business, loan business, investment and institution financing), financial market, and international business (fund business, investment bank and trade business and international business). Credit business is the main business of BOB and accounts for around 70% of it's total business.

38. BOB has a well-established procedure for reviewing and processing loan. If a loan meets the basic requirements, the loan review and approval process is as follows: (i) receiving loan applications by subbranch, branch, or head office; (ii) project assessment and client assessment; (iii) performing due diligence; (iv) loan assessment and approval meeting; and (v) loan approval. BOB's loans have the characteristics of focusing on science and technology, culture, green, and people focused. For green project, BOB will provide priority support to provide financial support. In addition, BOB has integrated environmental protection considerations in the loan review

process. If an enterprise client is not compliance with industrial policies or environment protection standards or the project doesn't have EIA approval, no credit support will be provided to the clients or projects.

39. **SME business practice.** SMEs service is one of the unique characteristic of BOB. There is an SME department within BOB. As of end of September 2015, total loan balance of SMEs is CNY259.65 billion. BOB has provided more than CNY1.7 trillion loan to more than 110,000 SMEs. And in Beijing, BOB provided more than CNY1.2 trillion loan to more than 80,000 SMEs.

40. The main approaches of BOB's SME business can be summarized as follows. First, BOB takes innovate strategy and planning for SMEs. The Board of Directors and the management team incorporate SME and green finance into BOB's long-term strategic planning; Second, innovate business organization framework. Through the establishment of start-up center, credit facility, and special branches to promote green financial services for pilot project, BOB promotes the practice to the entire bank; Third, innovate financial products system. According to the characteristics of energy-saving and environmental protection enterprises, BOB has formed a "Little Giant" product system with more than 50 kinds of specialized products, especially developed energy-saving loans, energy subsidy loans and other innovative products; Fourth, innovate risk approval process. BOB established green channel, authorizes the branch banks and credit facilities with different levels, and conducts differentiation authorization for specialized business to improve the system, and constantly optimize processes and improve efficiency; Fifth, BOB has established innovative platform cooperation to strengthen the cooperation with government and regulatory authorities, follow up the policies, and cooperate with incubators, industry associations to open channels, enrich the products with cooperation of the security companies, intellectual property, firms, investment institutions; and Sixth, innovate specialized brand model. The "Little Giant" brand has been recognized by the majority of scientific and technological enterprises. Energy-saving and environmental protection enterprises under the program have grown rapidly and became the industry leader. Over 60% of publically treated companies in the Beijing Zhongguancun high-tech demonstration area are long-term customers of BOB.

41. **International cooperation.** In July 2004, BOB started working with I&G on the WB/GEF financed China Energy Conservation Promotion Project (Phase II). It creatively carried out EE loans, provided financial services to energy saving project and related enterprises. It became one of the first banks in the PRC to finance energy conservation projects. BOB has successfully provided loans to ESCOs with a total amount of CNY6 billion and more than 300 enterprises benefited from this service. The projects involved waste heat and overpressure utilization, ground source heat pump, intelligent energy-saving equipment, chilled water storage, combustion systems energy saving, and other technical fields in various provinces and cities. International Financial Corporation (IFC) also provided technical due diligence assistance as well as capacity building activities.

42. In 2007, BOB started cooperation with the IFC on China Utility-Based Energy Efficiency Finance (CHUEE) Project, which utilizes a loss-sharing mechanism (loss sharing ratio of 75%) to finance energy conservation projects. The CHUEE project was further subdivided into four financial models: (i) ESCO financing model, (ii) end-user energy-saving technological transformation financing model, (iii) equipment suppliers cooperation financing model, and (iv) public service provider cooperation financing model. The CHUEE project was implemented from 2007 through November 2011 and 13 enterprises received loans. The total loan value granted under the CHUEE project was CNY234 million.

43. In 2013, BOB signed a new agreement with IFC on China Utility-Based Energy Efficiency Finance Project Risk-Sharing Cooperation (CHUEE SME program). Based on the original cooperation, the CHUEE SME program combined with the existing national policies and market demand, further enriched the content of the agreement, and committed to support SMEs on energy efficiency and water efficiency projects. BOB became the first commercial bank to develop partnership with international financial organizations on water efficiency project. The new Risk-Sharing Cooperation Agreement specialized in supporting the SMEs focusing energy efficiency and increased the cooperation amount of credit risk to CNY880 million. The CHUEE SME Program provided 15 energy conservation SMEs with a total loan value of CNY170 million. Supported enterprises are from Beijing, Shanghai, Hangzhou, Tianjin, Shenzhen, and other regions.

44. Overall, the performance of BOB shows that BOB has strong experience in working with SMEs and domestic green credits and loans. It is also experience in conducting financial due diligence on projects. BOB has cooperated with international financial organizations and I&G for more than 12 years. This experience is very valuable and can be a good basis for further cooperation with I&G under GFP. Therefore, BOB can be a good partner of I&G in implementing GFP and provide support on business development, client development and management and cofinancier.

#### **D. Appraisal Center of Environment and Engineering**

45. ACEE, affiliated with the Ministry of Environmental Protection (MEP), was established in 1992 and it is the main institution that provides technical support in the field of EIA to the MEP. In addition, ACEE provides independent technical expert opinion to MEP on major initiatives and large scale projects that require the approvals from MEP. Its main responsibilities are to:

- (i) review the EIA reports of development plans and significant large construction projects with significant environmental impact;
- (ii) conduct the environmental evaluation of significant economic policies and plans;
- (iii) conduct research on EIA policies and methodologies and establish EIA technical guidelines;
- (iv) perform EIA information management and environmental modeling;
- (v) manage qualification of EIA consultancies and practitioners, and organize trainings and continuing education for EIA practitioners;
- (vi) provide guidance to EIA appraisal organizations nationwide; and
- (vii) review environmental inspection documents of construction projects with significant ecological impact that are subject to state approval.

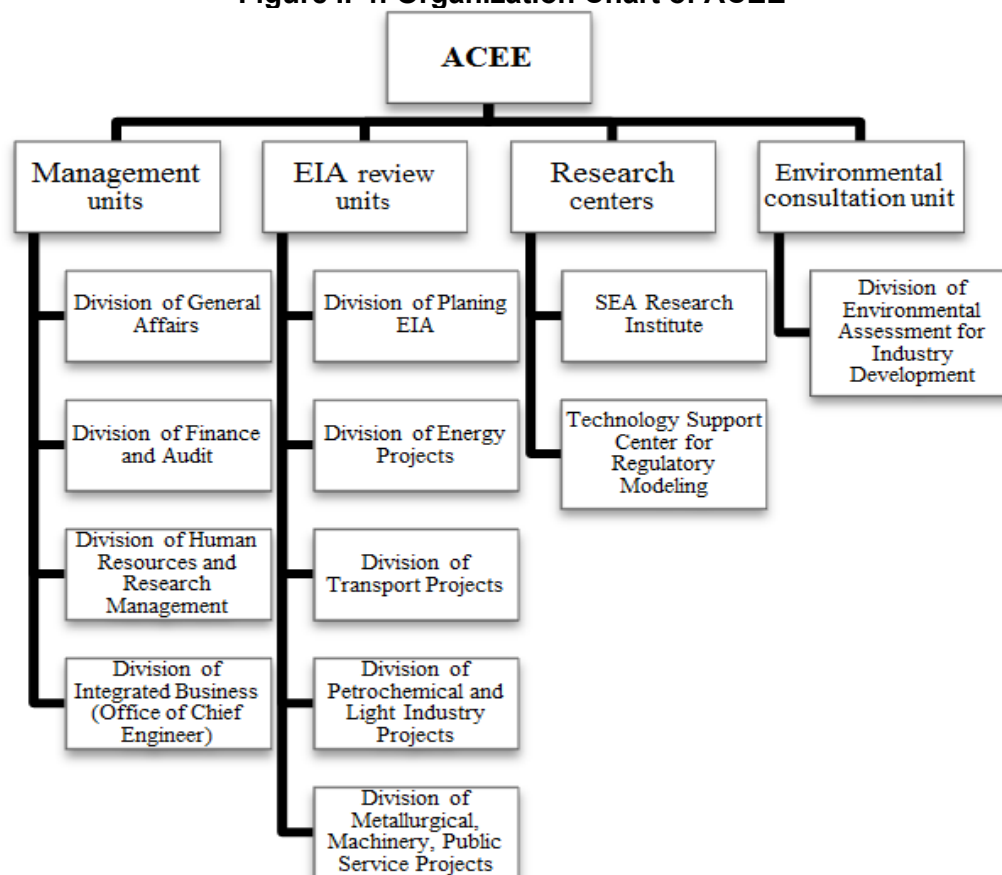
46. ACEE has 192 employees including 34 employees with Ph.D. degrees, 98 of them with master degrees, and 47 employees with bachelor degrees. In addition, ACEE has a pool of 750 independent experts from 11 areas and 13 industrial sectors who provide professional assistance and advice to ACEE. The organization chart of ACEE is shown in Figure II-6. Some of the main functions of ACEE are summarized below.

47. **Project EIA review.** ACEE has completed technical review of EIA reports for over 5,000 construction projects since its establishment and 65% of the EIA reports were required to strengthen environmental protection measures and/or optimize construction plans. It provides expert opinion for the MEP. Over 400 EIA reports reviewed were concluded unfeasible or suspended from approval. From 2011 to 2016, 1,623 EIA reports for construction projects were reviewed by ACEE in many heavy industrial sectors with significant air pollutant emissions.



48. **Planning EIA review.** Since 2005, ACEE has completed technical reviews of over 700 planning EIA reports for local and regional development plans including over 250 planning EIA reports in the last 5 years.

**Figure II-4: Organization Chart of ACEE**



49. **Strategic environmental impact assessment development.** ACEE organizes strategic environmental impact assessment (SEIA) for significant national development strategies. For example, ACEE completed SEIA for revitalizing old industrial bases in northeast China which provided environmental suggestions for the State Council in formulating plans for revitalizing the old industrial bases. ACEE has successfully organized SEIA for the development of five mega-regions of China, the development of West China, and the rising of Central China. Since 2015, ACEE has been assisting the MEP in carrying out SEIA for the development of Beijing–Tianjin–Hebei regions, Yangtze River Delta, and Pearl River Delta.

50. **Technical research.** ACEE has conducted or is carrying out over 110 research projects in recent years. Several projects received recognition and awards for environmental protection technology by the MEP. ACEE has organized or involved in organizing establishing 40 technical guidelines and regulations covering six areas: plan EIA, project EIA, project EIA review, project completion environmental inspection, on-site environmental supervision, and EIA follow-up. For example, ACEE participated in establishing the following technical guidelines and regulations:

- (i) Technical guidelines for EIA general principles
- (ii) Technical guidelines for EIA: Atmospheric environment
- (iii) Technical guidelines for EIA: surface water environment

- (iv) Technical guidelines for noise impact assessment
- (v) Technical guidelines for EIA: ecological environment of nature resource development
- (vi) Technical guidelines for planning environmental impact assessment
- (vii) Technical guidelines for environment risk assessment on projects

51. ACEE is also proactively building platforms combining research and application together. For example, the following four platforms have been established: (i) Environmental Protection Center for Thermal Power Development, (ii) Hydropower Environmental Institute, (iii) Research Center for Green Development of Iron & Steel Industry, and (iv) VOC Control Center. Organizations such as universities, enterprises and research institutes have been invited to join the platforms.

52. State Lab of EIA Numerical Modeling based in ACEE was founded in 2012. It has the capability of conducting air dispersion modeling. The Lab is dedicated to conducting research on EIA database, pollution inventory, standardization of EIA regulatory models, and EIA data calibration.

53. **International cooperation.** ACEE has participated in many international cooperation programs. For example, ACEE has cooperated with USEPA, Germany, Canada, the Netherlands, Japan, South Korea, Singapore, Brazil, Pakistan, Hong Kong, and Taiwan. In addition, ACEE has also worked on EIA Capacity Building Project financed by the World Bank and China-EU Biodiversity Pilot Project.

54. The due diligence work during the PPTA confirmed that ACEE is very experienced in assessing environmental impact of construction projects including EIA preparation for very complex projects in accordance to the requirements of the PRC environmental laws and regulations. It is the technical arm of MEP and it provides independent technical expert opinions on major policy initiatives and major projects to MEP. They are qualified to provide technical support to I&G on environmental issues during the implementation of the project. However, ACEE does not have any direct project experience in ADB financed project and they are not familiar with ADB's SPS requirements. During the PPTA, training on ESMS and environmental due diligence of potential subprojects was provided to the staff of ACEE. Further capacity building will be necessary in order for them to be fully qualified to manage and implement ESMS as a part of the I&G EHS team.

## **E. Applicable Environmental and Social Regulations in the PRC**

55. The PRC has established a comprehensive environmental laws and regulations for new construction projects as well as operations of existing facilities. A list of PRC national laws and regulations concerning environmental, health, safety, labor, and other social issues of existing facilities as well as new facilities is provided in **Appendix 1**, supplemented by relevant ordinances, circulars and technical standards, and guidance as published from time to time. In addition, the Greater BTH region governmental agencies may establish regulations and policies to supplement the national laws and regulations.

56. New construction projects are required to complete the following key assessments, which incorporate the PRC EHS regulatory requirements:

- I. EIAs for all projects;
- II. Safety impact pre-assessments, if applicable;
- III. Occupational health/disease hazard assessment, if applicable;

- IV. Energy conservation assessment; and
- V. Required approvals and permits.

### III. ENVIRONMENTAL AND SOCIAL MANAGEMENT POLICY AND APPLICABLE REQUIREMENTS

57. This chapter of the ESMS describes environmental and social management policies and applicable requirements that will be used for the GFP.

#### A. ESMS Policy

58. The EA is committed to ensuring environmental and social sustainability of the subprojects it supports. In this context, the goal of the ESMS is to promote the sustainability of subproject outcomes by protecting people and the environment from subprojects' potential adverse impacts. The objectives of the ESMS policy are to:

- (i) Avoid adverse impacts of subprojects on the environment and affected people, where possible;
- (ii) Minimize, mitigate, and/or compensate for adverse subproject impacts on the environment and affected people when avoidance is not possible; and
- (iii) Maximize opportunities for environmental and social benefits including development of subprojects' capacity to manage environmental and social risks.

59. The ESMS includes policy objectives and principles for three areas: (i) the environment; (ii) involuntary resettlement; and (iii) ethnic minority communities.

#### 1. Environmental Protection

60. **The environmental objectives** adopted for all selected subprojects are to (i) ensure the environmental soundness and sustainability of subprojects, and (ii) support the integration of environmental considerations into the subproject decision-making process. The **environmental policy principles** adopted for all selected subprojects are as follows.

- (i) Use a screening process for each subproject, as early as possible, to determine the appropriate extent and type of environmental assessment and/or audit required so that appropriate studies are undertaken commensurate with the significance of past, present and potential future impacts and risks.
- (ii) Conduct an environmental assessment and/ or audit<sup>10</sup> for subprojects to identify potential direct, indirect, cumulative, and induced impacts and risks to physical, biological, socioeconomic (including impacts on livelihood through environmental media, health and safety, vulnerable groups, and gender issues), and physical cultural resources in the context of the subproject's area of influence. Assess potential transboundary and global impacts, including climate change.
- (iii) Examine alternatives to the subproject's location, design, technology, and components and their potential environmental and social impacts and document the rationale for selecting the particular alternative. Also consider the no subproject alternative.
- (iv) Avoid, and where avoidance is not possible, minimize, mitigate, and/or offset adverse impacts and enhance positive impacts by means of environmental planning and management. Prepare a corrective action plan (CAP)<sup>11</sup> and/or an

<sup>10</sup> Environmental audit needs to be performed if a subproject involves existing activities or facilities that are already exist or under construction in order to determine the existence of any areas where the project may cause or is causing environmental risks or impacts.

<sup>11</sup> If environmental audit identifies any non-compliance or area of concern, a corrective action plan will be developed to provide appropriate corrective actions for each area of concern including costs and schedule.

- environmental management plan (EMP) that includes the mitigation measures, environmental monitoring and reporting requirements, related institutional or organizational arrangements, capacity development and training measures, implementation schedule, cost estimates, and performance indicators. Key considerations for EMP preparation include mitigation of potential adverse impacts to the level of no significant harm to third parties, and the polluter pays principle.
- (v) Carry out meaningful consultation<sup>12</sup> with affected people and facilitate their informed participation. Ensure women's participation in consultation. Involve stakeholders, including affected people and concerned non-government organizations, early in the subproject preparation process and ensure that their views and concerns are made known to and understood by decision makers and taken into account. Continue consultations with stakeholders throughout project implementation as necessary to address issues related to environmental assessment. Establish a grievance redress mechanism (GRM) to receive and facilitate resolution of the affected people's concerns and grievances regarding the subproject's environmental impact and performance.
  - (vi) For any subproject with Category A for environment, disclose an environmental assessment (EIA) report (including the EMP and/or CAP) at ADB website in a timely manner, before subproject approval, in an accessible place and in a form and language(s) understandable to affected people and other stakeholders. Disclose the final environmental assessment, and its updates if any, to affected people and other stakeholders.
  - (vii) For any subproject with Category B for environment, disclose the tabular EIA report on I&G website (including the EMP and/or CAP) in a timely manner, before subproject approval, in an accessible place and in a form and language(s) understandable to affected people and other stakeholders. Disclose the final environmental assessment report, and its updates if any, to affected people and other stakeholders.
  - (viii) Implement the EMP/CAP and monitor its effectiveness. Document monitoring results, including the development and implementation of corrective actions, and disclose monitoring reports.
  - (ix) Do not implement subproject activities in areas of critical habitats or legally protected areas. In an area of natural habitats, there must be no significant conversion or degradation demonstrated through environmental assessment. Use a precautionary approach to the use, development, and management of renewable natural resources.
  - (x) Apply pollution prevention and control technologies and practices consistent with international good practices as reflected in internationally recognized standards such as the World Bank Group's Environmental, Health, and Safety Guidelines. Adopt cleaner production processes and good energy efficiency practices. Avoid pollution, or, when avoidance is not possible, minimize or control the intensity or load of pollutant emissions and discharges, including air emissions, discharges to water or soils, noise, direct and indirect greenhouse gases emissions (if not,

---

<sup>12</sup> Meaningful consultation is a process that (i) begins early in the project preparation stage and is carried out on an ongoing basis throughout the project cycle; (ii) provides timely disclosure of relevant and adequate information that is understandable and readily accessible to affected people; (iii) is undertaken in an atmosphere free of intimidation or coercion; (iv) is gender inclusive and responsive, and tailored to the needs of disadvantaged and vulnerable groups; and (v) enables the incorporation of all relevant views of affected people and other stakeholders into decision making, such as project design, mitigation measures, the sharing of development benefits and opportunities, and implementation issues.

prepare offset measures), waste generation, and release of hazardous materials from their production, transportation, handling, and storage. Avoid the use of hazardous materials subject to international bans or phase-outs. Purchase, use, and manage pesticides based on integrated pest management approaches and reduce reliance on synthetic chemical pesticides.

- (xi) Provide workers with safe and healthy working conditions and prevent accidents, injuries, and disease. Establish preventive and emergency preparedness and response measures to avoid, and where avoidance is not possible, to minimize, adverse impacts and risks to the health and safety of local communities in conjunction with them.
- (xii) To conserve physical cultural resources and avoid destroying or damaging them, do not implement subproject activities in areas that support physical cultural resources or in areas where “chance-find” physical cultural resources are expected to be found.

## 2. Involuntary Resettlement

61. The **involuntary resettlement policy objectives** are to avoid involuntary resettlement. The involuntary resettlement policy principles are:

- (i) Screen any subproject early on to identify past, present, and future involuntary resettlement impacts and risks. And
- (ii) To avoid involuntary resettlement, do not undertake any subproject that involves involuntary resettlement, has recently required involuntary resettlement, or has serious social legacy issues.

## 3. Ethnic Minorities

62. The **ethnic minorities policy objectives** are to design and implement subprojects in a way that fosters full respect for ethnic minority peoples’ identity, dignity, human rights, livelihood systems, and cultural uniqueness as defined by the ethnic minority communities themselves so that they (i) receive culturally appropriate social and economic benefits, (ii) do not suffer adverse impacts as a result of subprojects, and (iii) can participate actively in subprojects that affect them. The ethnic minorities policy principles of the GFP include:

- (i) Screen any subproject early on to determine
  - (a) whether ethnic minority communities are present in, or have collective attachment to, the subproject area, and
  - (b) whether project impacts on ethnic minority communities are likely.
- (ii) Do not undertake any subproject that adversely impacts an ethnic minority community.

## 4. Labor Retrenchment

63. The **labor retrenchment policy objective** is to design and implement subprojects to avoid labor retrenchment and redundancies. The labor retrenchment policy principle of the GFP is to screen all subprojects for potential labor retrenchment and redundancies and those which will be found to have potential for such will be excluded for financing.

64. The environmental and social management policy of the project was approved and/or signed by I&G:

[ Name]	[ Date]
[the Board of Directors/ President/ or other Position/ Designation]	
State Development and Investment Corporation	
[ Name]	[ Date]
[the Board of Directors/ President/ or other Position/ Designation]	
China National Investment and Guaranty Corporation	

65. I&G will ensure and enhance effective environmental and social management practices in all subprojects financed under the GFP with a special focus on the following:

- (i) Ensuring that applicable environmental and social safeguard requirements, as defined in this ESMS are met for all subprojects;
- (ii) Providing finance only when the subprojects are expected to be designed, constructed, operated, and maintained in a manner consistent with applicable environmental and social safeguard requirements, as defined in this ESMS;
- (iii) Integrating environmental and social risk into its internal risk management analysis;
- (iv) Ensuring transparency in the subborrowers' activities;
- (v) Ensuring subborrowers companies to conduct meaningful consultation with affected people, local communities and the general public;
- (vi) Working together with the sub-borrowers' management to put into practice applicable environmental and social safeguard requirements; and
- (vii) Promoting investments with environmental and social benefits.

66. This policy will be communicated to all staff and operational employees associated with the project as well as subborrowers.

## **B. GFP Environmental and Social Safeguard Requirements**

67. I&G will ensure that:

- (i) All subprojects financed by ADB under GFP are screened against the Prohibited Investment Activities List (PIAL) of the ADB Safeguard Policy Statement (**Appendix 2**) and that any subprojects involving activities included in the PIAL is not supported by the project (using the ADB funds);
- (ii) All subprojects financed by ADB under GFP with potentially significant environmental impacts are reviewed and evaluated against Safeguard Requirement 1 of the ADB's SPS (2009) (**Appendix 3**);
- (iii) All subprojects financed by ADB under GFP are reviewed and evaluated against the PRC laws, regulations, and standards on environment, pollution management, occupational health, safety, involuntary resettlement and land acquisition, ethnic minorities, biodiversity, and physical cultural resources to confirm that they are in compliance; and

- (iv) All subprojects of future batches financed by ADB throughout the entire implementation period of GFP are screened against and meet the selection criteria including technical, financial, economic, environmental and social criteria presented in **Appendix 6** of this ESMS.



## **ENVIRONMENTAL AND SOCIAL MANAGEMENT PROCEDURES**

68. This ESMS sets out screening, categorization, and appraisal procedures for all new subprojects (including equity, loans, investments for ESCO or subprojects through financial leasing, guarantees) that are being considered to be financed using ADB loan through the GFP. Subprojects, including subprojects through financial leasing companies, to be financed by ADB under the GFP shall comply with all environmental and social safeguards requirements under the ESMS. It is important to note that the ESMS is a living document, which can be revised if necessary. This version of the ESMS will be effective for at least one year after the project loan effectiveness. Its effectiveness will be reviewed by ADB after one year and can be revised by I&G if necessary subject to ADB approval.

69. While the ESMS shall be applied during the entire implementation of GFP, the processes involving ADB described in this ESMS will remain active until the project is closed, after which only processes involving I&G will be applied.

### **A. Screening and Categorization**

70. I&G will announce the GFP financial opportunity to potential interested parties through various channels. Once the applications from potential subprojects are received, the procedure described below will be followed for subproject screening and categorization.

71. At an initial stage of identifying potential qualified subprojects, the ESMS manager (or other designated staff) of I&G will cross check with ADB's PIAL. If the subproject involves a prohibited activity on the PIAL, the subproject company will be informed that it will not be considered under the project. Otherwise, the ESMS manager (or other designated staff) at I&G will inform the subproject company that the subprojects are eligible for further consideration. The next step is to ask the subprojects to prepare detailed subproject description and rapid environmental and social assessment.

72. At the subproject identification stage, the subprojects will be requested by the designated specialists from ACEE, on behalf of ESMS manager (or other designated staff) at I&G, to first prepare (i) detailed description of a subprojects, including company description, business activities, location, description of other relevant facilities that are related, associated or linked with the subproject, indication on subproject status whether construction already started, indication on level of domestic EIA requirements and EIA approval status; and (ii) rapid assessment of the likely environmental and involuntary resettlement impacts, effects on indigenous peoples (ethnic minorities), and labor retrenchment of their subproject by using relevant sector-specific form among the attached rapid environmental assessment (REA) checklists, including a checklist for preliminary climate risk screening (Appendix 4), and social safeguard screening checklists (Appendix 5). These checklists are developed to assist the determination on the significance of potential environmental and social impacts/risks associated with the subprojects.

73. The subprojects shall prepare and submit (i) detailed subproject description; (ii) the environment and social rapid assessment checklists; and (iii) evidence/proof that the investment (including the related, associated or linked facilities when the investment involves these) are in compliance with applicable national laws and regulations to the designated specialists from ACEE, who represent ESMS manager (or other designated staff) at I&G. More specifically, if any subproject involves financing for, addition or modification of existing facilities, the designated specialists from ACEE, on behalf of ESMS manager (or other designated staff) at I&G will request

the subproject company to provide the following documents prior to the site visit: copies of (i) EIA approval(s); (ii) Approval of Occupational Hazard Control Effect Assessment report; (iii) Approval of Safety Acceptance Assessment; (iv) environmental performance acceptance report(s); (v) environmental emission and discharge permit(s), if required by authorities; (vi) environmental monitoring data acceptable to a local environmental authority for at least the last three years; and (vii) other applicable permits and approvals, demonstrating full compliance with all applicable ESMS requirements; and (viii) a letter or written acknowledgement from the local authority with indication whether or not the subproject has an ongoing environmental and social dispute, any pending court case, unresolved land acquisition and resettlement case, and/or any record of violations, relevant to the existing facilities where the investment is taking place or the investment is linked to and/or related to (if equity investment existing facility refers to the entire company operations, if corporate finance for specific subproject existing facility refers to the specific subproject facilities).

74. After receiving these completed documents from the subprojects, the designated specialists from ACEE, on behalf of ESMS manager (or other designated staff) at I&G will pay an initial site visit to each subproject (and related, associated and linked facilities as appropriate), check whether the information provided in the completed forms is correct. If incorrect, information shall be corrected during the site visit and the rapid assessment will then be considered complete. If there is any environmental and social safeguards issue raised by a local authority, the issue should be investigated during the site visit by designated specialists from ACEE with results documented to form an attachment to the checklist.

75. If any subproject involves associated facilities, the subproject company will request for a copy of the environmental performance acceptance report(s) of the associated facilities and submit it to the designated specialists from ACEE, on behalf of ESMS manager (or other designated staff) at I&G. After receiving these completed documents from the subprojects, the designated specialists from ACEE, on behalf of ESMS manager (or other designated staff) at I&G will pay an initial site visit to the subproject and associated facilities.

- (i) During the initial site visit, the designated specialists from ACEE or FI loan implementation environmental consultant(s), on behalf of ESMS manager (or other designated staff) at I&G, will perform the following tasks: confirm that the information included in the checklists that could influence environmental and social categorizations (e.g., all potential environmental and social impacts/risks of the subproject) is comprehensive and correct;
- (ii) verify that any existing facility (if equity investment existing facility refers to the entire company operations, if corporate finance for specific subproject existing facility refers to the specific subproject facilities) is in full compliance with applicable national laws and regulations;
- (iii) check whether any existing facility has GB/T 24001 (equivalent to ISO 14001) Environmental Management Systems, and/or GB/T 28001:2001 (equivalent to OHSAS 18001) Occupational Health and Safety Management Systems certifications; and check the status of corrective actions for the findings in the most recent GB/T 24001 and/or GB/T 28001 audit(s);
- (iv) identify potential operational EHS risks associated with the operational practices observed at any existing facility as refers to project activity;
- (v) conduct brief environmental and social consultation through interviews with employees, local residents and/or local environmental authorities including the EPB;
- (vi) present and discuss a subproject-level GRM, including GRM information disclosure;

- (vii) verify whether there has been recent land acquisition (in the past 2 years) by the host company and whether there any outstanding compensation payments or disputes;
- (viii) check whether environment and social due diligence of other related, associated or linked facilities<sup>13</sup> would be required;
- (ix) confirm boundaries of potential adverse impacts, particularly in respect of environmental receptors;
- (x) check whether there are any ethnic minority communities within these boundaries; and
- (xi) check for potential labor retrenchment and redundancies.

76. Once the checklists and the verification work are completed by the designated specialists from ACEE, on behalf of ESMS manager (or other designated staff) at I&G, the environmental and social categorizations of the subproject shall be prepared based on the ADB's categorization system concerning the significance of the subproject's potential impacts (described below and also in **Appendix 3**). Categorisation will be documented on the attached Environmental Safeguards Screening Checklists including detailed project description (**Appendix 4**) and the attached Social Safeguard Screening Checklists (**Appendix 5**).

77. The I&G ESMS manager or designated staff, on behalf of I&G, shall submit environmental and social categorizations of all subprojects, including ones through financial leasing company to ADB with the categorization results (checklists) attached in a letter to ADB project officer for review and concurrence prior to notification to the potential subprojects to process with further due diligence.

78. As for environmental categorization, a potential subproject's category is determined by the category of its most environmentally sensitive component, including direct, indirect, cumulative, and induced impacts in the subproject's area of influence. This area of influence encompasses: (i) the primary project site(s) and related facilities that the investment company (including its contractors) develops or controls, such as power transmission corridors, pipelines, canals, tunnels, access roads, borrow pits and disposal areas, and construction camps; (ii) associated facilities that are not funded as part of the investment (funding may be provided separately by the investment company or by third parties), and whose viability and existence depend exclusively on the investment and whose goods or services are essential for successful operation of the investment; (iii) areas and communities potentially affected by cumulative impacts from further planned development of the investment, other sources of similar impacts in the geographical area, any existing project or condition, and other project-related developments that are realistically defined at the time the assessment is undertaken; and (iv) areas and communities potentially affected by impacts from unplanned but predictable developments caused by the investment that may occur later or at a different location. The area of influence does not include potential impacts that might occur without the investment or independently of the investment. For financial leasing the most environmentally sensitive subproject to be financed will determine its category.

79. Each subproject, including subproject through financial leasing companies, is scrutinized as to its type, location, scale, and sensitivity and the magnitude of its past, current (if a subproject involves existing facilities) and potential future environmental impacts. It shall be assigned to one of the following three categories, which are in alignment with ADB SPS (2009):

---

<sup>13</sup> Associated facilities refers to facilities that are not funded as part of the project (funding may be provided separately by the subproject company or by third parties), and whose viability and existence depend exclusively on the subproject and whose goods or services are essential for successful operation of the subproject.

- (i) **Category A.** A subproject is classified as category A if it is likely to have significant adverse environmental impacts that are irreversible, diverse, or unprecedented. These impacts may affect an area larger than the sites or facilities subject to physical works. An English version of the EIA needs to be prepared for a category A subproject following Safeguards Requirement (SR) 1 and to be submitted to ADB for quality approval and no objection. The English EIA must be disclosed at ADB website for 120 days prior to the subproject approval by I&G.
- (ii) **Category B.** A subproject is classified as category B if its potential adverse environmental impacts are less adverse than those of category A projects. These impacts are site-specific, few if any of them are irreversible, and in most cases mitigation measures can be designed more readily than for category A subprojects. If the subproject is categorized as B, the subproject follows the PRC EIA requirements for environmental due diligence but must follow meaningful public consultation and meet GRM requirements. Tabular EIA form in Chinese shall be disclosed at I&G and subproject company's websites.
- (iii) **Category C.** A subproject is classified as category C if it is likely to have minimal or no adverse environmental impacts. No environmental assessment is required although environmental implications need to be reviewed and documented by I&G (or financial leasing companies for their subprojects).

80. As for involuntary resettlement, the categorization will be determined whether or not a potential subproject involves involuntary resettlement, including restrictions on land use or access to common properties (e.g., environmental protection buffer zone). The degree of impacts shall be determined by (i) the scope of physical and economic displacement, and (ii) the vulnerability of the affected persons. Category A refers to project activities with potential significant involuntary resettlement impacts. Category B refers to project activities that have involuntary resettlement impacts but not significant. Category C refers to project activities that do not have any impacts on involuntary resettlement.

81. As for indigenous peoples safeguard, the categorization will be determined whether or not a subproject has potential adverse impacts on ethnic minority communities. The degree of impacts is determined by evaluating (i) the magnitude of the impact on ethnic minority customary rights of use and access to land and natural resources; socioeconomic status; cultural and communal integrity; health, education, livelihood systems, and social security status; or indigenous knowledge; and (ii) the vulnerability of the affected ethnic minority people or communities. Category A refers to project activities with potential significant impacts on ethnic minorities. Category B refers to project activities that have impacts but not significant impacts on ethnic minorities. Category C refers to project activities that do not have any impacts on ethnic minorities.

82. Once the safeguards categorizations are completed for the subprojects, while reconfirming the subprojects meet all the specific selection criteria (Appendix 6), candidate subproject will be screened out (excluded) or pre-selected for carrying out further applicable environmental impact documents under the ESMS. As indicated in Appendix 6, any subproject that is (i) categorized as A or B for involuntary resettlement and/or ethnic minorities, (ii) had recently land acquisition and resettlement with outstanding issue, and (iii) cause labor retrenchment and redundancies will be excluded. The ESMS manager (or other designated staff) at I&G, with support from the designated specialists from ACEE will present the pre-selection list of the potential subprojects and submit it to I&G subproject selection members who can review and approve the pre-selected subprojects being taken forward to due diligence.

83. If a pre-selected subproject is categorized as A for the environment, I&G ESMS manager or a designated staff of I&G will inform ADB environment safeguard specialist and obtain further guidance to ensure all the Category A requirements to be met effectively and in timely manner.

## **B. Due Diligence for Entrusted Loans and Guarantees**

84. Once the pre-selected subprojects are identified and categorized by I&G, the subproject will be informed on the decision and the subproject will be subject to carry out further procedures of comprehensive due diligence. I&G will perform financial, technical as well as environmental due diligence of these pre-selected subprojects. If a pre-selected subproject is categorized B for environment, it will follow a domestic EIA requirements for its due diligence plus meaningful consultation, disclosure and GRM requirements. If a subproject involves existing or associated facilities, due diligence/environmental audit shall be conducted following ADB requirements. If a pre-selected subproject is categorized as A for environment, an English version of EIA needs to be prepared in accordance with ADB SPS (2009) Environmental Safeguards and be cleared by ADB for quality approval and no objection prior to its disclosure at ADB website for 120 days. The 120 days disclosure must be met for all subprojects with Category A prior to the subproject approval by I&G.

85. At this environmental due diligence stage, the designated specialists from ACEE, on behalf of the ESMS manager (or designated staff) at I&G, will provide the information request list and sample survey questionnaire that can be used by the pre-selected subprojects to conduct meaningful public consultation (**Appendix 8**). If a subproject is categorized as B, at least one meaningful public consultation needs to be performed and recorded in environmental due diligence report. If a subproject is categorized as A, at least two round of meaningful public consultation need to be performed with participation of ADB and I&G, and recorded in the English EIA report. I&G shall disclose all the environmental impact assessment reports of subprojects on their website.

86. The designated specialists from ACEE, on behalf of the ESMS manager (or designated staff) at I&G, will also inform the pre-selected subprojects to proceed with domestic EIA preparation, communicate closely with the pre-selected subprojects, and instruct them to ensure domestic EIA preparation to meet the PRC requirements and, as applicable, the ADB SPS requirements (**Appendix 3**). The approvals of the domestic EIA report shall be one of the conditions for the final approval of the subprojects to be financed by the GFP.

87. For a greenfield subproject, due diligence work will include reviewing EIA reports and approvals (if available), other supporting documents, site visits, information confirmation and additional information/ data collection and verification. If a greenfield project is identified as medium or high in preliminary climate risks screening, a climate risks and vulnerability assessment (CRVA) needs to be prepared.

88. If the pre-selected subprojects that are categorized as A involve existing facilities, due diligence will require environmental audits, in addition to environmental impact assessments of the subprojects under consideration. (Information provided at screening and categorisation stage should be sufficient for due diligence of existing facilities category B or category C, hence no further environmental audits requirement). The audit aims to determine the existence of any areas where the facilities of the subprojects may cause or is causing risks or negative impacts to the environment, workers, and local communities. The facilities will be required to provide additional information as specified in the list of **Appendix 7**. I&G, with support from the designated

specialists from ACEE will hire a (a team of) qualified FI loan implementation environment consultants to conduct environmental audits and comprehensive due diligence using primary and secondary data and information, and ensure environmental audit and comprehensive due diligence to be properly carried out in order to meet both the PRC requirements and the ADB SPS (2009) requirements (Appendix 3).

89. The scope of the environmental audit includes assessing the EHS performance and compliance related to the existing facilities where the subproject is taking place or the subproject is linked to and/or related to. The audit activities shall include site observations, interviews of stakeholders, and review of relevant documents, including EHS documents and records, EHS training, environmental monitoring procedures and results, emission testing reports, accident reports, incident responses, third party EHS audit reports, and others. During the environmental audit, the EHS auditor will carry out a series of interviews with facility personnel, such as the plant manager, ESMS manager, EHS staff and other workers at the facility, as well as other stakeholders, such as local EHS authorities including EPB(s), local environmental monitoring stations, and nearby residences and businesses. EHS and other social concerns, such as local community concerns and labor issues (i.e., confirm compliance with national labor standards), will be covered in the interviews. Some sample interview questions are provided in **Appendix 9**.

90. The EHS auditor will then prepare an EHS audit report for each facility audited. A typical environmental audit report includes the following major elements: (i) executive summary; (ii) facilities description, including both past and current activities; (iii) summary of national, local, and any other applicable environmental laws, regulations, and standards; (iv) audit and site investigation procedure; (v) findings and areas of concern with supporting photos as necessary; and (vi) CAP that provides the appropriate corrective actions for each area of concern, including costs and schedule. It will also include a list of people interviewed and key supporting documents.

91. If the subproject is category A for environment, an English version of the EIA report will need to be prepared. The English version of the EIA must be prepared in accordance with ADB SPS (2009) and submitted to ADB for review and approval. If the subproject involving existing facilities and/or business activities already exist or are under construction, an English version of environmental audit report needs to be prepared in accordance with ADB SPS (2009) and submitted to ADB for review and approval. The English version of EIA and/or Environmental audit reports must be disclosed in the ADB website for 120 days prior to subproject approval by I&G. If the subproject with environmental category A is a greenfield project and preliminarily assessed as medium or high in climate risks, a CRVA shall also be conducted and an English version of CRVA report shall be included in the English EIA report. The results and recommendations of the CRVA shall be incorporated during the subproject design phase. If the subproject with environmental category A is a brownfield project, climate risks need to be considered and shall be incorporated during the subproject design phase.

92. If the subproject is category B for the environment, the subproject follows the PRC EIA requirements for environmental due diligence and documents, which must be disclosed at I&G and subproject company's websites. ADB can request English translation of the PRC EIA tabular form. If the subproject is categorized as C for the environment, no environmental assessment is required although environmental implications need to be reviewed by I&G and documented in due diligence report. ADB can request English translations due diligence report. If the subproject with environmental category B or C is preliminarily assessed as medium or high in climate risks, climate risks need to be considered and shall be incorporated during the subproject design phase.

93. In reviewing the EIA, IEE, audit, due diligence report of a subproject with Category A, Category B, and category C for the environment, prior to submission to I&G and/or to ADB, the designated specialists from ACEE on behalf of ESMS manager of I&G will check the following: (i) all key potential social and environmental impacts and risks of the subproject are identified; (ii) effective measures to avoid, minimize, mitigate, or compensate for the adverse impacts are incorporated into the CAP, EMP, Environmental monitoring plan (EMoP), PRC EIA, and/or subproject design; (iii) all applicable emission/discharge standards are achieved by the subproject design;<sup>14</sup> (iv) the subproject proponent/entity understands the ESMS' policy principles and requirements and has the necessary commitment and capacity to manage social and environmental impacts and/or risks adequately; and (v) meaningful consultations with affected people have been conducted and recorded in accordance with ESMS requirements, which are (i) at least two rounds of meaningful public consultation with ADB and I&G's participation with local disclosure of information and 120 days ADB website disclosure for Category A; and (ii) at least one round of meaningful public consultation and local disclosure of information for Category B.

### **C. Due Diligence for Early Stage Investment (General Corporate Finance)**

94. If a pre-selected subproject is an early stage subproject through equity financing, I&G will commission qualified and experienced FI loan implementation environmental consultant(s) conduct a corporate audit of candidate company's existing ESMS and its performance against the objectives, principles, and requirements of this ESMS. The corporate audit shall:

- (i) Assess the company's ability to manage and address all relevant social and environmental risks and impacts of its business and operations;
- (ii) Assess the company's compliance record with applicable laws and regulations of the jurisdictions in which the subproject operates that pertain to environmental and social matters, including laws implementing PRC obligation under international law; and
- (iii) Identify the company's main stakeholder groups and current stakeholder engagement activities.

95. If the audit identify any issues, the I&G will either (i) ensure that a corrective action plan is developed specifying time-bound measures to achieve and maintain with the objectives, principles, and requirements of the ESMS within a reasonable time frame and is implemented properly; or (ii) ensure the company to adopt and implement an ESMS-based on this ESMS as a part of their management system.

96. If the subproject includes rehabilitation, modernization, or expansion of existing facilities, and is considered as Category A for environment, environmental audit and assessment needs to be carried out in accordance with the ADB SPS (2009) requirements (as per Section B). The English audit report and EIA must be approved by ADB and disclosed at ADB website for 120 days prior to subproject approval by I&G. If the subproject includes rehabilitation, modernization, or expansion of existing facilities, and is considered as Category B, it will follow domestic EIA requirements for its due diligence (as per Section B), which must be disclosed at I&G and subproject company's websites. If rehabilitation, modernization, or expansion is categorized as C for the environment, no audit or environmental assessment is required although environmental implications need to be reviewed by I&G (as per Section B).

---

<sup>14</sup> The applicable PRC emission standards must be met by the subproject. The applicable World Bank EHS guideline standards must also be met by the subproject with category A or B or deviation from them fully justified per paragraph 33 of Appendix 3.

#### **D. Due Diligence for ESCOs with Subprojects (Corporate Finance for Specific Subproject)**

97. If a pre-selected subproject is to provide credit lines for ESCOs, I&G will commission qualified and experienced FI loan implementation environmental consultant(s) to conduct a corporate audit of candidate company's existing ESMS and its performance against the objectives, principles, and requirements of ADB's safeguard policy statement. The corporate audit shall:

- (i) Assess the company's ability to manage and address all relevant social and environmental risks and impacts of its business and operations;
- (ii) Assess the company's compliance record with applicable laws and regulations of the jurisdictions in which the subproject operates that pertain to environmental and social matters, including laws implementing host country obligation under international law; and
- (iii) Identify the company's main stakeholder groups and current stakeholder engagement activities.

98. If the audit identify any issues, the I&G will either (i) ensure that a corrective action plan is developed specifying time-bound measures to achieve and maintain with the objectives, principles, and requirements of ADB's safeguard policy statement within a reasonable time frame and is implemented properly; or (ii) request the company to adopt this ESMS as a part of their management system by signing any relevant subproject agreement.

99. If an ESCO has specific subproject (existing facilities or greenfield) that is considered as Category A for environment, the English version of an audit or EIA report needs to be prepared in accordance with SPS Environmental Safeguards and approved by ADB (per Section B). The English EIA report must be disclosed at ADB website for 120 days prior to subproject approval by I&G. If an ESCO has specific subproject that is considered as Category B, it will follow domestic EIA requirements for its due diligence (per Section B). If an ESCO has specific subproject that is categorized as C for the environment, no environmental assessment is required although environmental implications need to be reviewed by I&G (per Section B).

#### **E. Due Diligence of Financial Leasing (Sub-FI)**

100. See section J.

#### **F. Selection of Subprojects**

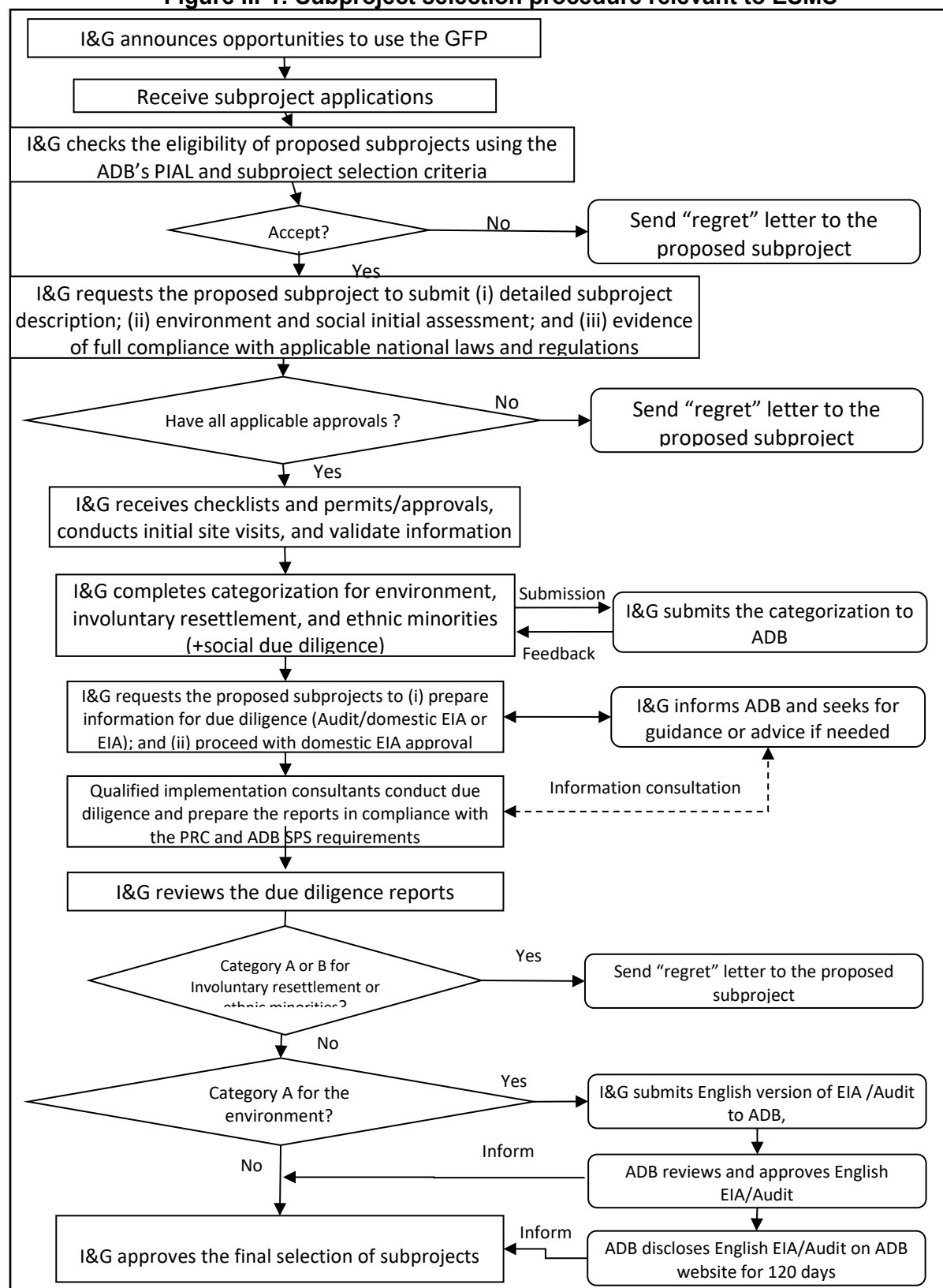
101. Based on results of environmental and social due diligence as well financial and technical due diligence, the ESMS manager (or designated staff) at I&G will prepare a final list of subprojects for I&G management to make the selection decision. I&G will share the final list of subprojects with ADB.

102. Any subprojects which are not in accordance with the environmental requirement of this ESMS or will (i) entail permanent or temporary physical displacement or economic displacement, and (ii) have impact on ethnic minorities will not be considered for financing. Also, any subproject which acquired the land within 2 years at the subproject identification state should be conducted due diligence to confirm that there is no outstanding issue on land acquisition process. If there is any outstanding issue, any of such subproject should not be considered for financing.



103. If any of the final subprojects are categorized as A for the environment, the subproject EIA report including an environmental audit section must be reviewed and cleared by ADB before the final subproject selection approval by I&G. A final draft EIA report of the subproject with category A for environment must be made publicly available at least 120 days on ADB's website before the approval of the subproject by I&G.

104. All subproject loan agreements will contain appropriate environmental and social covenants requiring investments to be in compliance in all material respects with the applicable environmental and social safeguard requirements, including the PIAL; PRC environmental and social laws and regulations; this ESMS; if applicable, CAP, EMP, and EMoP and ESMS; and GRM. The detailed procedures for subproject selection are shown in Figure III-1.

**Figure III-1: Subproject selection procedure relevant to ESMS**

## G. Compliance Monitoring and Reporting

105. After a subproject with category A or B for the environment is approved, the designated specialists from ACEE, on behalf of the ESMS manager of I&G (or other designated staff), shall monitor the subproject on ESMS implementation and confirm quarterly that the subproject is undertaking the obligations of compliance with all applicable environmental and social safeguard requirements, including the PIAL, PRC regulations, CAP, EMP, EMoP, ESMS, and GRM. Also the ESMS manager (or other designated staff) at I&G with support from designated specialists from ACEE will document and promptly report to ADB any actual or potential breach of the compliance requirements after becoming aware of it, and will work with the subproject to bring the subproject back into compliance.

106. For an environmental category A subproject, the EHS team at I&G will make quarterly visits to the site to monitor the implementation of subproject-specific CAP, EMP, EMoP, ESMS and GRM. Opportunities for ADB to accompany I&G EHS team during site visits will be provided during ADB project and safeguard review missions. I&G will also need to ensure that the subproject company has retained qualified and experienced external experts to verify monitoring information for Category A subprojects. For a Category B, the EHS team at I&G will make random visit during the year to the site to check the implementation of subproject-specific domestic EIA requirements on mitigation measures.

107. Environmental and social performance of all subprojects including Category C will be evaluated on a semi-annual basis by I&G. The benchmark for performance will be the ongoing compliance against the applicable environmental and social safeguard requirements in the subproject loan agreement, EIA/IEE, audit report, GRM, applicable CAP, EMP, EMoP, ESMS, and any other safeguard documents. The EHS team at I&G will ensure that the category A and B subproject prepares and submits semi-annual environmental and social monitoring reports (**Appendix 11**), and will review and assess the subproject's performance on environmental and social safeguard issues. If any subproject is categorized as A for the environment, the I&G shall ensure that the subproject must engage qualified and experienced external experts or independent third party to verify its monitoring information and makes full copy of monitoring reports available in English for disclosure on ADB website.

108. All the subproject level environmental monitoring reports must contain the information on energy savings, greenhouse gas emissions, and emissions reduction of other air pollutants that are induced by the subproject components as well as a report on progress with the CAP and the environmental monitoring data required by the EMoP, as applicable. In a case of any environmental incident related to project activities/area during reporting period, a subproject shall prepare an incident report and attach it to the environmental and social monitoring report using an incident report form (Appendix 12) including identification of corrective action. In the event of an unanticipated impact or minor/major change in subproject scope occurs the categorisation will be reconfirmed and it may be necessary to update the EIA and EMP, and prepare a CAP in accordance with ADB's SPS (2009) requirements as set out in **Appendix 3**.

109. Based on the review of the environmental and social monitoring reports for Category A and B subprojects prepared by the subproject companies, the EHS team at I&G will prepare English consolidated environmental monitoring reports semi-annually and submit them to ADB. In addition, the ESMS manager (or other designated staff) at I&G, with support from the designated specialists from ACEE will prepare semi-annual ESMS implementation reports after the loan effectiveness and submit them to ADB. A template form for the ESMS implementation report is attached in **Appendix 13**.

## H. Information Disclosure

110. For information disclosure, I&G will submit to ADB the following documents for disclosure on ADB's website:

- (i) For category A subprojects, a full English version of the final draft EIA/Audit report (including subproject specific audit findings, CAP, EMP, EMoP, ESMS, and GRM as applicable) to be disclosed for at least 120 days prior to subproject approval by I&G;
- (ii) For category A subprojects, a full English copy of the final EIA/Audit, upon receipt from the subproject company;
- (iii) For category A subprojects, a full English copy of any updated EIA and CAP prepared during project implementation, upon receipt from the subproject;
- (iv) For category A, a full English copy of Environmental monitoring reports;
- (v) Semi-annual consolidated environmental and social monitoring reports, including environmental performance and other social issues such as community concerns and internal labor issues in English; and
- (vi) Semi-annual ESMS implementation reports in English.

111. I&G will ensure that all the subprojects will provide relevant environmental and social safeguards information, including information from the above documents, PRC EIA and category B monitoring reports in a timely manner, in an accessible place and in a form understandable to affected people, surrounding local communities, and other stakeholders before subproject approval and during subproject implementation.

## I. Grievance Redress Mechanism

112. Public grievances will most likely relate to environmental and social issues encountered during the implementation of the subprojects, both in construction and operation phases. However, I&G needs to develop and operate the GFP level GRM in order to ensure a proper GRM at all levels to be established and operated, so that all complaints under the GFP will be recorded systematically. At the subproject level regardless of environmental categorization, all subprojects must establish the following detailed steps of GRM and implement them accordingly. At the GFP level, the designated ESMS manager at I&G will be the main focal person of the GEP's GRM and will ensure effective GRM implementation and GRM information disclosure through close cooperation and communications with subprojects.

113. If any grievance was not effectively solved at the subproject level, I&G with support from ACEE, will further facilitate the development of reasonable, effective, and satisfactory resolution. The following describes the five main steps of the GFP level GRM.

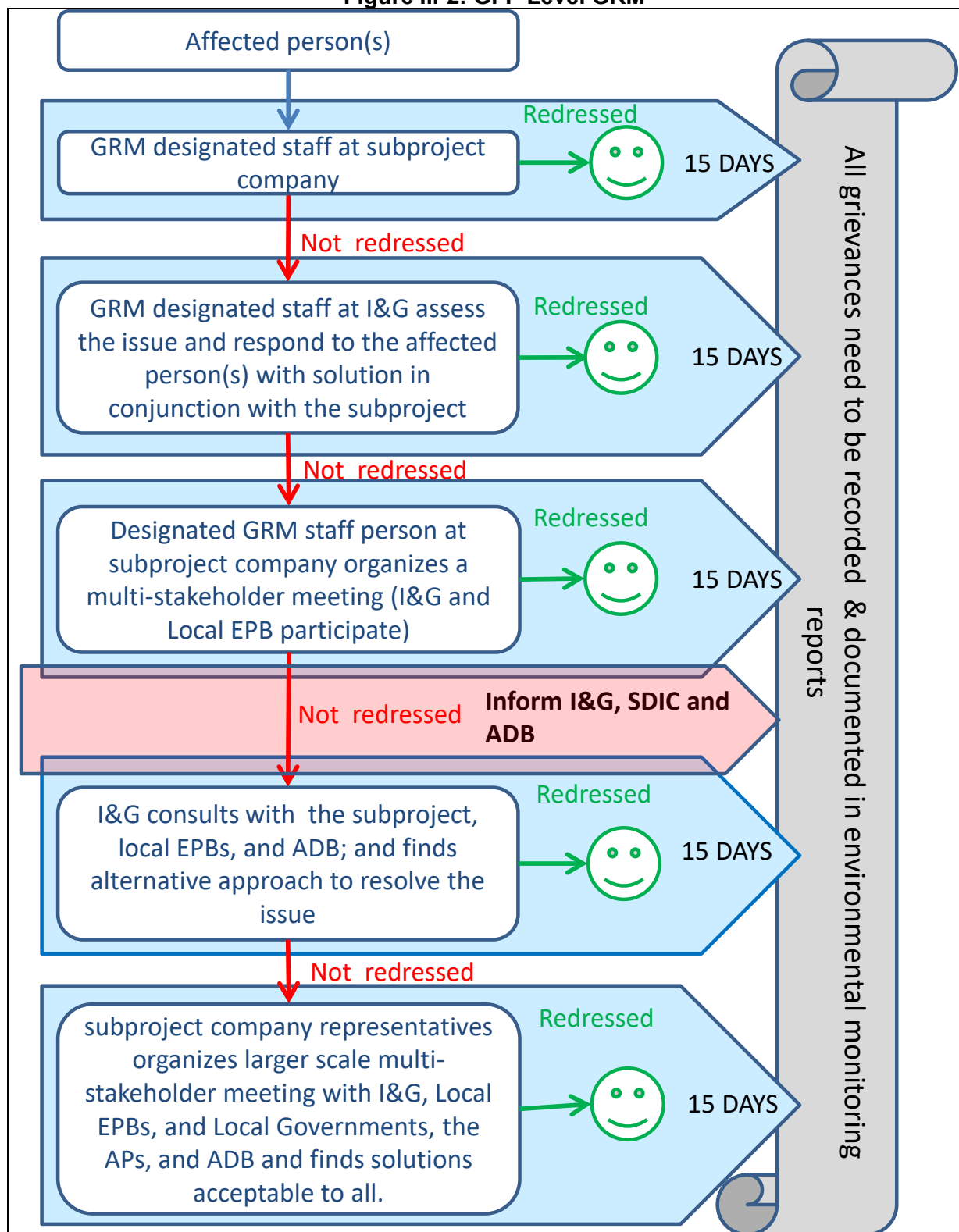
- (i) **Step 1: Resolution at Subproject Level.** If a concern arises, the affected person (AP) should try to resolve the issue of concern informally with the GRM designated staff at the subproject. If the concern is resolved successfully, no further follow-up is required. Nonetheless, the GRM designated staff at the subproject shall record any complaint and actions taken to resolve the issues and report the results to the GRM designated staff at I&G. If no solution is found within 15 working days or if the complainant is not satisfied with the suggested solution under Step 1, proceed to Step 2.
- (ii) **Step 2: Official Complaint to I&G.** The AP will submit the grievance directly, or via the GRM designated staff at the subproject, to the GRM designated staff at I&G who must assess the eligibility of the complaint, including whether Step 1 has been

implemented properly, identify a solution in conjunction with the subproject, and give a clear reply within 15 working days to the complainant and to the GRM designated staff at the subproject with the suggested solution. The subproject company shall implement the redress solution and convey the outcome to I&G within 7 working days.

- (iii) **Step 3: Stakeholder Meeting.** If no solution is identified or if the complainant is not satisfied with the suggested solution under Step 2, the GRM designated staff at the subproject will organize, within 15 days, a multi-stakeholder meeting where all relevant stakeholders, including the complainant, the GRM designated staff at the subproject or other representative(s), the GRM designated staff at I&G, and local EPB will be invited. The meeting will aim to find in a solution acceptable to all parties, and identify responsibilities and an action plan. The subproject company will implement the agreed-upon redress solution and convey the outcome to I&G within 7 working days.
- (iv) **Step 4: Special consultation.** If the multi-stakeholder hearing process under Step 3 is not successful, I&G with the consultation from the subproject company, the relevant EPBs, and ADB, will review the situation and attempt to develop an alternative approach to resolve the complaint within 15 working days.
- (v) **Step 5: Large Scale Stakeholder Meeting.** If the complainant is not satisfied with the suggested solution under Step 4, the subproject company, I&G relevant EPBs, and other local government authorities, shall organize another multi-stakeholder hearing process within 15 days and shall find a solution acceptable to all parties. Based on the agreement, an action plan shall be developed and implemented by the subproject company within the agreed timeframe.

114. The GRM designated staff at the subproject company and I&G shall accept the complaints/grievances lodged by the APs free of charge. Any cost incurred in dealing with a complaint/grievance should be covered by the subproject. The grievance procedures will remain valid throughout the duration of subproject construction and until subproject closure. Figure III-2 describes the project level GRM procedures.

Figure III-2: GFP Level GRM



**J. Categorization, Due Diligence, Selection, and Monitoring and Reporting for Subprojects through Financial Leasing Companies (Subprojects under Sub-FI)**

115. If a pre-selected subproject is to provide subprojects through a financial leasing company, I&G will commission qualified and experienced FI subproject environmental consultant(s) to conduct a corporate audit of candidate company's existing ESMS and its performance against the objectives, principles, and requirements of this ESMS. The corporate audit shall:

- (i) Assess the company's environmental and social safeguards management system, if any;
- (ii) Assess the company's compliance record with applicable laws and regulations of the jurisdictions in which the financial leasing company operates that pertain to environmental and social matters, including laws implementing host country obligation under international law.

116. If the audit identify any issues, the I&G will either (i) ensure that a corrective action plan is developed specifying time-bound measures to achieve and maintain with the objectives, principles, and requirements of this ESMS within a reasonable time frame and is implemented properly; or (ii) ensure the company to adopt and implement the principles, policies, and procedures of this ESMS (see Appendix 14) as a part of their management system by signing an agreement. Once a financial leasing company adopts the policy and all the procedures described in this ESMS, the financial leasing company shall ensure their suitably qualified and experienced staff diligently apply them in their selection, due diligence, approval, and monitoring of their specific subprojects.

117. Financial Leasing Company must establish its ESMS which follows I&G's ESMS. It needs to meet the requirements of the Safeguards Policy Statement and has been approved in writing by ADB. Financial leasing companies shall prepare environmental and social categorizations with detailed subproject description (as Section X) and submit them to I&G, who will submit to ADB. Environmental implications need to be reviewed by financial leasing companies and documented in due diligence report. The financial leasing company shall establish and implement GRM, while ensuring that GRM shall be established and implemented at their subproject level.

118. The financial leasing company shall meet reporting requirements, including (i) semi-annual reporting of environmental and social performance of all its subprojects, and (ii) semi-annual of environmental and social monitoring of all its subprojects (similar to what is described in section G below), which need to be submitted to I&G. I&G will incorporate these reports into its consolidated environmental and social monitoring reports and project level ESMS performance reports.

## INSTITUTIONAL RESPONSIBILITY, STAFFING, AND TRAINING

### A. Organization and responsibilities

119. SDIC will exercise fiduciary oversight over the project and ensure adequate resources are available to I&G to undertake environmental and social management on all subprojects.

120. The ESMS Manager (or other designated staff) at I&G will (i) oversight environmental and social issues on all subprojects, (ii) undertake or ensure adequate resources are made available for undertaking environmental and social screening, categorization and due diligence on all subprojects, including requirements for environmental audit/EIA/IEE and development of subproject specific CAP, EMP, EMoP, ESMS, and GRM, and submit information required to ADB as applicable; (iii) undertake or ensure adequate resources are made available for undertaking supervision and monitoring of environmental and social management performance of all subprojects, including subproject specific CAP, EMP, EMoP ESMS, and GRM, as applicable; (iv) ensure all the subprojects fulfill environmental monitoring requirements; (v) consolidate subprojects' environmental monitoring reports and submit them to ADB in a timely manner; and (vi) prepare and submit annual ESMS implementation reports in English to ADB. I&G shall ensure that ADB is notified if and when the responsible staff at I&G has been changed or replaced with new staff. Only suitably qualified and experienced staff must be appointed.

### B. Capacity and resources

121. **Staffing.** A full-time ESMS manager has been appointed at I&G. Two environmental impact assessment specialists from ACEE have been contracted to support the ESMS manager at I&G so that the ESMS can be fully operationalized before the first disbursement of ADB loan.

122. I&G will have and maintain a pool of qualified environmental and social consultants who can be called upon to assist in conducting environmental audit, preparing EIA/IEE, conducting environmental and social reviews including conducting due diligence on the past land acquisition and involuntary resettlement and/or trainings, as appropriate. I&G will also recruit LIECs to provide assistance and guidance to I&G and develop and implement capacity building program.

123. **Tasks for ACEE.** I&G has entered an agreement with ACEE to provide professional environmental services and to: (i) screen potential subprojects to be financed by the ADB loan; (ii) review and evaluate the subprojects against the ADB's SPS (2009); (iii) conduct site visits and perform environmental due diligence; (iv) conduct environmental training; and (v) monitor environmental performance and prepare reports. The specific tasks are outlined in the following paragraphs.

124. At the subproject identification stage, ACEE and/or I&G will review the rapid assessment of the likely environmental impacts using the environmental assessment checklist submitted by subprojects, including a checklist for preliminary climate risk screening.

125. ACEE will conduct preliminary environmental due diligence during the initial site visit (see para. 73) of each subproject and specifically perform the following:

- (i) confirm the information included in the checklists that could influence environmental and social categorizations (e.g., all potential environmental and social impacts/risks of the subproject have been identified);
- (ii) verify that the facility has proper EIA approval(s) and discharge permits, covering its entire production lines within its premise;



- (iii) identify potential operational EHS risks associated with the operational practices observed at the facility as related to the subproject;
- (iv) conduct brief environmental and social consultation through interviews with employees, local residents and/or local environmental authorities including the EPB;
- (v) confirm boundaries of potential adverse impacts, particularly in respect of environmental receptors as related to the subproject; and
- (vi) revise (if necessary) the initial assessment provided by the subproject.

126. Prepare environmental categorization using the ADB's categorization system for each subproject and submit it to I&G, who will then submit to ADB; A potential subproject's category is determined by the category of its most environmentally sensitive component, including direct, indirect, cumulative, and induced impacts in the subproject's area of influence.

127. If the pre-selected subprojects involve existing facilities, conduct EHS audit and comprehensive due diligence using primary and secondary data and information. The audit shall include all existing production operations across the entire facility. The audit activities shall include site observations, interviews with site personnel, and review of applicable documents, including EHS documents and records, including EHS training, environmental monitoring procedures and results, accident reports, incident responses, third party audit reports, and others. During the audit/due diligence visit, carry out site observations and a series of interviews with relevant local EHS authorities including EPB(s), local environmental monitoring stations are familiar with the facility, a plant manager, and an ESMS manager, EHS staff and other workers at the pre-selected subproject company, and residences and business from nearby communities regarding EHS and other social concern areas. The following tasks shall be performed while conducting EHS compliance audit:

- (i) ensure compliance with both the PRC requirements and the ADB SPS Environmental Safeguards requirements as applicable;
- (ii) verify EHS compliance status of the subproject company;
- (iii) present and discuss a subproject-level GRM, including GRM information disclosure;
- (iv) conduct environment due diligence of other associated facilities;
- (v) participate in meaningful public consultation to be organized by the subproject; and
- (vi) prepare EHS audit reports including findings and areas of concern and a corrective action plan for each area of concern.

128. If the pre-selected subproject was preliminarily assessed as medium or high in climate risks, prepare a CRVA.

129. Participate in an additional meaningful public consultation for Category A project including survey with representatives of affected communities (neighboring residents and businesses), who are located within the area of influence of the subproject

130. Provide recommendations to I&G on the subproject in terms of environmental impact.

131. Monitor the subprojects and confirm that the subprojects are undertaking the obligations of compliance with all applicable environmental and social safeguard requirements, including the PRC regulations, GRM, CAP, EMP, and EMoP as applicable.

132. Visit each subproject site, quarterly during construction and semi-annually during operation for category A subproject and semi-annually during construction and annually during

operation for category B subproject, to monitor the implementation of subproject-specific GRM, and applicable CAP, EMP, and EMoP.

133. Document and promptly report to I&G any actual or potential breach of the compliance requirements of any subprojects.

134. Prepare semi-annual environmental and social monitoring reports and the report shall contain the information on energy savings, greenhouse gas emissions, emissions reduction, progress with the CAP and the environmental monitoring data required by the EMoP.

135. In the event of an unanticipated impact or minor/major change in subproject scope, update the EIA/IEE and prepare a CAP in accordance with ADB's SPS requirements.

136. Prepare semi-annual ESMS implementation reports until the project closure and submit them to I&G.

137. Provide training to subborrowers on requirements of ADB SPS, ESMS, EMP, GRM, public consultation, environmental and social management system, EHS compliance among other topics to be identified by I&G.

138. **Estimated ESMS implementation budget.** The ADB loan is expected to be paid off within 15 years, including the 5 years for the initial batch of subprojects. The estimated costs for implementing ESMS during construction phase as well as operation phase are summarized in Table IV-1. The total estimated cost is about \$3.95 million.

139. **Training.** The ESMS Manager (and/or a designated staff) at I&G, the designated specialists at ACEE, and subprojects will take a series of capacity building measures before the first disbursement of ADB loan. In addition, ADB's environment safeguard specialist together with social safeguard consultant under the PPTA will provide on-the-job training on environment and social safeguard screening process to the ESMS manager before the first disbursement of ADB loan. Future subproject companies will take these training courses before the first disbursement of their loan. Due to the nature of the project and targeted industry, these training needs on environmental and social management systems (ESMS) and occupational health and safety management systems are essential. Table III-1 presents the training program on environmental and social management and associated costs.

Table IV-1: Estimated Budget for Implementing ESMS

No.	EMP Item	Unit	Unit Cost	Estimated Cost (USD)						Subtotal
				Category A		Category B		Category C		
				# Units	Cost	# Units	Cost	# Units	Cost	
	<b>Construction Phase</b>			20		50		30		
	<b>Mitigation Measures</b>	<b>Cost</b>		- - - Included in EA/IA budget - - -						
1	Independent Environment Monitoring	6-month	\$ 3,000	40	\$ 120,000	10	\$ 30,000	0	\$ -	\$ 150,000
2	Training	Program	\$ 4,000	40	\$ 160,000	25	\$ 100,000	3	\$ 12,000	\$ 272,000
3	Public Consultation	Survey	\$ 2,000	40	\$ 80,000	50	\$ 100,000	0	\$ -	\$ 180,000
4	Compliance Audit		\$ 4,000	40	\$ 160,000	50	\$ 100,000	30	\$ 120,000	\$ 380,000
5	Environmental Due Diligence (other)		\$ 4,000	40	\$ 160,000	50	\$ 100,000	30	\$ 120,000	\$ 380,000
6	LIEC - National	Month	\$ 5,500	40	\$ 220,000	50	\$ 275,000	2	\$ 11,000	\$ 506,000
7	LIEC - International	Month	\$ 25,000	20	\$ 500,000	20	\$ 500,000	0	\$ -	\$ 1,000,000
	<i>Subtotal</i>									<b>\$ 2,868,000</b>
	<b>Operation Phase</b>									
	<b>Mitigation Measures</b>	<b>Annual Cost</b>		- - - Included in Operating Costs - - -						
1	Independent Environment Monitoring	Quarter	\$ 3,000	8	\$ 24,000	8	\$ 24,000	0	\$ -	\$ 48,000
2	Training	Program	\$ 4,000	10	\$ 40,000	10	\$ 40,000	0	\$ -	\$ 80,000
3	Public Consultation	Survey	\$ 2,000	20	\$ 40,000	3	\$ 6,000	0	\$ -	\$ 46,000
4	Compliance Assessment	Program	\$ 4,000	20	\$ 80,000	50	\$ 200,000	1	\$ 4,000	\$ 284,000
5	LIEC - National	Monthly	\$ 5,500	20	\$ 110,000	5	\$ 27,500	1	\$ 5,500	\$ 143,000
6	LIEC - International	Monthly	\$ 25,000	3	\$ 75,000	2	\$ 50,000	0	\$ -	\$ 125,000
	<i>Subtotal</i>									<b>\$ 726,000</b>
	<b>Subtotal</b>									<b>\$ 3,594,000</b>
	Contingency									\$ 359,400
	<b>TOTAL</b>									<b>\$ 3,953,400</b>

Source: ADB estimates.

**Table IV-1: Capacity building training on environmental and social management**

Training Topic	Trainer	Attendee	Contents	Time s	Period (days) per time	# of Persons per time	Budget (USD)	Source of Funds
<b>ADB Safeguard Training</b>	Loan Implementation environmental consultants	I&G SDIC BOB, ACEE, Subproject companies  Note: All subprojects must receive this training prior to subproject implementation	<b>ADB and PRC EHS laws, regulations and policies</b> <ul style="list-style-type: none"> <li>The project's ESMS policy and requirements including links to ADB's SPS (2009), policy principles, policy delivery process, environmental and social safeguard requirements, and others,</li> <li>Subproject categorization and requirements of EIA/IEE</li> <li>Environmental due diligence and compliance audit</li> <li>Fund applicable PRC EHS laws, policies, standards and regulations</li> <li>International environmental, health and safety management practice in civil constructions including World Bank EHS Guidelines</li> </ul> <b>GRM</b> <ul style="list-style-type: none"> <li>GRM structure, responsibilities, and timeframe</li> <li>Types of grievances and eligibility assessment</li> </ul> <b>Implementation of EMP and EMoP</b> <ul style="list-style-type: none"> <li>Impacts and mitigation measures during construction, operation and decommissioning</li> <li>Monitoring and auditing mechanism</li> <li>Reporting requirements</li> </ul> <b>Construction phase EMP</b> <ul style="list-style-type: none"> <li>Implementation of Construction Phase EMP Plan</li> <li>Plan descriptions</li> <li>Roles and responsibilities</li> </ul> <b>Implementation of ESMS</b> <ul style="list-style-type: none"> <li>ESMS objectives, contents, subproject criteria, other issues at ESMS</li> </ul>	40	3	20	Course material Development and course evaluation report \$ 700 x 40 times = \$28,000  Course Delivery (fees and per diem, lump sum fixed cost): \$ 700/day x 3 (days) x 40 (times) = \$84,000  Logistics costs for trainees \$100 (per person) x 3 (days) x 40 (persons) x 20 (times) = \$240,000	ADB loan, I&G environment investment budget
<b>Total</b>				<b>40</b>	<b>3</b>	<b>20</b>	<b>\$352,000</b>	

Source: ADB estimates

## **ASSURANCES OF THE FUND**

140. The following assurances of the GFP project are agreed among, I&G, SDIC, BOB, and ADB.

- (i) I&G will ensure that all subprojects of future batches must meet the technical, financial, economic, environmental, and social criteria presented in this ESMS (Appendix 6).
- (ii) I&G will ensure that all subprojects approved will improve energy efficiency and reduce emissions.
- (iii) The GFP will not support expansion of production capacities or extension of the use of old and inefficient equipment.
- (iv) The GFP will not support subprojects that are included in the ADB Prohibited Investment Activities List (Appendix 2), including subprojects that involve the production of or trade in any product or activity deemed illegal under the PRC laws or regulations or international conventions and agreements or subject to international phase outs or bans.
- (v) I&G will have dedicated staff to provide supervision and management support for the project including sufficient dedicated suitable qualified and experience staff to ensure satisfactory ESMS implementation.
- (vi) I&G will hire full time qualified and experienced ESMS manager and other relevant staff for I&G, and/or contract out with a qualified EIA institute in order to enable satisfactory ESMS implementation throughout the entire GFP.
- (vii) I&G will hire qualified LIECs to (i) conduct capacity building training programs; (ii) support the environmental and social safeguards manager in supervising subprojects' CAP, EMP, EMoP, ESMS and GRM performances; (iii) conduct comprehensive due diligence including environmental audit as required; (iv) support I&G in preparing consolidated environmental monitoring reports; (v) support I&G in preparing ESMS implementation reports; (vi) provide training to subproject staff on ESMS requirements; and (vi) assist I&G in reviewing any other environmental and social issues at subprojects.
- (viii) The I&G will ensure that all the subprojects will provide to AP and other stakeholders relevant environmental and social safeguards information in Chinese, in a timely manner, in an accessible place and in a form understandable to AP and other stakeholders.
- (ix) At least two rounds of meaningful public consultations with ADB and I&G's participation will be conducted during the preparation of the due diligence for subprojects for Category A for the environment and one round for Category B subprojects.
- (x) Greenfield subprojects with medium or high climate risk will be required to prepare a Climate Risk and Vulnerability Assessment (CRVA) report, which needs to be incorporated in their applicable environmental due diligence reports. And the result of CRVA should be incorporated with the subproject design.

### APPENDIX 1. LIST OF APPLICABLE NATIONAL ENVIRONMENTAL, HEALTH AND SAFETY REGULATIONS

Category	Title of Regulation	Regulator	Edition
<b>Construction Projects</b>	Labor Law (1994)	Standing Committee of National People's Congress	1994
	Rules on the Labor Protection of Female Staff (1988)	State Council	1988
	Rules on the Types of Work Prohibited for Women (1990)	Ministry of Labor and Social Security (now Ministry of Human Resources and Social Security)	1990
	Classification of Intensity of Physical Work (GB3869-1997)	State Bureau of Technical Supervision	1997
	Law on Production Safety (2002)	Standing Committee of National People's Congress	2002
	Safety Signs and Guideline for the Use (GB2894-2008)	General Administration of Quality Supervision, Inspection and Quarantine and the Standardization Administration	2008
	Regulation on the Safety Supervision of Specialized Installations (2009)	State Council	2009
	Interim Rules for Supervision and Management of Occupational Health in Workplaces (2009)	State Administration of Work Safety	2009
	Regulation on the Management of Construction Project Quality (2000)	State Council	2000
<b>Occupational noise</b>	Norms on Hearing Protection for Workers at Industrial Facilities (1999)	Ministry of Health	1999
<b>Electricity</b>	Rules of Electrical Safety Management (1986)	Ministry of Machinery Industry	1986
	Safety Guidelines for Electricity Use (GB/T 13869-2008)	General Administration of Quality Supervision, Inspection and Quarantine and the Standardization Administration	2008
<b>Emergency</b>	Guidelines for Enterprises to Develop Emergency Response Plan for Work Place Accidents (AQ/T 9002-2006)	State Administration of Work Safety	2006
	Rules of Reporting and Investigation of Work Place Accidents (2007)	State Council	2007
	Interim Rules on Inspection and Removal of Potential Risks of Work Place Accidents (2007)	State Administration of Work Safety	2007
	Measures for the Administration of Emergency Response Plans for Work Safety Accidents (2009)	State Administration of Work Safety	2009
	Provisions on Radioactive Accidents (2001)	Ministry of Health and Ministry of Public Security	2001
<b>Fire Protection</b>	Fire Safety Signs (GB13495-1992)	State Bureau of Technical Supervision	1992
	Provisions on Safety for Workplaces with Explosion Risks (1995)	Labor Department	1995
	Firefighting Surveillance and Inspection Rules for Building Construction (1997)	Ministry of Public Security	1997

Category	Title of Regulation	Regulator	Edition
	Maintenance for Fire Equipment in Building (GA 587-2005)	Ministry of Public Security	2005
	Provisions of Fire Prevention in Building Design (GB 50016-2006)	Ministry of Construction and General Administration of Quality Supervision, Inspection and Quarantine	2006
	Fire Prevention Technology Requirements for Residential, Production, Operation or Storage Mixed-Use Areas (GA 703-2007)	Ministry of Public Security	2007
	Safety Regulation for Dust Explosion Prevention (GB 15577-2007)	General Administration of Quality Supervision, Inspection and Quarantine and Standardization Administration	2007
	Code for Acceptance and Inspection of Extinguisher Distribution in Buildings (GB 50444-2008)	Ministry of Housing and Urban-Rural Development	2008
<b>Hygiene standards</b>	Hygienic Standards for the Design of Industrial Enterprises (GBZ 1-2010)	Ministry of Health	2010
	Hygiene Standards for Domestic Drinking Water (GB 5749-2006)	Ministry of Health and Standardization Administration	2006
<b>Insurance</b>	Work-related Injury Insurance Regulation (2010)	State Council	2010
<b>Lifting</b>	Regulations for Periodic Inspection of Lifting/Hoisting Machinery (TSG Q7015 - 2008)	General Administration of Quality Supervision, Inspection and Quarantine	2008
	Regulations on Use and Maintenance of Lifts (TSG Q5001-2009)	General Administration of Quality Supervision, Inspection and Quarantine	2009
<b>Occupational Health and Disease</b>	Management Measures on Occupational Disease Diagnosis and Appraisal (2002)	Ministry of Health	2002
	Measures on Investigation of and Dealing with Occupational Diseases Risk Accidents (2002)	Ministry of Health	2002
	Measures on Occupational Health Care (2002)	Ministry of Health	2002
	Warning Signs for Occupational Disease Hazards in Workplaces (GBZ 158-2003)	Ministry of Health	2003
	Provisions on Management of Occupational Disease Hazard Classification in Construction Projects (2006)	Ministry of Health	2006
<b>Personal Protective Equipment (PPE)</b>	Personal Fall Protection Systems (GB 6095-2009)	General Administration of Quality Supervision, Inspection and Quarantine, and Standardization Administration	2009
	Code of Practice for Selection of Personal Protective Equipment—GB/T 11651-2008	General Administration of Quality Supervision, Inspection and Quarantine and State Standardization Administration Committee	2008

Category	Title of Regulation	Regulator	Edition
	Provisional Regulation of the Use of Personal Protective Equipment for Construction Personnel (2007)	Ministry of Construction	2007
<b>Reporting (statutory) asbestos hazardous dangerous explosive radioactive</b>	Basic Standards for Protection Against Ionizing Radiation and for the Safety of Radiation Sources—GB 18871-2002	General Administration of Quality Supervision, Inspection and Quarantine of People's Republic of China	2002
	Provisions on Preventing Environmental Pollution Caused by Electrical Equipment Containing Polychlorinated Biphenyls (PCBs) and Related Wastes (1991)	State Environmental Protection Administration (Now Ministry of Environmental Protection) and Ministry of Energy	1991
	Control Standard on Polychlorinated Biphenyl Wastes (GB 13015-91)	State Environmental Protection Administration	
	Management Measures on Transportation Safety Permitting of Radioactive Substances (2010)	Ministry of Environmental Protection	2010
	Rules on the Storage of Dangerous Chemicals (GB 15603-1995)	State Bureau of Technical Supervision	1995
	Regulations on the Management of the Controlled Chemicals (1995)	State Council	1995
	Provisions on Safe Use of Chemicals in Workplaces (1996)	Ministry of Labor and Ministry of Chemical Industry	1996
	Provisions on Pesticides Management in China (2001)	State Council	2001
	Management Measures on Registration of Dangerous Chemicals (2002)	State Economic and Trade Commission	2002
	General Rules for Classification and Hazard Communication of Chemicals (GB 13690-2009)	General Administration of Quality Supervision, Inspection and Quarantine and State Standardization Administration	2009
<b>Training</b>	Notion on Safe Production Training Examination for the Principals of Production and Operating Entity, Management Personnel and Other Practitioners (2002)	State Administration of Work Safety	2002
	Provision on Safety Training for Manufacturing and Operations Facilities (2006)	State Administration of Work Safety	2006
	Management Provisions on Examining Safety Technical Training of Special Operation Personnel (2010)	State Administration of Work Safety	2010
<b>Work equipment</b>	Safety in Welding and Cutting (GB 9448-1999)	State Bureau of Quality and Technical Supervision	1999
	Safety Nets (GB 5725-2009)	General Administration of Quality Supervision, Inspection and Quarantine, and Standardization Administration	2009
	Safety and Technical Regulations on Management, Use, Inspection, and Maintenance of Hand-held Power Tools (GB/T 3787-2006)	General Administration of Quality Supervision, Inspection and Quarantine, and Standardization Administration	2006
	Safety of Hand-held Power Tools(GB 3883)	General Administration of Quality Supervision, Inspection and Quarantine and Standardization Administration	



Category	Title of Regulation	Regulator	Edition
	Safety of Mobile Power Tools (GB 13960)	General Administration of Quality Supervision, Inspection and Quarantine and Standardization Administration	
<b>Workplace and welfare</b>	Labor Protection Regulations for Workplaces That Use Toxic Substances (2002)	State Council	2002
<b>General Environmental</b>	Law of the People's Republic of China on Environmental Impact Assessment (2002)	Standing Committee of the National People's Congress	2002
	Law of the People's Republic of China on Environmental Protection (1989)	Standing Committee of the National People's Congress	1989
	Law of the People's Republic of China on Land Management (1986; last amended 2004)	Standing Committee of the National People's Congress	2004
	Management Provisions on the Reporting and Registration of Pollutant Discharges (1992, last amended 2005)		1992
	Environmental Protection Management Measures for Electromagnetic Radiation (1997)	State Environmental Protection Administration	1997
	Measures for the Disclosure of Environmental Information (Trial Implementation) (2007)	Ministry of Environmental Protection	2007
	Law of the People's Republic of China on Prevention and Control of Pollution from Environmental Noise	Standing Committee of the National People's Congress	
	Management Measures on Automatic Monitoring and Inspection of Pollution Sources (2005)	Ministry of Environmental Protection	2005
	Measures on Management of Pollution Sources Monitoring (1999)	State Environmental Protection Administration	1999
<b>Water</b>	Law of the People's Republic of China on Water (1988; last amended 2002)	Standing Committee of the National People's Congress	2002
	Provisions on the Administration of the Prevention and Control of Pollution in the Protected Zones of Drinking Water Sources (1989)	State Environmental Protection Administration	1989
	Management Measures on the Monitoring of Pollutant Discharge Outlets Entering Rivers (2004)	Ministry of Water Resources	2004
	Management Regulations for Water Extraction Permitting and Collection of Water Resource Fees (2006)	State Council	2006
	Management Measures on Handling of Water Pollution Within a Specified Period (Trial Implementation) (2009)	Ministry of Environmental Protection	2009
	Integrated Wastewater Discharge Standard (GB 8978-1996)	State Environmental Protection Administration	1996
	Technical Guidelines for Environmental Impact Assessment—Groundwater Environment (HJ 610—2011)	Ministry of Environmental Protection	2011

Category	Title of Regulation	Regulator	Edition
	Quality Standard for Groundwater (GB/T 14848-93)	State Bureau of Technical Supervision	
	Discharge Standard for Municipal Wastewater (CJ 3082-1999)	Ministry of Construction	1999
	Environmental Quality Standard for Surface Water (GB 3838-2002)	State Environmental Protection Administration and General Administration of Quality Supervision, Inspection and Quarantine	2002
	Law on Prevention and Control of Water Pollution (1984; last amended 2008)	Standing Committee of the National People's Congress	2008
	Implementing Rules of the Law on the Prevention and Control of Water Pollution (2000)	State Council	2000
	Discharge standard of pollutants for livestock and poultry breeding (GB 18596-2001)	Ministry of Environmental Protection	2001
	Discharge standard of pollutants for municipal wastewater treatment plant (GB18918-2002)	Ministry of Environmental Protection	2002
	Discharge standard of water pollutants for iron and steel industry (GB 13456-2012)	Ministry of Environmental Protection	2012
Air	Measures on the Administration of Urban Smoke-Dust Controlling Zones (1987)	Environmental Protection Committee of the State Council	1987
	Law of the People's Republic of China on the Prevention and Control of Air Pollution (1987; last amended 2000)	Standing Committee of the National People's Congress	2000
	Management Regulations on ODS (2010)	State Council	2010
	Emission Standards for Odor Pollutants (GB 14554-1993)	State Environmental Protection Administration	1993
	Integrated Emission Standard for Air Pollutants (GB 16297-1996)	State Environmental Protection Administration	1996
	Technical Guidelines for Fugitive Emission Monitoring of Air Pollutants (HJ/T 55-2000)	State Environmental Protection Administration	2000
	Ambient Air Quality Standard (GB 3095-1996) (last amended 2000)	State Environmental Protection Administration and General Administration of Quality Supervision, Inspection and Quarantine	2000
	Emission standard of pollutants for coking chemical industry (GB 16171-2012)	Ministry of Environmental Protection	2012
	Emission standard of air pollutants for boiler (GB 13271-2014)	Ministry of Environmental Protection	2014
	Emission standard of pollutants for ceramics industry (GB 25464-2010)	Ministry of Environmental Protection	2010

Category	Title of Regulation	Regulator	Edition
	Emission Standard of Coalbed Methane/Coal Mine Gas (on trial) (GB 21522-2008)	Ministry of Environmental Protection	2008
	Emission standard of air pollutants for industrial kiln and furnace (GB 9078-1996)	Ministry of Environmental Protection	1996
	Emission standard of pollutants for magnesium and titanium industry (GB 25468-2010/XG1-2013)	Ministry of Environmental Protection	2013
<b>Hazardous Materials</b>	Classification of Radioactive Waste (GB 9133-1995)	State Bureau of Technical Supervision	1995
	Management Measures on Environmental Protection from Electromagnetic Radiation (1997)	State Environmental Protection Administration	1997
	Law on the Prevention and Control of Radioactive Pollution (2003)	Standing Committee of the National People's Congress	2003
	Prevention and Control Measures on Environmental Pollution of Unwanted Dangerous Chemicals (2005)	State Environmental Protection Administration	2005
	Environmental Management Measures on New Chemical Substances (2010)	Ministry of Environmental Protection	2010
	Provisions on Environmental Administration of New Chemical Substances (2010)	Ministry of Environmental Protection	2010
<b>Construction Projects</b>	Provisions on Environmental Protection Design of Construction Projects (1987)	State Planning Commission and State Council Environmental Protection Committee	1987
	Management Procedures on Environmental Protection of Construction Projects (1990)	State Environmental Protection Administration	1990
	Regulations on Management of Environmental Protection of Construction Projects (1998)	State Council	1998
	Classified Directory for Environmental Protection Management of Construction Projects (2002)	State Environmental Protection Administration	2002
<b>Emergency Planning</b>	Interim Provision on Management of Emergency Plan for Abrupt Environmental Accidents (2010)	Ministry of Environmental Protection	2010
<b>Energy Efficiency</b>	Interim Measures of Energy Conservation Assessment and Audit for Capital Asset Investment Projects (2010)	National Development and Reform Commission	2010
	Law of the People's Republic of China on Energy Conservation (1997; last amended 2007)	Standing Committee of the National People's Congress	2007
	Measures on Supervision and Management of Energy Conservation of Specialized Equipment with High Energy Consumption (2009)	General Administration of Quality Supervision, Inspection and Quarantine	2009
<b>Waste</b>	Circular Economy Promotion Law of the People's Republic of China (2009)	Standing Committee of the National People's Congress	2009

Category	Title of Regulation	Regulator	Edition
	Law on the Prevention and Control of Environmental Pollution by Solid Wastes (2004)	Standing Committee of the National People's Congress	2004
	Measures on the Administration of Hazardous Wastes Operating License (2004)	State Council	2004
	Management Measures on Environmental Pollution Prevention and Control of Electronic Wastes (2007)	State Environmental Protection Administration	2007
	National Catalogue of Hazardous Wastes (1998, last amended 2008)	Ministry of Environmental Protection	1999
	Measures on the Management of Hazardous Waste Manifests (1999)	State Environmental Protection Administration	1999
	Standard for Pollution Control on Hazardous Waste Storage (GB 18597-2001)	State Environmental Protection Administration	2001
	Standard for Pollution Control on the Storage and Disposal Site for General Industrial Solid Wastes (GB 18599-2001)	State Environmental Protection Administration and the State Administration of Quality Supervision, Inspection and Quarantine	2001
	Management Measures on Environmental Pollution Prevention and Control of Electronic Wastes (2007)	State Environmental Protection Administration	2007
	Waste Electrical and Electronic Product Disposal and Recycling Management Regulations (2009)	State Council	2009

## APPENDIX 2. ASIAN DEVELOPMENT BANK PROHIBITED INVESTMENT ACTIVITIES LIST

The following do not qualify for Asian Development Bank financing:

- (i) production or activities involving harmful or exploitative forms of forced labor<sup>1</sup> or child labor<sup>2</sup>;
- (ii) production of or trade in any product or activity deemed illegal under host country laws or regulations or international conventions and agreements or subject to international phase outs or bans, such as (a) pharmaceuticals,<sup>3</sup> pesticides, and herbicides,<sup>4</sup> (b) ozone-depleting substances,<sup>5</sup> (c) polychlorinated biphenyls<sup>6</sup> and other hazardous chemicals,<sup>7</sup> (d) wildlife or wildlife products regulated under the Convention on International Trade in Endangered Species of Wild Fauna and Flora,<sup>8</sup> and (e) transboundary trade in waste or waste products;<sup>9</sup>
- (iii) production of or trade in weapons and munitions, including paramilitary materials;
- (iv) production of or trade in alcoholic beverages, excluding beer and wine;<sup>10</sup>
- (v) production of or trade in tobacco;<sup>10</sup>
- (vi) gambling, casinos, and equivalent enterprises;<sup>10</sup>
- (vii) production of or trade in radioactive materials,<sup>11</sup> including nuclear reactors and components thereof;
- (ix) production of, trade in, or use of unbonded asbestos fibers;<sup>12</sup>
- (x) commercial logging operations or the purchase of logging equipment for use in
- (xi) primary tropical moist forests or old-growth forests; and
- (xii) marine and coastal fishing practices, such as large-scale pelagic drift net fishing
- (xiii) and fine mesh net fishing, harmful to vulnerable and protected species in large
- (xiv) numbers and damaging to marine biodiversity and habitats.

---

<sup>1</sup> Forced labor means all work or services not voluntarily performed, that is, extracted from individuals under threat of force or penalty.

<sup>2</sup> Child labor means the employment of children whose age is below the host country's statutory minimum age of employment or employment of children in contravention of International Labor Organization Convention No. 138 "Minimum Age Convention" ([www.ilo.org](http://www.ilo.org)).

<sup>3</sup> A list of pharmaceutical products subject to phaseouts or bans is available at <http://www.who.int>.

<sup>4</sup> A list of pesticides and herbicides subject to phaseouts or bans is available at <http://www.pic.int>.

<sup>5</sup> A list of the chemical compounds that react with and deplete stratospheric ozone resulting in the widely publicized ozone holes is listed in the Montreal Protocol, together with target reduction and phaseout dates. Information is available at <http://www.unep.org/ozone/montreal.shtml>.

<sup>6</sup> A group of highly toxic chemicals, polychlorinated biphenyls are likely to be found in oil-filled electrical transformers, capacitors, and switchgear dating from 1950 to 1985.

<sup>7</sup> A list of hazardous chemicals is available at <http://www.pic.int>.

<sup>8</sup> A list is available at <http://www.cites.org>.

<sup>9</sup> As defined by the Basel Convention; see <http://www.basel.int>.

<sup>10</sup> 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.

<sup>11</sup> This does not apply to the purchase of medical equipment, quality control (measurement) equipment, and any equipment for which ADB considers the radioactive source to be trivial and adequately shielded.

<sup>12</sup> This does not apply to the purchase and use of bonded asbestos cement sheeting where the asbestos content is less than 20%.

## **APPENDIX 3. ADB ENVIRONMENTAL AND SOCIAL SAFEGUARDS REQUIREMENTS**

### **SAFEGUARD REQUIREMENTS 1: ENVIRONMENT**

#### **A. Introduction**

1. Safeguard Requirements 1 outlines the requirements that borrowers/clients are required to meet when delivering environmental safeguards for projects supported by the Asian Development Bank (ADB). It discusses the objectives and scope of application, and underscores the requirements for undertaking the environmental assessment process. These requirements include assessing impacts, planning and managing impact mitigations, preparing environmental assessment reports, disclosing information and undertaking consultation, establishing a grievance mechanism, and monitoring and reporting. The document also includes particular environmental safeguard requirements pertaining to biodiversity conservation and sustainable management of natural resources, pollution prevention and abatement, occupational and community health and safety, and conservation of physical cultural resources. The applicability of particular requirements is established through the environmental assessment process and compliance with the requirements is achieved through implementation of environmental management plans agreed to by ADB and the borrower/client.

#### **B. Objectives**

2. The objectives are to ensure the environmental soundness and sustainability of projects, and to support the integration of environmental considerations into the project decision-making process.

#### **C. Scope of Application**

3. The requirements apply to all ADB-financed and/or ADB-administered sovereign and non-sovereign projects, and their components regardless of the source of financing, including investment projects funded by a loan; and/or a grant; and/or other means, such as equity and/or guarantees (hereafter broadly referred to as projects).

#### **D. Requirements**

##### **1. Environmental Assessment**

4. Environmental assessment is a generic term used to describe a process of environmental analysis and planning to address the environmental impacts and risks associated with a project. At an early stage of project preparation, the borrower/client will identify potential direct, indirect, cumulative and induced environmental impacts on and risks to physical, biological, socioeconomic, and physical cultural resources and determine their significance and scope, in consultation with stakeholders, including affected people and concerned NGOs. If potentially adverse environmental impacts and risks are identified, the borrower/client will undertake an environmental assessment as early as possible in the project cycle. For projects with potentially significant adverse impacts that are diverse, irreversible, or unprecedented, the borrower/client will examine alternatives to the project's location, design, technology, and components that would avoid, and, if avoidance is not possible, minimize adverse environmental impacts and risks. The rationale for selecting the particular project location, design, technology, and components will be properly documented, including, cost-benefit analysis, taking environmental costs and benefits of the various alternatives considered into account. The "no project" alternative will be also considered.

5. The assessment process will be based on current information, including an accurate project description, and appropriate environmental and social baseline data. The environmental assessment will consider all potential impacts and risks of the project on physical, biological, socioeconomic (occupational health and safety, community health and safety, vulnerable groups and gender issues, and impacts on livelihoods through environmental media [Appendix 2, para. 6]) and physical cultural resources in an integrated way. The project's potential environmental impacts and risks will be reviewed against the requirements presented in this document and applicable laws and regulations of the jurisdictions in which the project operates that pertain to environmental matters, including host country obligations under international law.

6. Impacts and risks will be analyzed in the context of the project's area of influence. This area of influence encompasses (i) the primary project site(s) and related facilities that the borrower/client (including its contractors) develops or controls, such as power transmission corridors, pipelines, canals, tunnels, access roads, borrow pits and disposal areas, and construction camps; (ii) associated facilities that are not funded as part of the project (funding may be provided separately by the borrower/client or by third parties), and whose viability and existence depend exclusively on the project and whose goods or services are essential for successful operation of the project; (iii) areas and communities potentially affected by cumulative impacts from further planned development of the project, other sources of similar impacts in the geographical area, any existing project or condition, and other project-related developments that are realistically defined at the time the assessment is undertaken; and (iv) areas and communities potentially affected by impacts from unplanned but predictable developments caused by the project that may occur later or at a different location. The area of influence does not include potential impacts that might occur without the project or independently of the project. Environmental impacts and risks will also be analyzed for all relevant stages of the project cycle, including preconstruction, construction, operations, decommissioning, and postclosure activities such as rehabilitation or restoration.

7. The assessment will identify potential transboundary effects, such as air pollution, increased use or contamination of international waterways, as well as global impacts, such as emission of greenhouse gases and impacts on endangered species and habitats.

8. The environmental assessment will examine whether particular individuals and groups may be differentially or disproportionately affected by the project's potential adverse environmental impacts because of their disadvantaged or vulnerable status, in particular, the poor, women and children, and Indigenous Peoples. Where such individuals or groups are identified, the environmental assessment will recommend targeted and differentiated measures so that adverse environmental impacts do not fall disproportionately on them.

9. Depending on the significance of project impacts and risks, the assessment may comprise a full-scale environmental impact assessment (EIA) for category A projects, an initial environmental examination (IEE) or equivalent process for category B projects, or a desk review. An EIA report includes the following major elements: (i) executive summary, (ii) description of the project, (iii) description of the environment (with comprehensive baseline data), (iv) anticipated environmental impacts and mitigation measures, (v) analysis of alternatives, (vi) environmental management plan(s), (vii) consultation and information disclosure, and (viii) conclusion and recommendations. The annex to this appendix provides further details. An IEE, with its narrower scope, may be conducted for projects with limited impacts that are few in number, generally site-specific, largely reversible, and readily addressed through mitigation measures.



10. When the project involves existing activities or facilities, relevant external experts will perform environmental audits to determine the existence of any areas where the project may cause or is causing environmental risks or impacts. If the project does not foresee any new major expansion, the audit constitutes the environmental assessment for the project. A typical environmental audit report includes the following major elements: (i) executive summary; (ii) facilities description, including both past and current activities; (iii) summary of national, local, and any other applicable environmental laws, regulations, and standards; (iv) audit and site investigation procedure; (v) findings and areas of concern; and (vi) corrective action plan that provides the appropriate corrective actions for each area of concern, including costs and schedule.

11. When the project involves the development of or changes to policies, plans, or programs that are likely to have significant environmental impacts that are regional or sectoral, strategic environmental assessment will be required. A strategic environmental assessment report will include (i) an analysis of the scenario, (ii) an assessment of long-term and indirect impacts, (iii) a description of the consultation process, and (iv) an explanation of option selection.

## **2. Environmental Planning and Management**

12. The borrower/client will prepare an environmental management plan (EMP) that addresses the potential impacts and risks identified by the environmental assessment. The EMP will include the proposed mitigation measures, environmental monitoring and reporting requirements, emergency response procedures, related institutional or organizational arrangements, capacity development and training measures, implementation schedule, cost estimates, and performance indicators. Where impacts and risks cannot be avoided or prevented, mitigation measures and actions will be identified so that the project is designed, constructed, and operated in compliance with applicable laws and regulations and meets the requirements specified in this document. The level of detail and complexity of the environmental planning documents and the priority of the identified measures and actions will be commensurate with the project's impacts and risks. Key considerations include mitigation of potential adverse impacts to the level of "no significant harm to third parties", the polluter pays principle, the precautionary approach, and adaptive management.

13. If some residual impacts are likely to remain significant after mitigation, the EMP will also include appropriate compensatory measures (offset) that aim to ensure that the project does not cause significant net degradation to the environment. Such measures may relate, for instance, to conservation of habitat and biodiversity, preservation of ambient conditions, and greenhouse gas emissions. Monetary compensation in lieu of offset is acceptable in exceptional circumstances, provided that the compensation is used to provide environmental benefits of the same nature and is commensurate with the project's residual impact.

14. The EMP will define expected outcomes as measurable events to the extent possible and will include performance indicators or targets that can be tracked over defined periods. It will be responsive to changes in project design, such as a major change in project location or route, or in technology, unforeseen events, and monitoring results.

15. At times, a third party's involvement will influence implementation of the EMP. A third party may be, inter alia, a government agency, a contractor, or an operator of an associated facility. When the third-party risk is high and the borrower/client has control or influence over the actions and behavior of the third party, the borrower/client will collaborate with the third party to



achieve the outcome consistent with the requirements for the borrower/client. Specific actions will be determined on a case-by-case basis.

16. The borrower/client will use qualified and experienced experts to prepare the environmental assessment and the EMP. For highly complex and sensitive projects, independent advisory panels of experts not affiliated with the project will be used during project preparation and implementation.

### **3. Information Disclosure**

17. The borrower/client will submit to ADB the following documents for disclosure on ADB's website:

- (i) a draft full EIA (including the draft EMP) at least 120 days prior to ADB Board consideration, and/or environmental assessment and review frameworks before project appraisal, where applicable;
- (ii) the final EIA/IEE;
- (iii) a new or updated EIA/IEE and corrective action plan prepared during project implementation, if any; and
- (iv) the environmental monitoring reports.

18. The borrower/client will provide relevant environmental information, including information from the documents in para. 17 in a timely manner, in an accessible place and in a form and language(s) understandable to affected people and other stakeholders. For illiterate people, other suitable communication methods will be used.

### **4. Consultation and Participation**

19. The borrower/client will carry out meaningful consultation with affected people and other concerned stakeholders, including civil society, and facilitate their informed participation. Meaningful consultation is a process that (i) begins early in the project preparation stage and is carried out on an ongoing basis throughout the project cycle;<sup>1</sup> (ii) provides timely disclosure of relevant and adequate information that is understandable and readily accessible to affected people; (iii) is undertaken in an atmosphere free of intimidation or coercion; (iv) is gender inclusive and responsive, and tailored to the needs of disadvantaged and vulnerable groups; and (v) enables the incorporation of all relevant views of affected people and other stakeholders into decision making, such as project design, mitigation measures, the sharing of development benefits and opportunities, and implementation issues. Consultation will be carried out in a manner commensurate with the impacts on affected communities. The consultation process and its results are to be documented and reflected in the environmental assessment report.

### **5. Grievance Redress Mechanism**

20. The borrower/client will establish a mechanism to receive and facilitate resolution of affected peoples' concerns, complaints, and grievances about the project's environmental performance. The grievance mechanism should be scaled to the risks and adverse impacts of the project. It should address affected people's concerns and complaints promptly, using an understandable and transparent process that is gender responsive, culturally appropriate, and

<sup>1</sup> For environment category A projects, such consultations will necessarily include consultations at the early stage of EIA field work and when the draft EIA report is available during project preparation, and before project appraisal by ADB.

readily accessible to all segments of the affected people at no costs and without retribution. The mechanism should not impede access to the country's judicial or administrative remedies. The affected people will be appropriately informed about the mechanism.

## **6. Monitoring and Reporting**

21. The borrower/client will monitor and measure the progress of implementation of the EMP. The extent of monitoring activities will be commensurate with the project's risks and impacts. In addition to recording information to track performance, the borrower/client will undertake inspections to verify compliance with the EMP and progress toward the expected outcomes. For projects likely to have significant adverse environmental impacts, the borrower/client will retain qualified and experienced external experts or qualified NGOs to verify its monitoring information. The borrower/client will document monitoring results, identify the necessary corrective actions, and reflect them in a corrective action plan. The borrower/client will implement these corrective actions and follow up on these actions to ensure their effectiveness.

22. The borrower/client will prepare periodic monitoring reports that describe progress with implementation of the EMP and compliance issues and corrective actions, if any. The borrower/client will submit at least semiannual monitoring reports during construction for projects likely to have significant adverse environmental impacts, and quarterly monitoring reports for highly complex and sensitive projects. For projects likely to have significant adverse environmental impacts during operation, reporting will continue at the minimum on an annual basis. Such periodic reports will be posted in a location accessible to the public. Project budgets will reflect the costs of monitoring and reporting requirements.

## **7. Unanticipated Environmental Impacts**

23. Where unanticipated environmental impacts become apparent during project implementation, the borrower/client will update the environmental assessment and EMP or prepare a new environmental assessment and EMP to assess the potential impacts, evaluate the alternatives, and outline mitigation measures and resources to address those impacts.

## **8. Biodiversity Conservation and Sustainable Natural Resource Management**

24. The borrower/client will assess the significance of project impacts and risks on biodiversity<sup>2</sup> and natural resources as an integral part of the environmental assessment process specified in paras. 4–10. The assessment will focus on the major threats to biodiversity, which include destruction of habitat and introduction of invasive alien species, and on the use of natural resources in an unsustainable manner. The borrower/client will need to identify measures to avoid, minimize, or mitigate potentially adverse impacts and risks and, as a last resort, propose compensatory measures, such as biodiversity offsets, to achieve no net loss or a net gain of the affected biodiversity.

### **a. Modified Habitats**

25. In areas of modified habitat, where the natural habitat has apparently been altered, often through the introduction of alien species of plants and animals, such as in agricultural areas, the

---

<sup>2</sup> The variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.

borrower/client will exercise care to minimize any further conversion or degradation of such habitat, and will, depending on the nature and scale of the project, identify opportunities to enhance habitat and protect and conserve biodiversity as part of project operations.

**b. Natural Habitats**

26. In areas of natural habitat,<sup>3</sup> the project will not significantly convert or degrade<sup>4</sup> such habitat, unless the following conditions are met:

- (i) No alternatives are available.
- (ii) A comprehensive analysis demonstrates that the overall benefits from the project will substantially outweigh the project costs, including environmental costs.
- (iii) Any conversion or degradation is appropriately mitigated.

27. Mitigation measures will be designed to achieve at least no net loss of biodiversity. They may include a combination of actions, such as postproject restoration of habitats, offset of losses through the creation or effective conservation of ecologically comparable areas that are managed for biodiversity while respecting the ongoing use of such biodiversity by Indigenous Peoples or traditional communities, and compensation to direct users of biodiversity.

**c. Critical Habitats**

28. No project activity will be implemented in areas of critical habitat<sup>5</sup> unless the following requirements are met:

- (i) There are no measurable adverse impacts, or likelihood of such, on the critical habitat which could impair its high biodiversity value or the ability to function.
- (ii) The project is not anticipated to lead to a reduction in the population of any recognized endangered or critically endangered species<sup>6</sup> or a loss in area of the habitat concerned such that the persistence of a viable and representative host ecosystem be compromised.
- (iii) Any lesser impacts are mitigated in accordance with para. 27.

29. When the project involves activities in a critical habitat, the borrower/client will retain qualified and experienced external experts to assist in conducting the assessment.

<sup>3</sup> Land and water areas where the biological communities are formed largely by native plant and animal species, and where human activity has not essentially modified the area's primary ecological functions.

<sup>4</sup> Significant conversion or degradation is (i) the elimination or severe diminution of the integrity of a habitat caused by a major, long-term change in land or water use; or (ii) the modification of a habitat that substantially reduces the habitat's ability to maintain viable populations of its native species. Significant conversion may include, for example, land clearing; replacement of natural vegetation (for example, by crops or tree plantations); permanent flooding (by a reservoir for instance); drainage, dredging, filling, or canalization of wetlands; or surface mining.

<sup>5</sup> Critical habitat is a subset of both natural and modified habitat that deserves particular attention. Critical habitat includes areas with high biodiversity value, including habitat required for the survival of critically endangered or endangered species; areas having special significance for endemic or restricted-range species; sites that are critical for the survival of migratory species; areas supporting globally significant concentrations or numbers of individuals of congregatory species; areas with unique assemblages of species or that are associated with key evolutionary processes or provide key ecosystem services; and areas having biodiversity of significant social, economic, or cultural importance to local communities. Critical habitats include those areas either legally protected or officially proposed for protection, such as areas that meet the criteria of the World Conservation Union classification, the Ramsar List of Wetlands of International Importance, and the United Nations Educational, Scientific, and Cultural Organization's world natural heritage sites.

<sup>6</sup> As defined by the World Conservation Union's Red List of Threatened Species or as defined in any national legislation.



#### **d. Legally Protected Areas**

30. In circumstances where some project activities are located within a legally protected area, in addition to the requirement specified in para. 28, the borrower/client will meet the following requirements:

- (i) Act in a manner consistent with defined protected area management plans.
- (ii) Consult protected area sponsors and managers, local communities, and other key stakeholders on the proposed project.
- (iii) Implement additional programs, as appropriate, to promote and enhance the conservation aims of the protected area.

#### **e. Invasive Alien Species**

31. The borrower/client will not intentionally introduce any new alien species (that is, species not currently established in the country or region of the project) unless carried out in accordance with the existing regulatory framework for such introduction, if such a framework is present, or unless the introduction is subject to a risk assessment (as part of the environmental assessment) to determine the potential for invasive behavior. Under no circumstances must species known to be invasive be introduced into new environments. The borrower/client will undertake assessment of the possibility of accidental or unintended introduction of such invasive alien species and identify measures to minimize the potential for release.

#### **f. Management and Use of Renewable Natural Resources**

32. Renewable natural resources will be managed in a sustainable manner. Sustainable resource management is management of the use, development, and protection of resources in a way, or at a rate, that enables people and communities, including Indigenous Peoples, to provide for their current social, economic, and cultural well-being while also sustaining the potential of those resources to meet the reasonably foreseeable needs of future generations. This includes safeguarding the life-supporting capacity of air, water, and soil ecosystems. Where possible, the borrower/client will demonstrate the sustainable management of resources through an appropriate system of independent certification.

### **9. Pollution Prevention and Abatement**

33. During the design, construction, and operation of the project the borrower/client will apply pollution prevention and control technologies and practices consistent with international good practice, as reflected in internationally recognized standards such as the World Bank Group's *Environment, Health and Safety Guidelines*.<sup>7</sup> These standards contain performance levels and measures that are normally acceptable and applicable to projects. When host country regulations differ from these levels and measures, the borrower/client will achieve whichever is more stringent. If less stringent levels or measures are appropriate in view of specific project circumstances, the borrower/client will provide full and detailed justification for any proposed alternatives that are consistent with the requirements presented in this document.

**a. Pollution Prevention, Resource Conservation, and Energy Efficiency**

34. The borrower/client will avoid, or where avoidance is impossible, will minimize or control the intensity or load of pollutant emission and discharge. In addition the borrower/client will examine and incorporate in its operations resource conservation and energy efficiency measures consistent with the principles of cleaner production. When the project has the potential to constitute a significant source of emissions in an already degraded area, strategies that help improve ambient conditions, such as evaluating alternative project locations and considering emissions offsets, will be introduced.

**b. Wastes**

35. The borrower/client will avoid, or where avoidance is not possible, will minimize or control the generation of hazardous and nonhazardous wastes and the release of hazardous materials resulting from project activities. Where waste cannot be recovered or reused, it will be treated, destroyed, and disposed of in an environmentally sound manner. If the generated waste is considered hazardous, the client will explore reasonable alternatives for its environmentally sound disposal considering the limitations applicable to its transboundary movement.<sup>8</sup> When waste disposal is conducted by third parties, the borrower/client will use contractors that are reputable and legitimate enterprises licensed by the relevant regulatory agencies.

**c. Hazardous Materials**

36. The borrower/client will avoid the manufacture, trade, and use of hazardous substances and materials subject to international bans or phaseouts because of their high toxicity to living organisms, environmental persistence, potential for bioaccumulation, or potential for depletion of the ozone layer<sup>9</sup> and will consider the use of less hazardous substitutes for such chemicals and materials.

**d. Pesticide Use and Management**

37. The environmental assessment will ascertain that any pest and/or vector management activities related to the project are based on integrated pest management approaches and aim to reduce reliance on synthetic chemical pesticides in agricultural and public health projects. The borrower/client's integrated pest/vector management program will entail coordinated use of pest and environmental information along with available pest/vector control methods, including cultural practices, biological, genetic and, as a last resort, chemical means to prevent unacceptable levels of pest damage. The health and environmental risks associated with pest management should be minimized with support, as needed, to institutional capacity development, to help regulate and monitor the distribution and use of pesticides and enhance the application of integrated pest management.

38. The borrower/client will not use products that fall in World Health Organization Recommended Classification of Pesticides by Hazard Classes Ia (extremely hazardous) and Ib (highly hazardous) or Class II (moderately hazardous), if the project host country lacks restrictions on distribution and use of these chemicals, or if they are likely to be accessible to personnel without proper training, equipment, and facilities to handle, store, apply and dispose

<sup>8</sup> Consistent with the objectives of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes.

<sup>9</sup> Consistent with the objectives of the Stockholm Convention on Persistent Organic Pollutants and the Montreal Protocol on Substances that Deplete the Ozone Layer.

of these products properly. The borrower/client will handle, store, apply and dispose of pesticides in accordance with international good practice such as the Food and Agricultural Organization's International Code of Conduct on the Distribution and Use of Pesticides.

#### **e. Greenhouse Gas Emissions**

39. The borrower/client will promote the reduction of project-related anthropogenic greenhouse gas emissions in a manner appropriate to the nature and scale of project operations and impacts. During the development or operation of projects that are expected to or currently produce significant quantities of greenhouse gases,<sup>10</sup> the borrower/client will quantify direct emissions from the facilities within the physical project boundary and indirect emissions associated with the off-site production of power used by the project. The borrower/client will conduct quantification and monitoring of greenhouse gas emissions annually in accordance with internationally recognized methodologies.<sup>11</sup> In addition, the borrower/client will evaluate technically and financially feasible and cost-effective options to reduce or offset project-related greenhouse gas emissions during project design and operation, and pursue appropriate options.

### **10. Health and Safety**

#### **a. Occupational Health and Safety**

40. The borrower/client will provide workers<sup>12</sup> with a safe and healthy working environment, taking into account risks inherent to the particular sector and specific classes of hazards in the borrower's/client's work areas, including physical, chemical, biological, and radiological hazards. The borrower/client will take steps to prevent accidents, injury, and disease arising from, associated with, or occurring during the course of work by (i) identifying and minimizing, so far as reasonably practicable, the causes of potential hazards to workers; (ii) providing preventive and protective measures, including modification, substitution, or elimination of hazardous conditions or substances; (iii) providing appropriate equipment to minimize risks and requiring and enforcing its use; (iv) training workers and providing them with appropriate incentives to use and comply with health and safety procedures and protective equipment; (v) documenting and reporting occupational accidents, diseases, and incidents; and (vi) having emergency prevention, preparedness, and response arrangements in place.

41. The borrower/client will apply preventive and protective measures consistent with international good practice, as reflected in internationally recognized standards such as the World Bank Group's *Environment, Health and Safety Guidelines* (footnote 7).

#### **b. Community Health and Safety**

42. The borrower/client will identify and assess the risks to, and potential impacts on, the safety of affected communities during the design, construction, operation, and decommissioning of the project, and will establish preventive measures and plans to address them in a manner commensurate with the identified risks and impacts. These measures will favor the prevention

<sup>10</sup> Even though the significance of a project's contribution to greenhouse gas emissions varies between industry sectors, the significance threshold to be considered for these requirements is generally 100,000 tons of carbon dioxide equivalent per year for the aggregate emissions of direct sources and indirect sources associated with electricity purchased for own consumption.

<sup>11</sup> Estimation methodologies are provided by the Intergovernmental Panel on Climate Change (IPCC), various international organizations, and relevant host country agencies.

<sup>12</sup> Including nonemployee workers engaged by the borrower/client through contractors or other intermediaries to work on project sites or perform work directly related to the project's core functions.



or avoidance of risks and impacts over their minimization and reduction. Consideration will be given to potential exposure to both accidental and natural hazards, especially where the structural elements of the project are accessible to members of the affected community or where their failure could result in injury to the community. The borrower/client will avoid or minimize the exacerbation of impacts caused by natural hazards, such as landslides or floods, that could result from land use changes due to project activities.

43. The borrower/client will inform affected communities of significant potential hazards in a culturally appropriate manner. The borrower/client will be prepared to respond to accidental and emergency situations. This preparation will include response planning document(s) that addresses the training, resources, responsibilities, communications, procedures, and other aspects required to respond effectively to emergencies associated with project hazards. Appropriate information about emergency preparedness and response activities, resources, and responsibilities will be disclosed to affected communities.

44. When structural elements or components, such as dams, tailings dams, or ash ponds, are situated in high-risk locations and their failure or malfunction may threaten the safety of communities, the borrower/client will engage qualified and experienced experts, separate from those responsible for project design and construction, to conduct a review as early as possible in project development and throughout project design, construction, and commissioning.

## **11. Physical Cultural Resources**

45. The borrower/client is responsible for siting and designing the project to avoid significant damage to physical cultural resources.<sup>13</sup> Such resources likely to be affected by the project will be identified, and qualified and experienced experts will assess the project's potential impacts on these resources using field-based surveys as an integral part of the environmental assessment process specified in paras. 4–10.

46. When a project may affect physical cultural resources, the borrower/client will consult with affected communities who use, or have used them within living memory, for long-standing cultural purposes to identify physical cultural resources of importance and to incorporate the views of the affected communities on such resources into the borrower's/client's decision-making process. Consultation will also involve relevant national or local regulatory agencies that are entrusted with protecting physical cultural resources. The findings are disclosed as part of, and in the same manner as, the environmental assessment report, except when such disclosure would compromise or jeopardize the safety or integrity of the physical cultural resources.

47. When the project is likely to have adverse impacts on physical cultural resources, the borrower/client will identify appropriate measures for avoiding or mitigating these impacts as part of the environmental planning process specified in paras. 12–16. These measures may range from avoidance to full site protection to selective mitigation, including salvage and documentation, in cases where a portion or all of the physical cultural resources may be lost.

48. When the proposed location of a project is in areas where physical cultural resources are expected to be found as determined during the environmental assessment process, chance finds procedures will be included in the EMP. Chance finds shall not be disturbed until an

---

<sup>13</sup> Defined as movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. Physical cultural resources may be located in urban or rural settings and may be above or below ground or under water. Their cultural interest may be at the local, provincial, national, or international level.

assessment by a competent specialist is made and actions consistent with these requirements are identified.

49. The project will not remove any physical cultural resources unless the following conditions are met:

- (i) No alternatives to removal are available.
- (ii) The overall benefits of the project substantially outweigh the anticipated cultural heritage loss from removal.
- (iii) Any removal is conducted in accordance with relevant provisions of national and/or local laws, regulations, and protected area management plans and national obligations under international laws, and employs the best available techniques.



## OUTLINE OF AN ENVIRONMENTAL IMPACT ASSESSMENT REPORT

This outline is part of the Safeguard Requirements 1. An environmental assessment report is required for all environment category A and B projects. Its level of detail and comprehensiveness is commensurate with the significance of potential environmental impacts and risks. A typical EIA report contains the following major elements, and an IEE may have a narrower scope depending on the nature of the project. The substantive aspects of this outline will guide the preparation of environmental impact assessment reports, although not necessarily in the order shown.

### A. Executive Summary

This section describes concisely the critical facts, significant findings, and recommended actions.

### B. Policy, Legal, and Administrative Framework

This section discusses the national and local legal and institutional framework within which the environmental assessment is carried out. It also identifies project-relevant international environmental agreements to which the country is a party.

### C. Description of the Project

This section describes the proposed project; its major components; and its geographic, ecological, social, and temporal context, including any associated facility required by and for the project (for example, access roads, power plants, water supply, quarries and borrow pits, and spoil disposal). It normally includes drawings and maps showing the project's layout and components, the project site, and the project's area of influence.

### D. Description of the Environment (Baseline Data)

This section describes relevant physical, biological, and socioeconomic conditions within the study area. It also looks at current and proposed development activities within the project's area of influence, including those not directly connected to the project. It indicates the accuracy, reliability, and sources of the data.

### E. Anticipated Environmental Impacts and Mitigation Measures

This section predicts and assesses the project's likely positive and negative direct and indirect impacts to physical, biological, socioeconomic (including occupational health and safety, community health and safety, vulnerable groups and gender issues, and impacts on livelihoods through environmental media [Appendix 2, para. 6]), and physical cultural resources in the project's area of influence, in quantitative terms to the extent possible; identifies mitigation measures and any residual negative impacts that cannot be mitigated; explores opportunities for enhancement; identifies and estimates the extent and quality of available data, key data gaps, and uncertainties associated with predictions and specifies topics that do not require further attention; and examines global, transboundary, and cumulative impacts as appropriate.

### F. Analysis of Alternatives

This section examines alternatives to the proposed project site, technology, design, and operation—including the no project alternative—in terms of their potential environmental

impacts; the feasibility of mitigating these impacts; their capital and recurrent costs; their suitability under local conditions; and their institutional, training, and monitoring requirements. It also states the basis for selecting the particular project design proposed and, justifies recommended emission levels and approaches to pollution prevention and abatement.

#### **G. Information Disclosure, Consultation, and Participation**

This section:

- (i) describes the process undertaken during project design and preparation for engaging stakeholders, including information disclosure and consultation with affected people and other stakeholders;
- (ii) summarizes comments and concerns received from affected people and other stakeholders and how these comments have been addressed in project design and mitigation measures, with special attention paid to the needs and concerns of vulnerable groups, including women, the poor, and Indigenous Peoples; and
- (iii) describes the planned information disclosure measures (including the type of information to be disseminated and the method of dissemination) and the process for carrying out consultation with affected people and facilitating their participation during project implementation.

#### **H. Grievance Redress Mechanism**

This section describes the grievance redress framework (both informal and formal channels), setting out the time frame and mechanisms for resolving complaints about environmental performance.

#### **I. Environmental Management Plan**

This section deals with the set of mitigation and management measures to be taken during project implementation to avoid, reduce, mitigate, or compensate for adverse environmental impacts (in that order of priority). It may include multiple management plans and actions. It includes the following key components (with the level of detail commensurate with the project's impacts and risks):

- (i) Mitigation:
  - (a) identifies and summarizes anticipated significant adverse environmental impacts and risks;
  - (b) describes each mitigation measure with technical details, including the type of impact to which it relates and the conditions under which it is required (for instance, continuously or in the event of contingencies), together with designs, equipment descriptions, and operating procedures, as appropriate; and
  - (c) provides links to any other mitigation plans (for example, for involuntary resettlement, Indigenous Peoples, or emergency response) required for the project.
- (ii) Monitoring:
  - (a) describes monitoring measures with technical details, including parameters to be measured, methods to be used, sampling locations,

- frequency of measurements, detection limits and definition of thresholds that will signal the need for corrective actions; and
  - (b) describes monitoring and reporting procedures to ensure early detection of conditions that necessitate particular mitigation measures and document the progress and results of mitigation.
- (iii) Implementation arrangements:
  - (a) specifies the implementation schedule showing phasing and coordination with overall project implementation;
  - (b) describes institutional or organizational arrangements, namely, who is responsible for carrying out the mitigation and monitoring measures, which may include one or more of the following additional topics to strengthen environmental management capability: technical assistance programs, training programs, procurement of equipment and supplies related to environmental management and monitoring, and organizational changes; and
  - (c) estimates capital and recurrent costs and describes sources of funds for implementing the environmental management plan.
- (iv) Performance indicators: describes the desired outcomes as measurable events to the extent possible, such as performance indicators, targets, or acceptance criteria that can be tracked over defined time periods.

## **J. Conclusion and Recommendation**

This section provides the conclusions drawn from the assessment and provides recommendations.

## SAFEGUARD REQUIREMENTS 2: INVOLUNTARY RESETTLEMENT

### A. Introduction

1. ADB experience indicates that involuntary resettlement under development projects, if unmitigated, could give rise to severe economic, social, and environmental risks: production systems are dismantled; people face impoverishment when their productive assets or income sources are lost; people are relocated to environments where their productive skills may be less applicable, and the competition for resources greater; community institutions and social networks are weakened; kin groups are dispersed; and cultural identity, traditional authority, and the potential for mutual help are diminished or lost. ADB therefore seeks to avoid involuntary resettlement wherever possible; minimize involuntary resettlement by exploring project and design alternatives; enhance, or at least restore, the livelihoods of all displaced persons in real terms relative to pre-project levels; and improve the standards of living of the affected poor and other vulnerable groups.

2. Safeguard Requirements 2 outlines the requirements that borrowers/clients are required to meet in delivering involuntary resettlement safeguards to projects supported by the Asian Development Bank (ADB). It discusses the objectives, scope of application, and underscores the requirements for undertaking the social impact assessment and resettlement planning process, preparing social impact assessment reports and resettlement planning documents, exploring negotiated land acquisition, disclosing information and engaging in consultations, establishing a grievance mechanism, and resettlement monitoring and reporting.

### B. Objectives

3. The objectives are to avoid involuntary resettlement wherever possible; to minimize involuntary resettlement by exploring project and design alternatives; to enhance, or at least restore, the livelihoods of all displaced persons<sup>1</sup> in real terms relative to pre-project levels; and to improve the standards of living of the displaced poor and other vulnerable groups.

### C. Scope of Application

4. The requirements apply to all ADB-financed and/or ADB-administered sovereign and non-sovereign projects, and their components regardless of the source of financing, including investment projects funded by a loan; and/or a grant; and/or other means, such as equity and/or guarantees (hereafter broadly referred to as projects). The requirements also cover involuntary resettlement actions conducted by the borrower/client in anticipation of ADB support.

5. The involuntary resettlement requirements apply to full or partial, permanent or temporary physical displacement (relocation, loss of residential land, or loss of shelter) and economic displacement (loss of land, assets, access to assets, income sources, or means of livelihoods) resulting from (i) involuntary acquisition of land, or (ii) involuntary restrictions on land use or on access to legally designated parks and protected areas. Resettlement is considered involuntary when displaced individuals or communities do not have the right to refuse land acquisition that results in displacement. This occurs in cases where (i) lands are acquired through expropriation based on eminent domain; and (ii) lands are acquired through negotiated settlements, if expropriation process would have resulted upon the failure of negotiation.

---

<sup>1</sup> In the context of involuntary resettlement, displaced persons are those who are physically displaced (relocation, loss of residential land, or loss of shelter) and/or economically displaced (loss of land, assets, access to assets, income sources, or means of livelihoods) as a result of (i) involuntary acquisition of land, or (ii) involuntary restrictions on land use or on access to legally designated parks and protected areas.



6. If potential adverse economic, social, or environmental impacts from project activities other than land acquisition (including involuntary restrictions on land use, or on access to legally designated parks and protected areas) are identified, such as loss of access to assets or resources or restrictions on land use, they will be avoided, or at least minimized, mitigated, or compensated for, through the environmental assessment process. If these impacts are found to be significantly adverse at any stage of the project, the borrower/client will be required to develop and implement a management plan to restore the livelihood of affected persons to at least pre-project level or better.

#### **D. Requirements**

##### **1. Compensation, Assistance and Benefits for Displaced Persons**

7. Displaced persons in a project area could be of three types: (i) persons with formal legal rights to land lost in its entirety or in part; (ii) persons who lost the land they occupy in its entirety or in part who have no formal legal rights to such land, but who have claims to such lands that are recognized or recognizable under national laws; and (iii) persons who lost the land they occupy in its entirety or in part who have neither formal legal rights nor recognized or recognizable claims to such land. The involuntary resettlement requirements apply to all three types of displaced persons.

8. The borrower/client will provide adequate and appropriate replacement land and structures or cash compensation at full replacement cost for lost land and structures, adequate compensation for partially damaged structures, and relocation assistance, if applicable, to those persons described in para. 7(i) and 7(ii) prior to their relocation. For those persons described in para. 7(iii), the borrower/client will compensate them for the loss of assets other than land, such as dwellings, and also for other improvements to the land, at full replacement cost. The entitlements of those under para. 7(iii) is given only if they occupied the land or structures in the project area prior to the cutoff date for eligibility for resettlement assistance.

9. Preference will be given to land-based resettlement strategies for displaced persons whose livelihoods are land-based. These strategies may include resettlement on public land, or on private land acquired or purchased for resettlement. Whenever replacement land is offered, displaced persons are provided with land for which a combination of productive potential, locational advantages, and other factors is at least equivalent to the advantages of the land taken. If land is not the preferred option of the displaced persons, or sufficient land is not available at a reasonable price, non-land-based options built around opportunities for employment or self-employment should be provided in addition to cash compensation for land and other assets lost. The lack of land will be demonstrated and documented to the satisfaction of ADB.

10. The rate of compensation for acquired housing, land and other assets will be calculated at full replacement costs. The calculation of full replacement cost will be based on the following elements: (i) fair market value; (ii) transaction costs; (iii) interest accrued, (iv) transitional and restoration costs; and (v) other applicable payments, if any. Where market conditions are absent or in a formative stage, the borrower/client will consult with the displaced persons and host populations to obtain adequate information about recent land transactions, land value by types, land titles, land use, cropping patterns and crop production, availability of land in the project area and region, and other related information. The borrower/client will also collect baseline data on housing, house types, and construction materials. Qualified and experienced experts will undertake the valuation of acquired assets. In applying this method of valuation, depreciation of structures and assets should not be taken into account.

11. In the case of physically displaced persons, the borrower/client will provide (i) relocation assistance, secured tenure to relocation land, better housing at resettlement sites with comparable access to employment and production opportunities, and civic infrastructure and community services as required; (ii) transitional support and development assistance, such as land development, credit facilities, training, or employment opportunities; and (iii) opportunities to derive appropriate development benefits from the project.

12. In the case of economically displaced persons, regardless of whether or not they are physically displaced, the borrower/client will promptly compensate for the loss of income or livelihood sources at full replacement cost. The borrower/client will also provide assistance such as credit facilities, training, and employment opportunities so that they can improve, or at least restore, their income-earning capacity, production levels, and standards of living to pre-displacement levels. The borrower/client will also provide opportunities to displaced persons to derive appropriate development benefits from the project. The borrower/client will compensate economically displaced people under paragraph 7(iii) for lost assets such as crops, irrigation infrastructure, and other improvements made to the land (but not for the land) at full replacement cost. In cases where land acquisition affects commercial structures, affected business owners are entitled to (i) the costs of reestablishing commercial activities elsewhere; (ii) the net income lost during the transition period; and (iii) the costs of transferring and reinstalling plant, machinery, or other equipment. Business owners with legal rights or recognized or recognizable claims to land where they carry out commercial activities are entitled to replacement property of equal or greater value or cash compensation at full replacement cost.

13. Involuntary resettlement should be conceived of and executed as part of a development project or program. In this regard, the best strategy is to provide displaced persons with opportunities to share project benefits in addition to providing compensation and resettlement assistance. Such opportunities would help prevent impoverishment among affected persons, and also help meet the ethical demand for development interventions to spread development benefits widely. Therefore borrowers/clients are encouraged to ascertain specific opportunities for engaging affected persons as project beneficiaries and to discuss how to spread such opportunities as widely as possible among affected persons in the resettlement plan.

14. The borrower/client will ensure that no physical displacement or economic displacement will occur until (i) compensation at full replacement cost has been paid to each displaced person for project components or sections that are ready to be constructed; (ii) other entitlements listed in the resettlement plan have been provided to displaced persons; and (iii) a comprehensive income and livelihood rehabilitation program, supported by an adequate budget, is in place to help displaced persons improve, or at least restore, their incomes and livelihoods. While compensation is required to be paid before displacement, full implementation of the resettlement plan might take longer. If project activities restrict land use or access to legally designated parks and protected areas, such restrictions will be imposed in accordance with the timetable outlined in the resettlement plan agreed between the borrower/client and ADB.

## **2. Social Impact Assessment**

15. The borrower/client will conduct socioeconomic survey(s) and a census, with appropriate socioeconomic baseline data to identify all persons who will be displaced by the project and to assess the project's socioeconomic impacts on them. For this purpose, normally a cut-off date will be established by the host government procedures. In the absence of such procedures, the borrower/client will establish a cut-off date for eligibility. Information regarding the cutoff date will be documented and disseminated throughout the project area. The social impact assessment (SIA) report will include (i) identified past, present and future potential social impacts, (ii) an

inventory of displaced persons<sup>2</sup> and their assets,<sup>3</sup> (iii) an assessment of their income and livelihoods, and (iv) gender-disaggregated information pertaining to the economic and sociocultural conditions of displaced persons. The project's potential social impacts and risks will be assessed against the requirements presented in this document and applicable laws and regulations of the jurisdictions in which the project operates that pertain to involuntary resettlement matters, including host country obligations under international law.

16. As part of the social impact assessment, the borrower/client will identify individuals and groups who may be differentially or disproportionately affected by the project because of their disadvantaged or vulnerable status. Where such individuals and groups are identified, the borrower/client will propose and implement targeted measures so that adverse impacts do not fall disproportionately on them and they are not disadvantaged in relation to sharing the benefits and opportunities resulting from development.

### 3. Resettlement Planning

17. The borrower/client will prepare a resettlement plan, if the proposed project will have involuntary resettlement impacts. The objective of a resettlement plan is to ensure that livelihoods and standards of living of displaced persons are improved, or at least restored to pre-project (physical and/or economic) levels and that the standards of living of the displaced poor and other vulnerable groups are improved, not merely restored, by providing adequate housing, security of land tenure and steady income and livelihood sources. The resettlement plan will address all relevant requirements specified in Safeguard Requirements 2, and its level of detail and comprehensiveness of the resettlement plan will be commensurate with the significance of involuntary resettlement impacts. An outline of resettlement plan is provided in the annex to this appendix.

18. A resettlement plan will be based on the social impact assessment and through meaningful consultation with the affected persons. A resettlement plan will include measures to ensure that the displaced persons are (i) informed about their options and entitlements pertaining to compensation, relocation, and rehabilitation; (ii) consulted on resettlement options and choices; and (iii) provided with resettlement alternatives. During the identification of the impacts of resettlement and resettlement planning, and implementation, the borrower/client will pay adequate attention to gender concerns, including specific measures addressing the need of female headed households, gender-inclusive consultation, information disclosure, and grievance mechanisms, to ensure that both men and women receive adequate and appropriate compensation for their lost property and resettlement assistance, if required, as well as assistance to restore and improve their incomes and living standards.

19. The borrower/client will analyze and summarize national laws and regulations pertaining to land acquisition, compensation payment, and relocation of affected persons in the resettlement plan. The borrower/client will compare and contrast such laws and regulations with ADB's involuntary resettlement policy principles and requirements. If a gap between the two exists, the borrower/client will propose a suitable gap-filling strategy in the resettlement plan in consultation with ADB.

<sup>2</sup> A population record of all displaced persons by their residence based on the census. If a census is not conducted prior to project appraisal and the resettlement plan is based on a sample survey, an updated resettlement plan will be prepared based on a census of displaced persons after the detailed measurement survey has been completed but before any land acquisition for the project.

<sup>3</sup> The asset inventory is a preliminary record of affected or lost assets at the household, enterprise, or community level.



20. All costs of compensation, relocation, and livelihood rehabilitation will be considered project costs. To ensure timely availability of required resources, land acquisition and resettlement costs may be considered for inclusion in ADB financing. Resettlement expenditure is eligible for ADB financing if incurred in compliance with ADB's safeguard policy statement and with ADB-approved resettlement planning documents. If ADB funds are used for resettlement costs, such expenditure items will be clearly reflected in the resettlement plan.

21. The borrower/client will include detailed measures for income restoration and livelihood improvement of displaced persons in the resettlement plan. Income sources and livelihoods affected by project activities will be restored to pre-project levels, and the borrower/client will make every attempt to improve the incomes of displaced persons so that they can benefit from the project. For vulnerable persons and households affected, the resettlement plan will include measures to provide extra assistance so that they can improve their incomes in comparison with pre-project levels. The resettlement plan will specify the income and livelihoods restoration strategy, the institutional arrangements, the monitoring and reporting framework, the budget, and the time-bound implementation schedule.

22. The information contained in a resettlement plan may be tentative until a census of affected persons has been completed. Soon after the completion of engineering designs, the borrower/client will finalize the resettlement plan by completing the census and inventories of loss of assets. At this stage, changes to the resettlement plan take the form of revising the number of displaced persons, the extent of land acquired, the resettlement budget, and the timetable for implementing the resettlement plan. The entitlement matrix of the resettlement plan may be updated at this stage to reflect the relevant changes but the standards set in the original entitlement matrix cannot be lowered when the resettlement plan is revised and finalized. The borrower/client will ensure that the final resettlement plan (i) adequately addresses all involuntary resettlement issues pertaining to the project, (ii) describes specific mitigation measures that will be taken to address the issues, and (iii) ensures the availability of sufficient resources to address the issues satisfactorily.

23. Projects with significant involuntary resettlement impacts will need adequate contingency funds to address involuntary resettlement impacts that are identified during project implementation. The borrower/client will ensure that such funds are readily available. Moreover, the borrower/client will consult with displaced persons identified after the formulation of the final resettlement plan and inform them of their entitlements and relocation options. The borrower/client will prepare a supplementary resettlement plan, or a revised resettlement plan, and will submit it to ADB for review before any contracts are awarded.

24. The borrower/client will use qualified and experienced experts to prepare the social impact assessment and the resettlement plan. For highly complex and sensitive projects, independent advisory panels of experts not affiliated with the project will be used during project preparation and implementation.

#### **4. Negotiated Land Acquisition**

25. Safeguard Requirements 2 does not apply to negotiated settlements, unless expropriation would result upon the failure of negotiations. Negotiated settlements help avoid expropriation and eliminate the need to use governmental authority to remove people forcibly. The borrower/client is encouraged to acquire land and other assets through a negotiated settlement wherever possible, based on meaningful consultation with affected persons, including those without legal title to assets. A negotiated settlement will offer adequate and fair price for land and/or other assets. The borrower/client will ensure that any negotiations with displaced



persons openly address the risks of asymmetry of information and bargaining power of the parties involved in such transactions. For this purpose, the borrower/client will engage an independent external party to document the negotiation and settlement processes. The borrower/client will agree with ADB on consultation processes, policies, and laws that are applicable to such transactions; third-party validation; mechanisms for calculating the replacement costs of land and other assets affected; and record-keeping requirements.

## **5. Information Disclosure**

26. The borrower/client will submit the following documents to ADB for disclosure on ADB's website:

- (i) a draft resettlement plan and/or resettlement framework endorsed by the borrower/client before project appraisal;
- (ii) the final resettlement plan endorsed by the borrower/client after the census of affected persons has been completed;
- (iii) a new resettlement plan or an updated resettlement plan, and a corrective action plan prepared during project implementation, if any; and
- (iv) the resettlement monitoring reports.

27. The borrower/client will provide relevant resettlement information, including information from the documents in para. 26 in a timely manner, in an accessible place and in a form and language(s) understandable to affected persons and other stakeholders. For illiterate people, suitable other communication methods will be used.

## **6. Consultation and Participation**

28. The borrower/client will conduct meaningful consultation with affected persons, their host communities, and civil society for every project and subproject identified as having involuntary resettlement impacts. Meaningful consultation is a process that (i) begins early in the project preparation stage and is carried out on an ongoing basis throughout the project cycle; (ii) provides timely disclosure of relevant and adequate information that is understandable and readily accessible to affected people; (iii) is undertaken in an atmosphere free of intimidation or coercion; (iv) is gender inclusive and responsive, and tailored to the needs of disadvantaged and vulnerable groups; and (v) enables the incorporation of all relevant views of affected people and other stakeholders into decision making, such as project design, mitigation measures, the sharing of development benefits and opportunities, and implementation issues. Consultation will be carried out in a manner commensurate with the impacts on affected communities. The borrower/client will pay particular attention to the need of disadvantaged or vulnerable groups, especially those below the poverty line, the landless, the elderly, female headed households, women and children, Indigenous Peoples, and those without legal title to land.

## **7. Grievance Redress Mechanism**

29. The borrower/client will establish a mechanism to receive and facilitate the resolution of affected persons' concerns and grievances about physical and economic displacement and other project impacts, paying particular attention to the impacts on vulnerable groups. The grievance redress mechanism should be scaled to the risks and adverse impacts of the project. It should address affected persons' concerns and complaints promptly, using an understandable and transparent process that is gender responsive, culturally appropriate, and readily accessible to the affected persons at no costs and without retribution. The mechanism should not impede

access to the country's judicial or administrative remedies. The borrower/client will inform affected persons about the mechanism.

#### **8. Monitoring and Reporting**

30. The borrower/client will monitor and measure the progress of implementation of the resettlement plan. The extent of monitoring activities will be commensurate with the project's risks and impacts. In addition to recording the progress in compensation payment and other resettlement activities, the borrower/client will prepare monitoring reports to ensure that the implementation of the resettlement plan has produced the desired outcomes. For projects with significant involuntary resettlement impacts, the borrower/client will retain qualified and experienced external experts or qualified NGOs to verify the borrower's/client's monitoring information. The external experts engaged by the borrower/client will advise on safeguard compliance issues, and if any significant involuntary resettlement issues are identified, a corrective action plan will be prepared to address such issues. Until such planning documents are formulated, disclosed and approved, the borrower/client will not proceed with implementing the specific project components for which involuntary resettlement impacts are identified.

31. The borrower/client will prepare semiannual monitoring reports that describe the progress of the implementation of resettlement activities and any compliance issues and corrective actions. These reports will closely follow the involuntary resettlement monitoring indicators agreed at the time of resettlement plan approval. The costs of internal and external resettlement monitoring requirements will be included in the project budget.

#### **9. Unanticipated Impacts**

32. If unanticipated involuntary resettlement impacts are found during project implementation, the borrower/client will conduct a social impact assessment and update the resettlement plan or formulate a new resettlement plan covering all applicable requirements specified in this document.

#### **10. Special Considerations for Indigenous Peoples**

33. The borrower/client will explore to the maximum extent possible alternative project designs to avoid physical relocation of Indigenous Peoples that will result in adverse impacts on their identity, culture, and customary livelihoods. If avoidance is impossible, in consultation with ADB, a combined Indigenous Peoples plan and resettlement plan could be formulated to address both involuntary resettlement and Indigenous Peoples issues. Such a combined plan will also meet all relevant requirements specified under Safeguard Requirements 3.

## **SAFEGUARD REQUIREMENTS 3: INDIGENOUS PEOPLES**

### **A. Introduction**

1. The United Nations Declaration on the Rights of Indigenous Peoples was adopted by the United Nations General Assembly in September 2007. Many countries in Asia and the Pacific have voted in favor of this nonbinding declaration. The Asian Development Bank (ADB) recognizes the rights of Indigenous Peoples to direct the course of their own development. Indigenous Peoples do not automatically benefit from development, which is often planned and implemented by those in the mainstream or dominant population in the countries in which they live. Special efforts are needed to engage Indigenous Peoples in the planning of development programs that affect them, in particular, development programs that are supposedly designed to meet their specific needs and aspirations. Indigenous Peoples are increasingly threatened as development programs infringe into areas that they traditionally own, occupy, use, or view as ancestral domain.

2. Safeguard Requirements 3 outlines the requirements that borrowers/clients are required to meet in delivering Indigenous Peoples safeguards to projects supported by ADB. It discusses the objectives and scope of application, and underscores the requirements pertaining to (i) undertaking the social impact assessment and planning process; (ii) preparing social impact assessment reports and planning documents; (iii) disclosing information and undertaking consultation, including ascertaining consent of affected Indigenous Peoples community to selected project activities; (iv) establishing a grievance mechanism; and (v) monitoring and reporting. This set of policy requirements will safeguard Indigenous Peoples' rights to maintain, sustain, and preserve their cultural identities, practices, and habitats and to ensure that projects affecting them will take the necessary measures to protect these rights.

### **B. Objectives**

3. The objective is to design and implement projects in a way that fosters full respect for Indigenous Peoples' identity, dignity, human rights, livelihood systems, and cultural uniqueness as defined by the Indigenous Peoples themselves so that they (i) receive culturally appropriate social and economic benefits, (ii) do not suffer adverse impacts as a result of projects, and (iii) can participate actively in projects that affect them.

### **C. Scope of Application**

4. The requirements apply to all ADB-financed and/or ADB-administered sovereign and non-sovereign projects, and their components regardless of the source of financing, including investment projects funded by a loan; and/or a grant; and/or other means, such as equity and/or guarantees (hereafter broadly referred to as projects). The requirements also cover actions conducted by the borrower/client in anticipation of ADB projects.

5. Within Asia and the Pacific, individual indigenous communities reflect tremendous diversity in their cultures, histories, and current circumstances. The contexts in which such peoples live are varied and changing and no universally accepted definition of Indigenous Peoples exists. Indigenous Peoples may be referred to in different countries by such terms as indigenous ethnic minorities, indigenous cultural communities, aboriginals, hill tribes, minority nationalities, scheduled tribes, or tribal groups. Such groups can be considered Indigenous Peoples for operational purposes when they possess the characteristics listed in para. 6.



6. For operational purposes, the term Indigenous Peoples is used in a generic sense to refer to a distinct, vulnerable, social and cultural group possessing the following characteristics in varying degrees:

- (i) self-identification as members of a distinct indigenous cultural group and recognition of this identity by others;
- (ii) collective attachment to geographically distinct habitats or ancestral territories in the project area and to the natural resources in these habitats and territories;
- (iii) customary cultural, economic, social, or political institutions that are separate from those of the dominant society and culture; and
- (iv) a distinct language, often different from the official language of the country or region.

7. In considering these characteristics, national legislation, customary law, and any international conventions to which the country is a party will be taken into account.

8. A group that has lost collective attachment to geographically distinct habitats or ancestral territories in the project area because of forced severance remains eligible for coverage under this policy.

9. The Indigenous Peoples safeguards are triggered if a project directly or indirectly affects the dignity, human rights, livelihood systems, or culture of Indigenous Peoples or affects the territories or natural or cultural resources that Indigenous Peoples own, use, occupy, or claim as their ancestral domain.

#### **D. General Requirements**

##### **1. Consultation and Participation**

10. The borrower/client will undertake meaningful consultation with affected Indigenous Peoples to ensure their informed participation in (i) designing, implementing, and monitoring measures to avoid adverse impacts on them or, when avoidance is not possible, to minimize, mitigate, and compensate for such effects; and (ii) tailoring project benefits that accrue to them in a culturally appropriate manner. Meaningful consultation is a process that (i) begins early in the project preparation stage and is carried out on an ongoing basis throughout the project cycle; (ii) provides timely disclosure of relevant and adequate information that is understandable and readily accessible to affected people; (iii) is undertaken in an atmosphere free of intimidation or coercion; (iv) is gender inclusive and responsive, and tailored to the needs of disadvantaged and vulnerable groups; and (v) enables the incorporation of all relevant views of affected people and other stakeholders into decision making, such as project design, mitigation measures, the sharing of development benefits and opportunities, and implementation issues. Consultation will be carried out in a manner commensurate with the impacts on affected communities. The consultation process and its results will be documented and reflected in the Indigenous Peoples plan (IPP).

11. To carry out meaningful consultation with affected Indigenous Peoples, the borrower/client will establish a context-specific strategy for inclusive and participatory consultation, including approaches of identifying appropriate Indigenous Peoples representatives, and consultation methods appropriate to the social and cultural values of the affected Indigenous Peoples communities. The borrower/client will pay special attention to the concerns of indigenous women and youth.

12. When the borrower/client and the affected Indigenous Peoples have serious differences and disagreements in relation to the project, its components, or the IPP, the borrower/ client will undertake good faith negotiations to resolve such differences and disagreements.

## **2. Social Impact Assessment**

13. When screening by ADB confirms likely impacts on Indigenous Peoples, the borrower/client will retain qualified and experienced experts to carry out a full social impact assessment (SIA), and if impacts on Indigenous Peoples are identified, the borrower/client will prepare an IPP in conjunction with the feasibility study. The project's potential social impacts and risks will be assessed against the requirements presented in this document and applicable laws and regulations of the jurisdictions in which the project operates that pertain to Indigenous Peoples matters, including host country obligations under international law.

14. Based on the screening, a field-based SIA will be conducted either as part of the feasibility study or as a stand-alone activity. The SIA will, in a gender-sensitive manner, in consultation with Indigenous Peoples communities, identify the project-affected Indigenous Peoples and the potential impacts of the proposed project on them. The SIA will provide a baseline socioeconomic profile of the indigenous groups in the project area and project impact zone; assess their access to and opportunities to avail themselves of basic social and economic services; assess the short- and long-term, direct and indirect, and positive and negative impacts of the project on each group's social, cultural, and economic status; assess and validate which indigenous groups will trigger the Indigenous Peoples policy principles; and assess the subsequent approaches and resource requirements for addressing the various concerns and issues of projects that affect them.

15. The level of detail and comprehensiveness of the SIA will be proportional to the complexity of the proposed project and commensurate with the nature and scale of the proposed project's potential effects on Indigenous Peoples, whether positive or negative.

## **3. Indigenous Peoples Planning**

16. If the screening and SIA indicate that the proposed project will have impacts, positive and/or negative, on Indigenous Peoples, the borrower/client will prepare an IPP in the context of the SIA and through meaningful consultation with the affected Indigenous Peoples communities. The IPP will set out the measures whereby the borrower/client will ensure (i) that affected Indigenous Peoples receive culturally appropriate social and economic benefits; and (ii) that when potential adverse impacts on Indigenous Peoples are identified, these will be avoided to the maximum extent possible. Where this avoidance is proven to be impossible, based on meaningful consultation with indigenous communities, the IPP will outline measures to minimize, mitigate, and compensate for the adverse impacts. The level of detail and comprehensiveness of IPPs (annex to this appendix) will vary depending on the specific project and the nature of impacts to be addressed. The borrower/client will integrate the elements of the IPP into the project's design.

17. If Indigenous Peoples are the sole or the overwhelming majority of direct project beneficiaries,<sup>1</sup> and when only positive impacts are identified, the elements of an IPP could be included in the overall project design in lieu of preparing a separate IPP. In such cases, the project document will include a summary of about how the project complies with Indigenous Peoples safeguards. In particular, it will explain how the requirements for meaningful

<sup>1</sup> This may be the case in certain developing countries such as Pacific island nations.

consultation are fulfilled and how the accrual of benefits has been integrated into the project design.

18. The borrower/client will update the IPP following the completion of detailed engineering design and detailed measurement surveys. The updated IPP will closely follow the award of contract packages and the implementation time schedules of each project component or subproject. Mitigating measures to avoid adverse impacts on Indigenous Peoples and measures to enhance culturally appropriate development benefits will be adjusted, but the agreed outcomes as specified in the draft IPP will not be lowered or minimized. If new groups of Indigenous Peoples are identified prior to submission of the final IPP to ADB, meaningful consultation will be undertaken with them also.

19. The borrower/client will use qualified and experienced experts to prepare the social impact assessment and IPP. For highly complex and sensitive projects, independent advisory panels of experts not affiliated with the project will be used during project preparation and implementation. Any highly complex and sensitive projects affecting Indigenous Peoples will require an Indigenous Peoples expert on the advisory panel.

#### **4. Information Disclosure**

20. The borrower/client will submit to ADB the following documents to disclose on ADB's website:

- (i) a draft IPP and/or Indigenous Peoples planning framework, including the social impact assessment, endorsed by the borrower/client, before appraisal;
- (ii) the final IPP upon completion;
- (iii) a new or updated IPP and a corrective action plan prepared during implementation, if any; and
- (iv) the monitoring reports.

21. The borrower/client will provide relevant information, including information from the above documents in a timely manner, in an accessible place and in a form and language(s) understandable to the affected Indigenous Peoples and other stakeholders. If the Indigenous Peoples are illiterate, other appropriate communication methods will be used.

#### **5. Grievance Redress Mechanism**

22. The borrower/client will establish a mechanism to receive and facilitate resolution of the affected Indigenous Peoples communities' concerns, complaints, and grievances. The grievance mechanism will be scaled to the impacts of the project. It should address concerns and complaints promptly, using an understandable and transparent process that is culturally appropriate, gender responsive, and accessible to the affected Indigenous Peoples communities at no cost and without retribution. The mechanism should not impede access to the country's judicial or administrative remedies. The affected Indigenous Peoples communities will be appropriately informed about the mechanism.

#### **6. Monitoring and Reporting**

23. The borrower/client will monitor and measure the progress of implementation of the IPP. The extent of monitoring activities will be commensurate with the project's risks and impacts. In addition to recording information to track performance, the borrower/client should use dynamic mechanisms, such as inspections and audits, to verify compliance with requirements and

progress toward achieving the desired outcomes. For projects with significant adverse impacts on Indigenous Peoples, the borrower/client will retain qualified and experienced external experts or qualified NGOs to verify monitoring information. The external experts engaged by the borrower/client will advise on compliance issues, and if any significant Indigenous Peoples issues are found, the borrower/client will prepare a corrective action plan or an update to the approved IPP. The borrower/client will implement the corrective actions and follow up on these actions to ensure their effectiveness.

24. The borrower/client will prepare periodic monitoring reports on the progress of IPP implementation, highlighting compliance issues and corrective actions, if any. The borrower/client will submit semiannual monitoring reports. The costs of monitoring requirements will be reflected in project budgets.

## **7. Unanticipated Impacts**

25. If unanticipated impacts on Indigenous Peoples become apparent during project implementation, such as a change in the project's footprint, the borrower/client will carry out a social impact assessment and update the IPP or formulate a new IPP covering all applicable requirements specified in this document.

## **E. Special Requirements**

### **1. Ancestral Domains and Lands and Related Natural Resources**

26. Indigenous Peoples are closely tied to land, forests, water, wildlife, and other natural resources, and therefore special considerations apply if the project affects such ties. In this situation, when carrying out the social impact assessment and preparing the IPP, the borrower/client will pay particular attention to the following:

- (i) the customary rights of the Indigenous Peoples, both individual and collective, pertaining to ancestral domains, lands, or territories that they traditionally own or customarily use or occupy, and where access to natural resources is vital to the sustainability of their cultures and livelihood systems;
- (ii) the need to protect such ancestral domains, lands, and resources against illegal intrusion or encroachment;
- (iii) the cultural and spiritual values that the Indigenous Peoples attribute to such lands and resources;
- (iv) the Indigenous Peoples' natural resources management practices and the long-term sustainability of such practices; and
- (v) the need to rehabilitate the livelihood systems of Indigenous Peoples who have been evicted from their lands.

27. If the project involves activities that are contingent on establishing legally recognized rights to lands and territories that Indigenous Peoples have traditionally owned or customarily used or occupied, such as land titling projects, or the acquisition of such lands, the borrower/client will integrate an action plan for the legal recognition of customary rights to such lands, territories, and ancestral domains in the IPP. The action plan is normally carried out before project implementation, but in some cases it may need to be formulated concurrently with the project itself. Such legal recognition may take the following forms:

- (i) full legal recognition of existing customary land tenure systems of Indigenous Peoples, or



- (ii) conversion of customary usage rights to communal and/or individual ownership rights.

28. If neither option is possible under national law, the IPP will include an action plan for legal recognition of perpetual or long-term renewable custodial or user rights.

29. In addition, for projects with potential impacts on Indigenous Peoples, the borrower/client will ensure their meaningful consultation and facilitate their informed participation on matters affecting them directly, such as proposed mitigation measures, sharing of project benefits and opportunities, and implementation arrangements.

## 2. Consent of Affected Indigenous Peoples Communities

30. Indigenous Peoples may be particularly vulnerable when project activities include (i) commercial development of the cultural resources and knowledge of Indigenous Peoples; (ii) physical displacement from traditional or customary lands; and (iii) commercial development of natural resources within customary lands under use that that would impact the livelihoods or the cultural, ceremonial, or spiritual uses that define the identity and community of Indigenous Peoples. In deciding whether to proceed with a project involving such project activities, the borrower/client will seek the consent of affected Indigenous Peoples communities.

31. For purposes of policy application, consent of affected Indigenous Peoples communities refers to a collective expression by the affected Indigenous Peoples communities, through individuals and/or their recognized representatives, of broad community support for the project activities listed in para. 30. Such broad community support may exist even if some individuals or groups object to the project activities.

32. Where broad community support has been ascertained, the borrower/client will provide documentation that details the process and outcomes of consultations with Indigenous Peoples and Indigenous Peoples' organizations, including (i) the findings of the SIA; (ii) the process of meaningful consultation with the affected Indigenous Peoples communities; (iii) the additional measures, including project design modification, that may be required to address adverse impacts on the Indigenous Peoples and to provide them with culturally appropriate project benefits; (iv) the recommendations for meaningful consultation with and participation by Indigenous Peoples communities during project implementation, monitoring, and evaluation; and (v) the content of any formal agreements reached with Indigenous Peoples communities and/or Indigenous Peoples' organizations. The borrower/client will submit documentation of the engagement process to ADB for review and for ADB's own investigation to assure itself of the existence of broad community support for the project activities. ADB will not finance the project if such support does not exist.

33. When the borrower/client and the affected Indigenous Peoples have major disagreements relating to the design, the IPP, or the implementation of the activities relating to commercial development of the cultural resources, physical displacement of Indigenous Peoples, and/or to commercial development of natural resources, the borrower/client will adopt a process of good faith negotiations for resolving such differences and disagreements.

34. **Commercial Development of Cultural Resources.** If the project involves the commercial development of Indigenous Peoples' cultural resources and knowledge, the borrower/client will ensure that the affected communities are informed of (i) their rights to such resources under statutory and customary law; (ii) the scope and nature of the proposed commercial development and the parties interested or involved in such development; and (iii)



the potential effects of such development on Indigenous Peoples' livelihoods, environment, and use of such resources. The IPP will reflect the nature and content of agreements and will include arrangements to ensure that Indigenous Peoples receive an equitable share of the benefits to be derived from such commercial development in a culturally appropriate way.

**35. Physical Displacement of Indigenous Peoples.** The borrower/client will explore to the maximum extent possible alternative project designs to avoid physical displacement of Indigenous Peoples that will result in adverse impacts on their identity, culture, and customary livelihoods. In exceptional circumstances, when avoidance is impossible, the borrower/client will prepare an IPP that could be combined with a resettlement plan. Such a combined plan needs to be compatible with the Indigenous Peoples' cultural preferences and will include a land-based resettlement strategy. Where possible, the plan will allow the affected Indigenous Peoples to return to the lands and territories they traditionally owned or customarily used or occupied if the reasons for their relocation cease to exist. The plan should include provisions to rehabilitate such lands, if needed.

**36. Commercial Development of Natural Resources.** If the project involves the commercial development of natural resources (such as minerals, hydrocarbons, forests, water, or hunting or fishing grounds) within customary lands under use by Indigenous Peoples, the borrower/client will ensure that the affected communities are informed of (i) their rights to such resources under statutory and customary law; (ii) the scope and nature of the proposed commercial development and the parties interested or involved in such development; and (iii) the potential effects of such development on the Indigenous Peoples' livelihoods, environment, and use of such resources. The borrower/client will include in the IPP arrangements to enable the Indigenous Peoples to receive in a culturally appropriate manner an equitable share of the benefits to be derived from such commercial development that is at least equal to or higher than that of any other affected landowners.

### 3. Indigenous Peoples and Development

**37.** In furtherance of the objectives to benefit Indigenous Peoples, developing member countries can ask ADB to support them in their development planning and poverty reduction strategies by providing financial assistance for a variety of initiatives, such as the following:

- (i) strengthen local legislation to establish legal recognition of the customary or traditional land tenure systems of Indigenous Peoples;
- (ii) enhance participation by Indigenous Peoples in the development process by incorporating their perspectives into the design of development programs and poverty reduction strategies and providing them with opportunities to benefit more fully from development programs through policy and legal reforms, capacity building, and meaningful consultations, participation, and empowerment;
- (iii) support the development priorities of Indigenous Peoples through programs developed by governments in cooperation with Indigenous Peoples;
- (iv) address the gender and intergenerational issues that exist among many Indigenous Peoples, including the special needs of indigenous women, youth, and children;
- (v) prepare participatory profiles of Indigenous Peoples to document their culture, demographic structure, gender and intergenerational relations, and social organization, institutions, production systems, religious beliefs, and resource use patterns;
- (vi) strengthen the capacity of Indigenous Peoples communities and Indigenous Peoples' organizations to prepare, implement, monitor, and evaluate

- development programs;
- (vii) strengthen the capacity of government agencies responsible for providing development services to Indigenous Peoples;
- (viii) preserve and respect indigenous knowledge, including strengthening intellectual property rights; and
- (ix) facilitate partnerships among the government, Indigenous Peoples' organizations, civil society organizations, and the private sector to promote Indigenous Peoples' development programs.

## APPENDIX 4. ENVIRONMENTAL SAFEGUARD SCREENING CHECKLISTS

### 1. RAPID ENVIRONMENTAL ASSESSMENT CHECKLIST

**Instructions:**

(i) The subproject shall complete this checklist to support the environmental classification of the subproject.

**Note: Depending on subproject types, most relevant REA form shall be used.**

(ii) This checklist focuses on environmental issues and concerns. To ensure that social dimensions are adequately considered, refer also to ADB's (a) checklists on involuntary resettlement and Indigenous Peoples; (b) poverty reduction handbook; (c) staff guide to consultation and participation; and (d) gender checklists.

(iii) Answer the questions assuming the "without mitigation" case. The purpose is to identify potential impacts. Use the "remarks" section to discuss any anticipated mitigation measures.

Subproject Title:

**(General)**

Screening Questions	Yes	No	Remarks
<b>A. SUBPROJECT SITING</b> Is the subproject area adjacent to or within any of the following environmentally sensitive areas? (Identify environmentally sensitive areas within the area of influence of the subproject area and state distance to subproject area)			
1) Environmental protection zone			
2) Cultural heritage site			
3) Legally Protected Area			
4) Wetland			
5) Mangrove			
6) Estuarine			
7) Coast			
8) Mountain			
9) Forest			
10) Buffer zone of legally protected area			
11) Special area for protecting biodiversity			
12) Areas with high biodiversity value (critical habitat)			
13) Densely populated area			
14) Locale in which ambient quality standards are already exceeded			
<b>B. POTENTIAL ENVIRONMENTAL IMPACTS</b> Will the subproject cause...			
15) impairment of historical/cultural monuments/areas, and loss/damage to these sites?			
16) disfiguration of landscape or potential loss/damage to physical cultural resources?			

Screening Questions	Yes	No	Remarks
17) disturbance to precious ecology (e.g. sensitive or protected areas)?			
18) degradation of land and ecosystems (e.g. loss of wetlands and wild lands, coastal zones, watersheds and forests)?			
19) interference with other utilities and blocking access to buildings; nuisance areas due to noise and odor?			
20) dislocation or involuntary resettlement of people?			
21) disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?			
22) air pollution resulting from emissions of hydrocarbons or other pollutants from process equipment, fugitive emissions, venting or flaring, accidents, inadequate equipment maintenance, and poor planning?			
23) dangers to a safe and healthy working environment due to physical, chemical, biological, and radiological hazards during subproject construction and operation?			
24) noise and dust from construction activities or operation?			
25) air pollution resulting from emissions from production process, accidents, and poor equipment maintenance?			
26) pollution of water bodies and aquatic ecosystem resulting from chemical spillage, process wastewater, production wastes, utility operations, sanitary sewage, and miscellaneous discharges?			
27) contamination of soil and groundwater from chemical spillage, solid wastes from water treatment sludges, cafeteria or lunchroom wastes, ashes and incineration residues, etc.?			
28) large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?			
29) social conflicts if workers from other regions or countries are hired?			
30) risks to community health and safety during construction and operation caused by chemical spills, from road accidents and possible groundwater contamination?			

Screening Questions	Yes	No	Remarks
31) risks to community health and safety (e.g. from fire, explosion or chemical leak) due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?			
32) community safety risks due to both accidental and natural hazards, especially where the structural elements or components of these are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?			

**(Agro-Industrial)**

Screening Questions	Yes	No	Remarks
<b>A. Project Siting</b> Is the Project area adjacent to or within any of the following environmentally sensitive areas?			
▪ Cultural heritage site			
▪ Protected Area			
▪ Wetland			
▪ Mangrove			
▪ Estuarine			
▪ Buffer zone of protected area			
▪ Special area for protecting biodiversity			
▪ Bay			
<b>B. Potential Environmental Impacts</b> Will the Project cause...			
▪ ecological disturbances arising from the establishment of a plant or facility complex in or near sensitive habitats?			
▪ eventual degradation of water bodies due to discharge of wastes and other effluents from plant or facility complex?			
▪ serious contamination of soil and groundwater?			
▪ aggravation of solid waste problems in the area?			
▪ public health risks from discharge of wastes and poor air quality; noise and foul odor from plant emissions?			
▪ short-term construction impacts (e.g. soil erosion, deterioration of water and air quality, noise and vibration from construction equipment?			

Screening Questions	Yes	No	Remarks
▪ dislocation or involuntary resettlement of people?			
▪ disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?			
▪ environmental degradation (e.g. erosion, soil and water contamination, loss of soil fertility, disruption of wildlife habitat) from intensification of agricultural land use to supply raw materials for plant operation; and modification of natural species diversity as a result of the transformation to monoculture practices?			
▪ water pollution from discharge of liquid effluents?			
▪ air pollution from all plant operations?			
▪ gaseous and odor emissions to the atmosphere from processing operations?			
▪ accidental release of potentially hazardous solvents, acidic and alkaline materials?			
▪ uncontrolled in-migration with opening of roads to forest area and overloading of social infrastructure?			
▪ occupational health hazards due to fugitive dust, materials handling, noise, or other process operations?			
▪ disruption of transit patterns, creation of noise and congestion, and pedestrian hazards aggravated by heavy trucks?			
▪ disease transmission from inadequate waste disposal?			
▪ risks and vulnerabilities related to occupational health and safety due to physical, chemical, and biological hazards during project construction and operation?			
▪ large population increase during project construction and operation that cause increased burden on social infrastructure and services (such as water supply and sanitation systems)?			
▪ social conflicts if workers from other regions or countries are hired?			
▪ community health and safety risks due to the transport, storage, and use and/or disposal of materials likely to create physical, chemical and biological hazards during construction, operation and decommissioning?			

**(Airport)**

Screening Questions	Yes	No	Remarks
<b>A. Project Siting</b> Is the Project area adjacent to or within any of the following environmentally sensitive areas?			

Screening Questions	Yes	No	Remarks
▪ Cultural heritage site			
▪ Protected Area			
▪ Wetland			
▪ Mangrove			
▪ Estuarine			
▪ Buffer zone of protected area			
▪ Special area for protecting biodiversity			
<b>B. Potential Environmental Impacts</b> Will the Project cause...			
▪ encroachment on precious ecology resulting in loss or damage to terrestrial or aquatic habitats (e.g., wetlands or sensitive or protected areas)?			
▪ encroachment on historical/cultural monuments or areas?			
▪ decrease in value of land in the area due to noise and other nuisances such as traffic congestion and degradation of environmental aesthetics?			
▪ dislocation or involuntary resettlement of people?			
▪ disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?			
▪ noise and vibration disturbances?			
▪ short-term ecological disturbances such as soil erosion, water quality deterioration (surface and groundwater), air pollution, noise and vibrations from construction equipment?			
▪ creation of slum communities following airport construction?			
▪ risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?			
▪ communicable disease hazards?			
▪ accidental disruption of utilities?			
▪ traffic congestion at airport access and exit?			
▪ short-term air quality degradation due to dredging-related operations?			
▪ noise and vibration due to aircraft take-off and landing?			

Screening Questions	Yes	No	Remarks
▪ social conflicts if workers from other regions or countries are hired?			
▪ large population influx of construction causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?			
▪ hazards to traffic on highways near airport due to proximity of planes taking off and landing?			
▪ risks to community health and safety due to the transport, storage, and use and/or disposal of materials likely to create physical, chemical and biological hazards during construction and operation?			
▪ community safety risks due to both accidental and natural hazards, especially where the structural elements or components of the project (e.g., runways) are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?			

**(Chemical-Based Industrial)**

Screening Questions	Yes	No	Remarks
<b>A. Project Siting</b> Is the Project area adjacent to or within any of the following environmentally sensitive areas?			
▪ Cultural heritage site			
▪ Protected Area			
▪ Wetland			
▪ Mangrove			
▪ Estuarine			
▪ Buffer zone of protected area			
▪ Special area for protecting biodiversity			
<b>B. Potential Environmental Impacts</b> Will the Project cause...			
▪ impairment of historical/cultural monuments/areas, and loss/damage to these sites?			
▪ interference with other utilities and blocking access to buildings; nuisance areas due to noise and odor?			
▪ dislocation or involuntary resettlement of people?			
▪ disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?			



Screening Questions	Yes	No	Remarks
▪ air pollution resulting from emissions of hydrocarbons from process equipment, accidents, inadequate equipment maintenance, and poor planning?			
▪ dangers to a safe and healthy working environment due to physical, chemical, biological, and radiological hazards during project construction and operation?			
▪ noise and dust from construction activities?			
▪ air pollution resulting from emissions from production process, accidents, and poor equipment maintenance?			
▪ pollution of water bodies and aquatic ecosystem resulting from production wastes, utility operations, sanitary sewage, and miscellaneous discharges?			
▪ contamination of soil and groundwater from solid wastes from water treatment sludges, cafeteria or lunchroom wastes, ashes and incineration residues, etc.?			
▪ large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?			
▪ social conflicts if workers from other regions or countries are hired?			
▪ risks to community health and safety during construction and operation caused by chemical spills from road accidents and possible groundwater contamination?			
▪ risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?			
▪ community safety risks due to both accidental and natural hazards, especially where the structural elements or components of these are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?			

**(Fisheries)**

Screening Questions	Yes	No	Remarks
<b>A. Project Siting</b> Is the Project area adjacent to or within any of the following environmentally sensitive areas?			
▪ Cultural heritage site			
▪ Protected Area			
▪ Wetland			

Screening Questions	Yes	No	Remarks
▪ Mangrove			
▪ Estuarine			
▪ Buffer zone of protected area			
▪ Special area for protecting biodiversity			
<b>B. Potential Environmental Impacts</b> Will the Project cause...			
▪ overexploitation of fish stocks and long-term degradation of resource base?			
▪ capture of non-target species and habitat damage through use of destructive fishing methods and gears?			
▪ accidental damage to coral reefs by divers and fishing vessel anchors?			
▪ pollution from oil and fuel spills and bilge flushing?			
▪ ecological degradation resulting from clearing for conversion of coastal wetlands to fishponds?			
▪ social problems arising from conflicts with other site uses?			
▪ downstream water pollution from discharge of pond effluents with drain water?			
▪ reduction of water supplies for competing uses (e.g., irrigation or domestic)?			
▪ restriction of water circulation, obstruction to navigation by fish pens/cages, and reduction of stream capacity from siltation?			
▪ dislocation or involuntary resettlement of people?			
▪ disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?			
▪ social problems due to land tenure and use conflicts?			
▪ soil erosion and siltation during construction?			
▪ noise and dust from construction?			
▪ risks and vulnerabilities related to occupational health and safety due to physical, chemical, and biological hazards during project construction and operation?			
▪ reduction of water available to downstream users during peak seasons?			
▪ pollution of nearby aquatic environments by pond drainage water and inadequate farm management?			

Screening Questions	Yes	No	Remarks
▪ depletion of local fish populations by stocking of wild fry/fingerlings in ponds?			
▪ spread of diseases and parasites from exotic cultured species or escape of pond fish to the wild?			
▪ large population influx during project construction and operation that cause increased burden on social infrastructure and services (such as water supply and sanitation systems)?			
▪ social conflicts if workers from other regions or countries are hired?			
▪ increased community health risks due to the increased incidence or introduction of waterborne or water-related diseases?			
▪ risks to community health and safety due to the transport, storage, and use and/or disposal of materials likely to create physical, chemical and biological hazards during construction and operation?			

**(Forestry)**

Screening Questions	Yes	No	Remarks
<b>A. Project Siting</b> Is the Project area adjacent to or within any of the following environmentally sensitive areas?			
▪ Cultural heritage site			
▪ Protected Area			
▪ Wetland			
▪ Mangrove			
▪ Estuarine			
▪ Buffer zone of protected area			
▪ Special area for protecting biodiversity			
<b>B. Potential Environmental Impacts</b> Will the Project cause...			
▪ increase in soil erosion and siltation?			
▪ increase in peak and flood flows?			
▪ loss of downstream beneficial uses (water supply or fisheries)?			
▪ impairment of ecological and recreational opportunities?			
▪ impairment of beneficial uses of traditional forests?			

Screening Questions	Yes	No	Remarks
▪ any loss of precious ecology?			
▪ possible conflicts with established management policies?			
▪ dislocation or involuntary resettlement of people?			
▪ loss of downstream ecological and economic functions due to any construction of social infrastructure (e.g., road, training or information center, office or housing)?			
▪ displacement of people or reduce their access to forest resources?			
▪ disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?			
▪ uncontrolled in-migration, including the influx of workers and their followers, with opening of roads to forest area and overloading of social infrastructure?			
▪ unnecessary loss of ecological value and decreased biodiversity by replacement of natural forest with plantation with limited number of species?			
▪ technology or land use modification that may change present social and economic activities?			
▪ ecological problems as well as community health and safety hazards due to land clearance prior to reforestation (e.g., soil erosion, disruption of hydrological cycle, loss of nutrients, decline in soil fertility)?			
▪ other ecological problems as well as community health and safety hazards (e.g., pollution of water bodies from fertilizers, pesticides, and herbicides used in the plantation)?			
▪ dangers to a safe and healthy working environment due to physical, chemical and biological hazards during project construction and operation?			
▪ social problems and conflicts related to land tenure and resource use rights?			
▪ social conflicts if workers from other regions or countries are hired?			
▪ risks to community health and safety due to the transport, storage and/or disposal of materials such as explosives, fuel, pesticide and other chemicals during construction and operation?			

**(Governance and Finance)**

Screening Questions	Yes	No	Remarks
<b>A. Does the Project involve a Program Loan or Sector Development Program Loan with Policy Conditions</b>  Will the policy reforms lead to:			
<ul style="list-style-type: none"> <li>▪ reductions in government expenditure that will adversely affect the delivery of public services for environmental protection, social programs, drought relief, food aid, or agricultural extension services</li> </ul>			
<ul style="list-style-type: none"> <li>▪ alterations in the pattern of land use or land use conflicts</li> </ul>			
<ul style="list-style-type: none"> <li>▪ impacts on the environment through increased exploitation of natural resources (e.g. forests, fisheries, minerals)</li> </ul>			
<ul style="list-style-type: none"> <li>▪ impacts on the environment through changes in agricultural inputs (e.g. land, water, energy, fertilizer, pesticides, biotechnology, mechanization)</li> </ul>			
<ul style="list-style-type: none"> <li>▪ reduced incentive, capability, or resources for small and medium size enterprises (SMEs) to comply with environmental protection laws and regulations</li> </ul>			
<ul style="list-style-type: none"> <li>▪ dismantling of environmental regulations or changes in the regulatory framework for environmental management</li> </ul>			
<ul style="list-style-type: none"> <li>▪ any other policy outcomes that might have major environmental implications</li> </ul>			

Screening Questions	Yes	No	Remarks
<b>B. Does the Project involve a financial intermediation component?</b>  Will the project involve:			
<ul style="list-style-type: none"> <li>▪ credit lines through a financial intermediary, including micro-finance, that will finance sub-projects that include major infrastructure development, be located at or near an environmentally sensitive area, alter the pattern of land use or cause land use conflicts, lead to the generation of hazardous waste, or generate significant air or water pollution</li> </ul>			
<ul style="list-style-type: none"> <li>▪ equity investments</li> </ul>			
<b>C. Does the Project include an investment component?</b>			
<ul style="list-style-type: none"> <li>▪ Project loan</li> </ul>			
<ul style="list-style-type: none"> <li>▪ Sector loan</li> </ul>			
<ul style="list-style-type: none"> <li>▪ Guarantee</li> </ul>			
<ul style="list-style-type: none"> <li>▪ Equity</li> </ul>			
Will the project:			
<ul style="list-style-type: none"> <li>▪ include major infrastructure development?</li> </ul>			
<ul style="list-style-type: none"> <li>▪ be located at or near an environmentally sensitive area?</li> </ul>			
<ul style="list-style-type: none"> <li>▪ alter the pattern of land use or cause land use conflicts?</li> </ul>			
<ul style="list-style-type: none"> <li>▪ lead to the generation of hazardous waste?</li> </ul>			
<ul style="list-style-type: none"> <li>▪ generate significant air or water pollution?</li> </ul>			
<ul style="list-style-type: none"> <li>▪ cause a large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?</li> </ul>			
<ul style="list-style-type: none"> <li>▪ add infrastructure that can harm community health and safety when it is accessed or when it fails?</li> </ul>			
<ul style="list-style-type: none"> <li>▪ dislocation or involuntary resettlement of people?</li> </ul>			

Screening Questions	Yes	No	Remarks
▪ disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?			

**(Hydropower)**



Screening Questions	Yes	No	Remarks
<b>A. Project Location</b> Is the dam and/or Project facilities adjacent to or within any of the following areas?			
▪ Unregulated river			
▪ Undammed river tributaries below the dam			
▪ Unique or aesthetically valuable land or water form			
▪ Special area for protecting biodiversity			
▪ Protected Area			
▪ Buffer zone of protected area			
▪ Primary forest			
▪ Range of endangered or threatened animals			
▪ Area used by indigenous peoples			
▪ Cultural heritage site			
▪ Wetland			

Screening Questions	Yes	No	Remarks
▪ Mangrove			
▪ Estuary			
<b>B. Potential Environmental Impacts</b> Will the Project cause...			
▪ short-term construction impacts such as soil erosion, deterioration of water and air quality, noise and vibration from construction equipment?			
▪ disturbance of large areas due to material quarrying?			
▪ disposal of large quantities of construction spoils?			
▪ clearing of large forested area for ancillary facilities and access road?			
▪ impounding of a long river stretch?			
▪ dryness (less than 50% of dry season mean flow) over a long downstream river stretch?			
▪ construction of permanent access road near or through forests?			
▪ creation of barriers for migratory land animals			
▪ loss of precious ecological values due to flooding of agricultural/forest areas, and wild lands and wildlife habitat; destruction of fish spawning/breeding and nursery grounds?			
▪ deterioration of downstream water quality due to anoxic water from the reservoir and sediments due to soil erosion?			
▪ significant diversion of water from one basin to another?			
▪ alternating dry and wet downstream conditions due to peaking operation of powerhouse?			
▪ significant modification of annual flood cycle affecting downstream ecosystem, people's sustenance and livelihoods?			
▪ loss or destruction of unique or aesthetically valuable land or water forms?			
▪ proliferation of aquatic weeds in reservoir and downstream impairing dam discharge, irrigation systems, navigation and fisheries, and increasing water loss through transpiration?			
▪ scouring of riverbed below dam?			
▪ downstream erosion of recipient river in trans-basin diversion?			
▪ increased flooding risk of recipient river in trans-basin diversion?			
▪ decreased groundwater recharge of downstream areas?			
▪ draining of downstream wetlands and riparian areas?			
▪ decline or change in fisheries below the dam due to reduced peak flows and floods, submersion of river stretches and resultant destruction of fish breeding and nursery grounds, and water quality changes?			
▪ loss of migratory fish species due to barrier imposed by the dam?			
▪ formation of sediment deposits at reservoir entrance, creating backwater effect and flooding and waterlogging upstream?			
▪ significant disruption of river sediment transport downstream due to trapping in reservoir?			
▪ environmental risk due to potential toxicity of sediments trapped behind the dams?			
▪ increased saltwater intrusion in estuary and low lands due to reduced river flows?			

Screening Questions	Yes	No	Remarks
▪ significant induced seismicity due to large reservoir size and potential environmental hazard from catastrophic failure of the dam?			
▪ cumulative effects due to its role as part of a cascade of dams/ reservoirs?			
▪ depletion of dissolved oxygen by large quantities of decaying plant material, fish mortality due to reduced dissolved oxygen content in water, algal blooms causing successive and temporary eutrophication, growth and proliferation of aquatic weeds?			
▪ risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?			
▪ large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?			
▪ creation of community slums following construction of the hydropower plant and its facilities?			
• social conflicts if workers from other regions or countries are hired?			
▪ uncontrolled human migration into the area, made possible by access roads and transmission lines?			
▪ disproportionate impacts on the poor, women, children or other vulnerable groups?			
▪ community health and safety risks due to the transport, storage, and use and/or disposal of materials likely to create physical, chemical and biological hazards?			
• risks to community safety due to both accidental and natural hazards, especially where the structural elements or components of the project (e.g., dams) are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?			

**(Irrigation)**

Screening Questions	Yes	No	Remarks
<b>A. Project Siting</b> Is the Project area adjacent to or within any of the following environmentally sensitive areas?			
▪ Protected Area			
▪ Wetland			
▪ Mangrove			
▪ Estuarine			
▪ Buffer zone of protected area			
▪ Special area for protecting biodiversity			
<b>B. Potential Environmental Impacts</b> Will the Project cause...			

Screening Questions	Yes	No	Remarks
▪ loss of precious ecological values (e.g. result of encroachment into forests/swamplands or historical/cultural buildings/areas, disruption of hydrology of natural waterways, regional flooding, and drainage hazards)?			
▪ conflicts in water supply rights and related social conflicts?			
▪ impediments to movements of people and animals?			
▪ potential ecological problems due to increased soil erosion and siltation, leading to decreased stream capacity?			
▪ Insufficient drainage leading to salinity intrusion?			
▪ over pumping of groundwater, leading to salinization and ground subsidence?			
▪ impairment of downstream water quality and therefore, impairment of downstream beneficial uses of water?			
▪ dislocation or involuntary resettlement of people?			
▪ disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?			
▪ potential social conflicts arising from land tenure and land use issues?			
▪ soil erosion before compaction and lining of canals?			
▪ noise from construction equipment?			
▪ dust during construction?			
▪ waterlogging and soil salinization due to inadequate drainage and farm management?			
▪ leaching of soil nutrients and changes in soil characteristics due to excessive application of irrigation water?			
▪ reduction of downstream water supply during peak seasons?			
▪ soil pollution, polluted farm runoff and groundwater, and public health risks due to excessive application of fertilizers and pesticides?			
▪ soil erosion (furrow, surface)?			
▪ scouring of canals?			
▪ clogging of canals by sediments?			
▪ clogging of canals by weeds?			

Screening Questions	Yes	No	Remarks
▪ seawater intrusion into downstream freshwater systems?			
▪ introduction of increase in incidence of waterborne or water related diseases?			
▪ dangers to a safe and healthy working environment due to physical, chemical and biological hazards during project construction and operation?			
▪ large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?			
▪ social conflicts if workers from other regions or countries are hired?			
▪ risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?			
▪ community safety risks due to both accidental and natural hazards, especially where the structural elements or components of the project (e.g., irrigation dams) are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?			

**(Petrochemical)**

Screening Questions	Yes	No	Remarks
<b>A. Project Siting</b> Is the Project area adjacent to or within any of the following environmentally sensitive areas?			
▪ Cultural heritage site			
▪ Protected Area			
▪ Wetland			
▪ Mangrove			
▪ Estuarine			
▪ Buffer zone of protected area			
▪ Special area for protecting biodiversity			
<b>B. Potential Environmental Impacts</b> Will the Project cause...			
▪ impairment of historical/cultural monuments/areas, and loss/damage to these sites?			
▪ interference with other utilities and blocking access to buildings; nuisance areas due to noise and odor?			

Screening Questions	Yes	No	Remarks
▪ dislocation or involuntary resettlement of people?			
▪ disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?			
▪ risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?			
▪ air pollution resulting from emissions of hydrocarbons from process equipment, accidents, inadequate equipment maintenance, and poor planning?			
▪ noise and dust from construction activities?			
▪ air pollution resulting from emissions from production process, accidents, and poor equipment maintenance?			
▪ pollution of water bodies and aquatic ecosystem resulting from production wastes, utility operations, sanitary sewage, and miscellaneous discharges?			
▪ contamination of soil and groundwater from solid wastes from water treatment sludges, cafeteria or lunchroom wastes, ashes and incineration residues, etc.?			
▪ large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?			
▪ social conflicts if workers from other regions or countries are hired?			
▪ risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?			
▪ community safety risks due to both accidental and natural hazards, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?			

**(Ports and Harbors)**

Screening Questions	Yes	No	Remarks
<b>A. Project Siting</b> Is the Project area adjacent to or within any of the following environmentally sensitive areas?			
▪ Cultural heritage site			
▪ Protected Area			

Screening Questions	Yes	No	Remarks
▪ Wetland			
▪ Mangrove			
▪ Estuarine			
▪ Buffer zone of protected area			
▪ Special area for protecting biodiversity			
<b>B. Potential Environmental Impacts</b> Will the Project cause...			
▪ <b>encroachment on precious ecology resulting in loss or damage to fisheries and fragile coastal habitats such as coral reefs, mangroves, and seagrass beds?</b>			
▪ short-term increase in turbidity and sunlight penetration as well as changes in sediment pattern and flows at dredging site?			
▪ removal and disturbance of aquatic flora and fauna at dredging site?			
▪ deterioration of water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in construction?			
▪ alteration of bottom surface and modifications to bathymetry, causing changes in tidal bore, river circulation, species diversity, and salinity?			
▪ <b>changes in sediment pattern and littoral drift that may cause beach erosion of neighboring areas?</b>			
▪ modification of terrestrial habitat by upland disposal of dredged material or covering of potential archaeological sites with dredge spoil?			
▪ short-term air quality degradation due to dredging-related operations?			
▪ noise and vibration due to blasting and other civil works?			
▪ risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?			
▪ dislocation or involuntary resettlement of people?			
▪ disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?			
▪ other social concerns relating to inconveniences in living conditions in the project areas?			



Screening Questions	Yes	No	Remarks
▪ social conflicts if construction depletes local fishery resources on which communities depend for subsistence?			
▪ <b>poor sanitation and solid waste disposal in construction camps and work sites, and possible transmission of communicable diseases from workers to local populations (such as STI's and HIV/AIDS)?</b>			
▪ social concerns relating to local inconveniences associated with port operation (e.g. increased volume of port traffic, greater risk of accidents, communicable disease transmission)?			
▪ deterioration of water quality due to ship (e.g. ballast water, oil waste, lubricant and fuel spills, sewage) and waterfront industry discharges?			
▪ increased noise and air pollution resulting from airborne emissions (e.g. gas, smoke, fumes) from maneuvering and berthing ships and the waterfront industry?			
▪ large population increase during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?			
▪ social conflicts especially when workers from other areas are hired?			
▪ risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?			
▪ community safety risks due to both accidental and natural hazards, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?			

**(Power Transmission)**

Screening Questions	Yes	No	Remarks
<b>A. Project Siting</b> Is the Project area adjacent to or within any of the following environmentally sensitive areas?			
▪ Cultural heritage site			
▪ Protected Area			
▪ Wetland			
▪ Mangrove			
▪ Estuarine			

Screening Questions	Yes	No	Remarks
▪ Buffer zone of protected area			
▪ Special area for protecting biodiversity			
<b>B. Potential Environmental Impacts</b> Will the Project cause...			
▪ encroachment on historical/cultural areas, disfiguration of landscape and increased waste generation?			
▪ <b>encroachment on precious ecosystem (e.g. sensitive or protected areas)?</b>			
▪ alteration of surface water hydrology of waterways crossed by roads and resulting in increased sediment in streams affected by increased soil erosion at the construction site?			
▪ damage to sensitive coastal/marine habitats by construction of submarine cables?			
▪ <b>deterioration of surface water quality due to silt runoff, sanitary wastes from worker-based camps and chemicals used in construction?</b>			
▪ increased local air pollution due to rock crushing, cutting and filling?			
▪ risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?			
▪ chemical pollution resulting from chemical clearing of vegetation for construction site?			
▪ noise and vibration due to blasting and other civil works?			
▪ dislocation or involuntary resettlement of people?			
▪ disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?			
▪ social conflicts relating to inconveniences in living conditions where construction interferes with pre-existing roads?			
▪ hazardous driving conditions where construction interferes with pre-existing roads?			
▪ creation of temporary breeding habitats for vectors of disease such as mosquitoes and rodents?			
▪ dislocation and compulsory resettlement of people living in right-of-way of the power transmission lines?			

Screening Questions	Yes	No	Remarks
▪ <b>environmental disturbances associated with the maintenance of lines (e.g. routine control of vegetative height under the lines)?</b>			
▪ facilitation of access to protected areas in case corridors traverse protected areas?			
▪ disturbances (e.g. noise and chemical pollutants) if herbicides are used to control vegetative height?			
▪ large population influx during project construction and operation that cause increased burden on social infrastructure and services (such as water supply and sanitation systems)?			
▪ social conflicts if workers from other regions or countries are hired?			
▪ poor sanitation and solid waste disposal in construction camps and work sites, and possible transmission of communicable diseases from workers to local populations?			
▪ risks to community safety associated with maintenance of lines and related facilities?			
▪ community health hazards due to electromagnetic fields, land subsidence, lowered groundwater table, and salinization?			
▪ risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?			
▪ community safety risks due to both accidental and natural hazards, especially where the structural elements or components of the project (e.g., high voltage wires, and transmission towers and lines ) are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?			

### (Roads and Highways)

Screening Questions	Yes	No	Remarks
<b>A. Project Siting</b> Is the project area adjacent to or within any of the following environmentally sensitive areas?			
▪ Cultural heritage site			
▪ Protected Area			
▪ Wetland			
▪ Mangrove			

Screening Questions	Yes	No	Remarks
▪ Estuarine			
▪ Buffer zone of protected area			
▪ Special area for protecting biodiversity			
<b>B. Potential Environmental Impacts</b> Will the Project cause...			
▪ encroachment on historical/cultural areas; disfiguration of landscape by road embankments, cuts, fills, and quarries?			
▪ encroachment on precious ecology (e.g. sensitive or protected areas)?			
▪ alteration of surface water hydrology of waterways crossed by roads, resulting in increased sediment in streams affected by increased soil erosion at construction site?			
▪ deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in construction?			
▪ increased local air pollution due to rock crushing, cutting and filling works, and chemicals from asphalt processing?			
▪ risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation during project construction and operation?			
▪ noise and vibration due to blasting and other civil works?			
▪ dislocation or involuntary resettlement of people?			
▪ dislocation and compulsory resettlement of people living in right-of-way?			
▪ disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?			
▪ other social concerns relating to inconveniences in living conditions in the project areas that may trigger cases of upper respiratory problems and stress?			
▪ hazardous driving conditions where construction interferes with pre-existing roads?			
▪ poor sanitation and solid waste disposal in construction camps and work sites, and possible transmission of communicable diseases (such as STI's and HIV/AIDS) from workers to local populations?			

Screening Questions	Yes	No	Remarks
▪ creation of temporary breeding habitats for diseases such as those transmitted by mosquitoes and rodents?			
▪ accident risks associated with increased vehicular traffic, leading to accidental spills of toxic materials?			
▪ increased noise and air pollution resulting from traffic volume?			
▪ increased risk of water pollution from oil, grease and fuel spills, and other materials from vehicles using the road?			
▪ social conflicts if workers from other regions or countries are hired?			
▪ large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?			
▪ risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?			
▪ community safety risks due to both accidental and natural causes, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning.			

**(Sewage Treatment)**

Screening Questions	Yes	No	Remarks
<b>B. Project Siting</b> Is the project area...			
▪ Densely populated?			
▪ Heavy with development activities?			
▪ Adjacent to or within any environmentally sensitive areas?			
• Cultural heritage site			
• Protected Area			
• Wetland			
• Mangrove			
• Estuarine			
• Buffer zone of protected area			

Screening Questions	Yes	No	Remarks
<ul style="list-style-type: none"> <li>Special area for protecting biodiversity</li> </ul>			
<ul style="list-style-type: none"> <li>Bay</li> </ul>			
<b>A. Potential Environmental Impacts</b> Will the Project cause...			
<ul style="list-style-type: none"> <li>impairment of historical/cultural monuments/areas and loss/damage to these sites?</li> </ul>			
<ul style="list-style-type: none"> <li>interference with other utilities and blocking of access to buildings; nuisance to neighboring areas due to noise, smell, and influx of insects, rodents, etc.?</li> </ul>			
<ul style="list-style-type: none"> <li>dislocation or involuntary resettlement of people?</li> </ul>			
<ul style="list-style-type: none"> <li>disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?</li> </ul>			
<ul style="list-style-type: none"> <li>impairment of downstream water quality due to inadequate sewage treatment or release of untreated sewage?</li> </ul>			
<ul style="list-style-type: none"> <li>overflows and flooding of neighboring properties with raw sewage?</li> </ul>			
<ul style="list-style-type: none"> <li>environmental pollution due to inadequate sludge disposal or industrial waste discharges illegally disposed in sewers?</li> </ul>			
<ul style="list-style-type: none"> <li>noise and vibration due to blasting and other civil works?</li> </ul>			
<ul style="list-style-type: none"> <li>risks and vulnerabilities related to occupational health and safety due to physical, chemical, and biological hazards during project construction and operation?</li> </ul>			
<ul style="list-style-type: none"> <li>discharge of hazardous materials into sewers, resulting in damage to sewer system and danger to workers?</li> </ul>			
<ul style="list-style-type: none"> <li>inadequate buffer zone around pumping and treatment plants to alleviate noise and other possible nuisances, and protect facilities?</li> </ul>			
<ul style="list-style-type: none"> <li>road blocking and temporary flooding due to land excavation during the rainy season?</li> </ul>			
<ul style="list-style-type: none"> <li>noise and dust from construction activities?</li> </ul>			
<ul style="list-style-type: none"> <li>traffic disturbances due to construction material transport and wastes?</li> </ul>			
<ul style="list-style-type: none"> <li>temporary silt runoff due to construction?</li> </ul>			
<ul style="list-style-type: none"> <li>hazards to public health due to overflow flooding, and groundwater pollution due to failure of sewerage system?</li> </ul>			

Screening Questions	Yes	No	Remarks
▪ deterioration of water quality due to inadequate sludge disposal or direct discharge of untreated sewage water?			
▪ contamination of surface and ground waters due to sludge disposal on land?			
▪ health and safety hazards to workers from toxic gases and hazardous materials which maybe contained in confined areas, sewage flow and exposure to pathogens in untreated sewage and unstabilized sludge?			
▪ large population increase during project construction and operation that causes increased burden on social infrastructure (such as sanitation system)?			
▪ social conflicts between construction workers from other areas and community workers?			
▪ risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?			
▪ community safety risks due to both accidental and natural hazards, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?			

**(Solid Waste Treatment)**

Screening Questions	Yes	No	Remarks
A. Project Siting Is the project area...			
▪ Densely populated?			
▪ Heavy with development activities?			
▪ Adjacent to or within any environmentally sensitive areas?			
• Cultural heritage site			
• Protected Area			
• Wetland			
• Mangrove			
• Estuarine			
• Buffer zone of protected area			



Screening Questions	Yes	No	Remarks
<ul style="list-style-type: none"> <li>Special area for protecting biodiversity</li> </ul>			
<ul style="list-style-type: none"> <li>Bay</li> </ul>			
B. Potential Environmental Impacts Will the Project cause...			
<ul style="list-style-type: none"> <li>impacts associated with transport of wastes to the disposal site or treatment facility</li> </ul>			
<ul style="list-style-type: none"> <li>impairment of historical/cultural monuments/areas and loss/damage to these sites?</li> </ul>			
<ul style="list-style-type: none"> <li>degradation of aesthetic and property value loss?</li> </ul>			
<ul style="list-style-type: none"> <li>nuisance to neighboring areas due to foul odor and influx of insects, rodents, etc.?</li> </ul>			
<ul style="list-style-type: none"> <li>dislocation or involuntary resettlement of people?</li> </ul>			
<ul style="list-style-type: none"> <li>disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?</li> </ul>			
<ul style="list-style-type: none"> <li>risks and vulnerabilities related occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?</li> </ul>			
<ul style="list-style-type: none"> <li>public health hazards from odor, smoke from fire, and diseases transmitted by flies, insects, birds and rats?</li> </ul>			
<ul style="list-style-type: none"> <li>deterioration of water quality as a result of contamination of receiving waters by leachate from land disposal system?</li> </ul>			
<ul style="list-style-type: none"> <li>contamination of ground and/or surface water by leachate from land disposal system?</li> </ul>			
<ul style="list-style-type: none"> <li>land use conflicts?</li> </ul>			
<ul style="list-style-type: none"> <li>pollution of surface and ground water from leachate coming from sanitary landfill sites or methane gas produced from decomposition of solid wastes in the absence of air, which could enter the aquifer or escape through soil fissures at places far from the landfill site?</li> </ul>			
<ul style="list-style-type: none"> <li>inadequate buffer zone around landfill site to alleviate nuisances?</li> </ul>			
<ul style="list-style-type: none"> <li>road blocking and/or increased traffic during construction of facilities?</li> </ul>			
<ul style="list-style-type: none"> <li>noise and dust from construction activities?</li> </ul>			
<ul style="list-style-type: none"> <li>temporary silt runoff due to construction?</li> </ul>			
<ul style="list-style-type: none"> <li>hazards to public health due to inadequate management of landfill site caused by inadequate institutional and financial capabilities for the management of the landfill operation?</li> </ul>			

Screening Questions	Yes	No	Remarks
▪ emission of potentially toxic volatile organics from land disposal site?			
▪ surface and ground water pollution from leachate and methane gas migration?			
▪ loss of deep-rooted vegetation (e.g. trees) from landfill gas?			
▪ explosion of toxic response from accumulated landfill gas in buildings?			
▪ contamination of air quality from incineration?			
▪ public health hazards from odor, smoke from fire, and diseases transmitted by flies, rodents, insects and birds, etc.?			
▪ health and safety hazards to workers from toxic gases and hazardous materials in the site?			
▪ large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?			
▪ social conflicts if workers from other regions or countries are hired?			
▪ risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?			
▪ community safety risks due to both accidental and natural hazards, especially where the structural elements or components (e.g., landfill or incinerator) of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?			

**(Thermal Power Plants)**

SCREENING QUESTIONS	Yes	No	REMARKS
<b>A. Project Siting</b> Is the Project area adjacent to or within any of the following environmentally sensitive areas?			
▪ Cultural heritage site			
▪ Protected Area			
▪ Wetland			
▪ Mangrove			
▪ Estuarine			
▪ Buffer zone of protected area			
▪ Special area for protecting biodiversity			

SCREENING QUESTIONS	Yes	No	REMARKS
<b>B. Potential Environmental Impacts</b> Will the Project cause...			
▪ impairment of historical/cultural monuments and other areas, and loss/damage to these sites?			
▪ encroachment into precious ecosystem (e.g. sensitive habitats like protected forest areas or terrestrial wildlife habitats?			
▪ dislocation or involuntary resettlement of people?			
▪ disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?			
▪ aesthetic degradation and property value loss due to establishment of plant and ancillary facilities?			
▪ risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?			
▪ noise and dust from construction activities?			
▪ short-term soil erosion and silt runoff due to construction?			
▪ fugitive dust during transportation, unloading, storage, and processing of coal, and polluted runoff from coal storage?			
▪ risk of oil spills, which could pollute surface and groundwater and soil?			
▪ hazards in gas pipeline operation and gas storage at power plant sites?			
▪ changes in flow regimes downstream of the water intake due to abstraction for cooling purposes?			
▪ pollution of water bodies and aquatic ecosystem from wastewater treatment plant for boiler feed, bleed-off from cooling towers, boiler blowdown and wash-water, and effluent from ash pond?			
▪ air pollution from fuel gas discharged into the atmosphere?			
▪ public health and safety hazards due to solid waste disposal in sanitary landfills (see Matrix of Impacts and Measures for Solid Waste Disposal)?			
▪ large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?			

SCREENING QUESTIONS	Yes	No	REMARKS
▪ social conflicts if workers from other regions or countries are hired?			
▪ risks community safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?			
▪ community safety risks due to both accidental and natural hazards, especially where the structural elements or components of the project (e.g. ash pond) are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?			

**(Water Supply)**

Screening Questions	Yes	No	Remarks
<b>A. Project Siting</b> Is the project area...			
▪ Densely populated?			
▪ Heavy with development activities?			
▪ Adjacent to or within any environmentally sensitive areas?			
• Cultural heritage site			
• Protected Area			
• Wetland			
• Mangrove			
• Estuarine			
• Buffer zone of protected area			
• Special area for protecting biodiversity			
• Bay			
<b>B. Potential Environmental Impacts</b> Will the Project cause...			
▪ pollution of raw water supply from upstream wastewater discharge from communities, industries, agriculture, and soil erosion runoff?			
▪ impairment of historical/cultural monuments/areas and loss/damage to these sites?			
▪ hazard of land subsidence caused by excessive ground water pumping?			
▪ social conflicts arising from displacement of communities ?			

Screening Questions	Yes	No	Remarks
▪ conflicts in abstraction of raw water for water supply with other beneficial water uses for surface and ground waters?			
▪ unsatisfactory raw water supply (e.g. excessive pathogens or mineral constituents)?			
▪ delivery of unsafe water to distribution system?			
▪ inadequate protection of intake works or wells, leading to pollution of water supply?			
▪ over pumping of ground water, leading to salinization and ground subsidence?			
▪ excessive algal growth in storage reservoir?			
▪ increase in production of sewage beyond capabilities of community facilities?			
▪ inadequate disposal of sludge from water treatment plants?			
▪ inadequate buffer zone around pumping and treatment plants to alleviate noise and other possible nuisances and protect facilities?			
▪ impairments associated with transmission lines and access roads?			
▪ health hazards arising from inadequate design of facilities for receiving, storing, and handling of chlorine and other hazardous chemicals.			
▪ health and safety hazards to workers from handling and management of chlorine used for disinfection, other contaminants, and biological and physical hazards during project construction and operation?			
▪ dislocation or involuntary resettlement of people?			
▪ disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?			
▪ noise and dust from construction activities?			
▪ increased road traffic due to interference of construction activities?			
▪ continuing soil erosion/silt runoff from construction operations?			
▪ delivery of unsafe water due to poor O&M treatment processes (especially mud accumulations in filters) and inadequate chlorination due to lack of adequate monitoring of chlorine residuals in distribution systems?			
▪ delivery of water to distribution system, which is corrosive due to inadequate attention to feeding of corrective chemicals?			

Screening Questions	Yes	No	Remarks
▪ accidental leakage of chlorine gas?			
▪ excessive abstraction of water affecting downstream water users?			
▪ competing uses of water?			
▪ increased sewage flow due to increased water supply			
▪ <b>increased volume of sullage (wastewater from cooking and washing) and sludge from wastewater treatment plant</b>			
▪ large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?			
▪ social conflicts if workers from other regions or countries are hired?			
▪ risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during operation and construction?			
▪ community safety risks due to both accidental and natural hazards, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?			

**(Buildings)**

Screening Questions	Yes	No	Remarks
<b>A. Project Siting</b> Is the project area adjacent to or within any of the following areas:			
▪ Underground utilities			
▪ Cultural heritage site			
▪ Protected Area			
▪ Wetland			
▪ Mangrove			
▪ Estuarine			
▪ Buffer zone of protected area			
▪ Special area for protecting biodiversity			
▪ Bay			

Screening Questions	Yes	No	Remarks
<b>B. Potential Environmental Impacts</b> Will the Project cause...			
▪ <b>Encroachment on historical/cultural areas?</b>			
▪ <b>Encroachment on precious ecology (e.g. sensitive or protected areas)?</b>			
▪ <b>Impacts on the sustainability of associated sanitation and solid waste disposal systems?</b>			
▪ <b>Dislocation or involuntary resettlement of people?</b>			
▪ Disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?			
▪ <b>Accident risks associated with increased vehicular traffic, leading to loss of life?</b>			
▪ <b>Increased noise and air pollution resulting from increased traffic volume?</b>			
▪ Occupational and community health and safety risks?			
▪ Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?			
▪ <b>Generation of dust in sensitive areas during construction?</b>			
▪ <b>Requirements for disposal of fill, excavation, and/or spoil materials?</b>			
▪ <b>Noise and vibration due to blasting and other civil works?</b>			
▪ Long-term impacts on groundwater flows as result of needing to drain the project site prior to construction?			
▪ Long-term impacts on local hydrology as a result of building hard surfaces in or near the building?			
▪ Large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?			
▪ Social conflicts if workers from other regions or countries are hired?			
▪ Risks to community safety caused by fire, electric shock, or failure of the buildings safety features during operation?			
▪ Risks to community health and safety caused by management and disposal of waste?			

Screening Questions	Yes	No	Remarks
<ul style="list-style-type: none"> <li>Community safety risks due to both accidental and natural hazards, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?</li> </ul>			

**(Mining Industry)**

Screening Questions	Yes	No	Remarks
<b>A. Project Siting</b>			
Is the Project area adjacent to or within any of the following environmentally sensitive areas?			
<ul style="list-style-type: none"> <li>Cultural heritage site</li> </ul>			
<ul style="list-style-type: none"> <li>Protected Area</li> </ul>			
<ul style="list-style-type: none"> <li>Wetland</li> </ul>			
<ul style="list-style-type: none"> <li>Mangrove</li> </ul>			
<ul style="list-style-type: none"> <li>Estuarine</li> </ul>			
<ul style="list-style-type: none"> <li>Buffer zone of protected area</li> </ul>			
<ul style="list-style-type: none"> <li>Special area for protecting biodiversity</li> </ul>			
<ul style="list-style-type: none"> <li>Drinking water sources</li> </ul>			
<b>B. Potential Environmental Impacts</b>			
Will the Project cause...			
<ul style="list-style-type: none"> <li>impairment of historical/cultural monuments/areas, and loss/damage to these sites?</li> </ul>			
<ul style="list-style-type: none"> <li>dislocation or involuntary resettlement of people?</li> </ul>			
<ul style="list-style-type: none"> <li>disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?</li> </ul>			
<ul style="list-style-type: none"> <li>significant effects on natural resource base and resource management practices of indigenous peoples and vulnerable groups, and social conflicts between extractive industry workers and local communities?</li> </ul>			
<ul style="list-style-type: none"> <li>air pollution resulting from emissions of particulate matter (&lt;10µm), NO<sub>2</sub>, SO<sub>2</sub> from extractive activities, accidents, inadequate equipment maintenance, and poor planning?</li> </ul>			
<ul style="list-style-type: none"> <li>noise and dust from extractive activities?</li> </ul>			
<ul style="list-style-type: none"> <li>water pollution resulting from discharge of residual heavy metals from extractive activities?</li> </ul>			



Screening Questions	Yes	No	Remarks
▪ surface or groundwater pollution from inappropriate handling and storage of hazardous materials?			
▪ erosion caused by stormwater runoff from exposed soil surface, tailing dams, and waste rock dumps?			
▪ direct marine discharge or riverine discharge?			
▪ soil contamination and ecosystem disturbance from tailing deposits, sedimentation basins, and abandoned mine, mill, and camp sites?			
▪ risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?			
▪ large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?			
▪ social conflicts if workers from other regions or countries are hired?			
▪ risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?			
▪ community safety risks due to both accidental and natural hazards, especially where the structural elements or components of the project (e.g., excavation pits, tailing dams, etc.) are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?			

**(Solar Energy)**

Screening Questions	Yes	No	Remarks
<b>A. Project Siting</b> Is the Project area adjacent to or within any of the following environmentally sensitive areas?			
▪ Physical cultural heritage site			
▪ Located in or near to legally protected area			
▪ Located in or near to special habitats for biodiversity (modified or natural habitats)			
▪ Wetland			
▪ Mangrove			
▪ Estuarine			

Screening Questions	Yes	No	Remarks
▪ Offshore (marine)			
<b>B. Potential Environmental Impacts</b> Will the Project cause...			
▪ large scale land disturbance and land use impacts specially due to diversion of productive lands?			
▪ involuntary resettlement of people? (physical displacement and/or economic displacement)			
▪ disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?			
▪ noise, vibration and dust from construction activities?			
▪ an increase in local traffic during construction?			
▪ environmental disturbances such as soil erosion, land contamination, water quality deterioration, air pollution, noise and vibrations during construction phase?			
• aesthetic degradation and property value loss due to establishment of plant and ancillary facilities?			
▪ changes in flow regimes of the water intake from surface water or underground wells due to abstraction for cooling purposes?			
▪ pollution of water bodies and aquatic ecosystem from wastewater treatment plant, from cooling towers, and wash-water during operation?			
▪ a threat to bird or bat life from colliding with the project facilities and/or being burned by concentrated solar rays?			
▪ industrial liquid (dielectric fluids, cleaning agents, and solvents) and solid wastes (lubricating oils, compressor oils, and hydraulic fluids) generated during construction and operations likely to pollute land and water resources?			
▪ Soil/water contamination due to use of hazardous materials or disposal of broken or damaged solar cells (photovoltaic technologies contain small amounts of cadmium, selenium and arsenic ) during installation, operation and decommissioning?			
▪ noise disturbance during operation due to the proximity of settlements or other features?			
▪ visual impacts due to reflection from solar collector arrays resulting in glint or glare?			
▪ large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?			

Screening Questions	Yes	No	Remarks
▪ social conflicts between local laborers and those from outside the area?			
▪ risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during construction, installation, operation, and decommissioning?			
▪ risks to community health and safety due to the transport, storage, and use and/or disposal of materials and wastes such as explosives, fuel and other chemicals during construction, and operation?			
▪ community safety risks due to both accidental and natural causes, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?			

**(Wind Energy)**

Screening Questions	Yes	No	Remarks
<b>A. Project Siting</b> Is the Project area adjacent to or within any of the following environmentally sensitive areas?			
▪ Cultural heritage site			
▪ Protected Area			
▪ Wetland			
▪ Mangrove			
▪ Estuarine			
▪ Offshore (marine)			
▪ Buffer zone of protected area			
▪ Special area for protecting biodiversity			
<b>B. Potential Environmental Impacts</b> Will the Project cause...			
▪ encroachment on precious ecology resulting in loss or damage to terrestrial or aquatic habitats (e.g., wetlands or sensitive or protected areas) or species of conservation significance?			
▪ encroachment on historical/cultural monuments or areas?			
▪ dislocation or involuntary resettlement of people?			
▪ disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?			

Screening Questions	Yes	No	Remarks
▪ risks and vulnerabilities related to occupational health and safety due to physical, chemical and biological hazards during project construction and operation?			
▪ noise and vibration due to blasting and other civil works?			
▪ an increase in local traffic during construction?			
▪ decrease in value of land in the area due to noise, the degradation of environmental aesthetics or other nuisances?			
▪ short-term ecological disturbances such as soil erosion, water quality deterioration (surface and groundwater), air pollution, noise and vibrations from construction equipment?			
▪ alteration of surface water flows by towers, roads or other facilities, resulting in erosion and stream sedimentation?			
▪ disturbance of sensitive marine ecosystems from the installation of offshore towers and submarine cables?			
▪ a threat to bird or bat life from turbine and tower collision (particularly waterbirds)?			
▪ noise disturbance during operation due to the proximity of settlements or other features?			
▪ disruption of radar or telecommunications from electromagnetic interference?			
▪ aviation or navigation hazard from turbines?			
▪ hazards to traffic on major roads near the wind farm due to the location of turbines causing driver distraction?			
▪ facilitation of access to protected areas by roads or the transmission line corridor?			
▪ shadow flicker in nearby settlements or at other important local sites?			
▪ large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?			
▪ social conflicts if workers from other regions or countries are hired?			
▪ risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?			

Screening Questions	Yes	No	Remarks
▪ community safety risks due to both accidental and natural hazards, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?			

**2. SUBPROJECT DESCRIPTION AND ENVIRONMENTAL CATEGORIZATION****Subproject Title:****Detailed Subproject Description:****Overall conclusion on Environment Category (circle one):****A****B.****C****Reason for conclusion:****Notes:****Prepared by:** \_\_\_\_\_ (subproject)**Reviewed by:** \_\_\_\_\_ (ACEE or I&G ESMS Manager)**Endorsed by:** \_\_\_\_\_ (I&G)

### 3. A Checklist for Preliminary Climate Risk Screening

Subproject Title:		Score	Remarks <sup>1</sup>
<b>Location and Design of subproject</b>	Is siting and/or routing of the subproject (or its components) likely to be affected by climate conditions including extreme weather related events such as floods, droughts, storms, landslides?		
	Would the subproject design (e.g. the clearance for bridges) need to consider any hydro-meteorological parameters (e.g., sea-level, peak river flow, reliable water level, peak wind speed etc)?		
<b>Materials and Maintenance</b>	Would weather, current and likely future climate conditions (e.g. prevailing humidity level, temperature contrast between hot summer days and cold winter days, exposure to wind and humidity hydro-meteorological parameters likely affect the selection of project inputs over the life of project outputs (e.g. construction material)?		
	Would weather, current and likely future climate conditions, and related extreme events likely affect the maintenance (scheduling and cost) of project output(s) ?		
<b>Performance of subproject outputs</b>	Would weather/climate conditions, and related extreme events likely affect the performance (e.g. annual power production) of subproject output(s) (e.g. hydro-power generation facilities) throughout their design life time?		

Options for answers and corresponding score are provided below:

Response	Score
Not Likely	0
Likely	1
Very Likely	2

Responses when added that provide a score of 0 will be considered low risk subproject. If adding all responses will result to a score of 1-4 and that no score of 2 was given to any single response, the subproject will be assigned a medium risk category. A total score of 5 or more (which include providing a score of 1 in all responses) or a 2 in any single response, will be categorized as high risk subproject.

**Result of Initial Screening (Low, Medium, High):** \_\_\_\_\_

**Other**

**Comments:** \_\_\_\_\_

Prepared by: \_\_\_\_\_(subproject)

Reviewed by: \_\_\_\_\_(ACEE)

Endorsed by: \_\_\_\_\_(I&G)

## APPENDIX 5. SOCIAL SAFEGUARD SCREENING CHECKLISTS

### 1. Land Acquisition and Involuntary Resettlement Impact Pre-Screening Checklist

<sup>1</sup> If possible, provide details on the sensitivity of project components to climate conditions, such as how climate parameters are considered in design standards for infrastructure components, how changes in key climate parameters and sea level might affect the siting/routing of project, the selection of construction material and/or scheduling, performances and/or the maintenance cost/scheduling of project outputs.

Date: \_\_\_\_\_

<b>A. Subproject Data</b>				
Subproject Title _____				
<b>Probable Involuntary Resettlement Effects</b>	<b>Yes</b>	<b>No</b>	<b>Not Applicable</b>	<b>Remarks</b>
<b>B. Involuntary Acquisition of Land</b>				
1. Will there be land acquisition or has land acquisition been acquired recently (within 3 years)?				
2. Will there be residential house demolition causing loss of shelter to people/workers due to land acquisition or construction activities?				
3. Will there be any temporary occupation of land that affects the land, housing, assets or livelihoods/business of people.				
4. Will there be restrictions on land use or access to common properties (e.g. environmental buffer zone)?				
<b>B. Outstanding issue on Acquired Land and Involuntary Resettlement within 2 years</b>				
5. Is there any outstanding issue (e.g. outstanding payment of compensation, complains from affected people and/or communities)				

**Prepared by:**

Name and Position: \_\_\_\_\_

Date: \_\_\_\_\_

If “yes” to any question, further due diligence is required using Checklist 3 to determine whether the subproject should be excluded (e.g., there are potential or outstanding land acquisition and resettlement issues). If there has been prior land acquisition and/or resettlement (LAR) within 2 years a due diligence report must be prepared using the Guideline (see item 5). The due diligence should confirm that LAR was carried out in accordance with local laws and regulations, and that there are no outstanding LAR issues or complaints. Otherwise, the subproject will be deemed ineligible.

If all answers are “no”, the project will be Category C.

## 2. Ethnic Minorities Impact Pre-Screening Checklist

Date: \_\_\_\_\_

<b>A. Subproject Data</b>				
Subproject Title _____				
<b>KEY CONCERNS</b> (Please provide elaborations on the Remarks column, if necessary)	<b>YES</b>	<b>NO</b>	<b>NOT APPLICABLE</b>	<b>Remarks</b>
<b>B. Ethnic Minorities Identification<sup>1</sup></b>				
1. Are there “minorities” (ethnic or national minorities) communities or groups within the boundaries of potential adverse impacts?				

<sup>1</sup> If yes to question 2 or 3, further due diligence is required using Checklist 4 to determine the subproject categorization (B or C) or whether the subproject should be excluded (e.g., adverse impacts on ethnic minority community). If all answers are “no”, the project will be Category C.



<b>Prepared by:</b>	
Name and Position	
Date:	

If yes to question above, further due diligence is required using Checklist 4 to determine the subproject categorization (B or C) or whether the subproject should be excluded (e.g., adverse impacts on ethnic minority community). If all answers are “no”, the project will be Category C.

### 3. Involuntary Resettlement Impact Categorization Checklist

<b>Probable Involuntary Resettlement<sup>29</sup> Effects</b>	<b>Yes</b>	<b>No</b>	<b>Not Known</b>	<b>Remarks</b>
<b>Involuntary Acquisition of Land</b>				
1. Will there be land acquisition?				
2. Is the site for land acquisition known?				
3. Is the ownership status and current usage of land to be acquired known?				
4. Will easement be utilized within an existing Right of Way (ROW)?				
5. Will there be any restriction on land use or access to common property?				
6. Will there be loss of shelter (i.e, house demolition) and residential land due to land acquisition?				
7. Will there be loss of agricultural and other productive assets due to land acquisition?				
8. Will there be losses of crops, trees, and fixed assets due to land acquisition?				
9. Will there be loss of businesses or enterprises due to land acquisition?				
10. Will there be loss of income sources and means of livelihoods due to land acquisition?				
<b>Temporary Land Occupation Impacts</b>				
11. During construction, will there be temporary occupation of lands that do not belong to the company?				
12. Will temporary land occupation cause impacts in existing land uses or people?				
<b>House Demolition</b>				

<sup>29</sup> The definition and scope of involuntary resettlement as per ADB's Safeguard Policy Statement (2009) and safeguard requirement 2 (which is included as Appendix 3 of this ESMS).

13. Will there be any building demolition?				
14. Do such buildings belong to the company?				
15. Will any people be impacted by house demolition (e.g., workers, residents, others)				
<b>Information on Displaced Persons:</b>				
Any estimate of the likely number of persons that will be impacted by the subproject? <input type="checkbox"/> No <input type="checkbox"/> Yes If yes, approximately how many? _____				
Are any of them poor, female-heads of households, or vulnerable to poverty risks? <input type="checkbox"/> No <input type="checkbox"/> Yes				
Are any displaced persons from ethnic minority groups? <input type="checkbox"/> No <input type="checkbox"/> Yes				

Note: You may attach additional information on the subproject, as necessary.

**Overall conclusion on Involuntary Resettlement Category (circle one):**

**A**

**B**

**C**

**Note:** for a subproject to be approved for FI loan, it should be category C and any due diligence for prior land acquisition should confirm there are no remaining issues.

**Reason for conclusion:**

**Notes:**

#### 4. Ethnic Minorities Impact Screening Checklist

<b>KEY CONCERNS</b> (Please provide elaborations on the Remarks column)	<b>YES</b>	<b>NO</b>	<b>NOT KNOWN</b>	<b>Remarks</b>
<b>A. Identification of Potential Impacts</b>				
1. Will the subproject directly benefit ethnic minority communities?				
5. Will the subproject have direct or indirect adverse impacts on ethnic minority communities or workers?				
3. Will the subproject affect health of ethnic minorities? (positive or negative)				
4. Will the subproject have any temporary or permanent environmental impacts on an ethnic minority community?				
5. Will the subproject have any impact on working conditions (i.e., occupational health and safety) for ethnic minority workers? (positive or negative)				
6. Does this subproject pose any health risk to local communities in the case of an accidental spill or explosion either within the plant or materials transported to or from the plant?				
7. Do such ethnic minority groups speak a distinct language or dialect?				

#### B. Anticipated subproject impacts on Ethnic Minorities

<b>Subproject activity</b>	<b>Anticipated positive effect</b>	<b>Anticipated negative effect</b>
<b>1.</b>		
<b>2.</b>		
<b>3.</b>		
<b>4.</b>		
<b>5.</b>		

Note: You may attach additional information on the subproject, as necessary.

**Overall conclusion on Indigenous Peoples Category (circle one):**

**A**

**B**

**C**

**Note:** Category A and B subprojects will be excluded. A subproject that has no ethnic minorities will be Category C and no further actions are required.

**Reason for conclusion:**

**Notes:**

## **5. Guidance for Information and data collection, and report outline for a Land Acquisition and Resettlement Due Diligence Report (DDR). – (i.e., prior impacts within 2 years)**

### **1) Project impact on land acquisition 项目影响**

- amount of land acquisition, affected village, number of affected household and person 征地数量, 受影响村及受影响户数、人口
- amount of residential house demolition, affected village and displaced household and person 住宅房屋拆迁数量, 受影响村及拆迁户数, 人口
- amount of non-residential house demolition, including institute, enterprise and small shop, 非住宅房屋拆迁, 包括企事业单位及店铺
- affected vulnerable group (including include non-registered persons and non-registered property) 征地影响弱势群体情况
- affected facilities and ground attachment 项目影响附属物及基础设施

### **2) Implementation of LA, HD and resettlement 征地拆迁安置实施**

- Institutional structure - including organization, staff and their responsibilities, and contacts 征地拆迁实施机构安排, 包括机构组织、相关人员及职责、负责人联系方式
- Detail schemes and procedures of LA and HD 征地拆迁实施方案及程序
- Commencement and completion dates of LA, HD and resettlement 征地拆迁启动及完成的时间
- Information disclosure (including notices for LA, HD and resettlement, public hearing, (if any) 征地拆迁信息公开 (包括征地公告、房屋拆迁及移民安置公告、听证 (如有) 等)
- Grievances and redress procedures 抱怨申述程序
- Resettlement cost and its composition 征地拆迁补偿资金及构成
- Disbursement of compensation and procedures 补偿资金支付及其流程

- Issues and complaints from affected people during implementation, and any outstanding issues/complaints

### 3) Relevant laws and regulations for LA, HD and resettlement 征地、拆迁依据的有关政策及有关文件:

- Policies for LA, HD and resettlement of the project 项目实施的征地政策, 房屋拆迁及安置政策
- ✓ **Others 其他**
  - Samples of LA agreement, HD agreement 征地拆迁协议 (抽样)
  - Official documents, including approval of project, land use pre-examination and approval of land use by land resource department
  - Any documents of LAR progress monitoring and reporting

### Outline of LAR Due Diligence Report

- 1 SUMMARY
    - 1.1 Background
    - 1.2 Resettlement Due Diligence
      - 1.2.1 Methodology
      - 1.2.2 Scope
  - 2 RESETTLEMENT IMPLEMENTING ORGANIZATION
    - 2.1 Organization
    - 2.2 Capacity of Organization
    - 2.3 Conclusion
  - 3 RESETTLEMENT POLICIES AND COMPENSATION RATES
    - 3.1 Policy Framework (Land and House)
    - 3.2 Compensation Policy and Rates
    - 3.3 Conclusion
  - 4 LA, HD AND RESETTLEMENT IMPLEMENTATION
    - 4.1 LA Impacts and Analysis
    - 4.2 LA and Resettlement Plan/Schemes and Implementation Steps and Timing
    - 4.3 HD and Relocation Plan/Schemes and Implementation Steps and Timing
    - 4.4 Resettlement Cost and Disbursement of Resettlement Funds
      - 4.4.1 Resettlement compensation
      - 4.4.2 Disbursement Process
      - 4.4.3 Compensation Payment
    - 4.5 Conclusion
  - 5 INFORMATION DISCLOSURE AND GRIEVANCE REDRESS
    - 5.1 Information Disclosure and Consultation
    - 5.2 Grievance Redress
    - 5.3 Evaluation
  - 6 CONCLUSIONS
    - 6.1 Summary of evaluations
    - 6.2 Outstanding issue (if applicable)
    - 6.3 Complaints from affected people (if applicable)
    - 6.4 Corrective actions to resolve outstanding issue and complain from affected people (if applicable)
- APPENDICES (local regulations/standards; maps; photos; census of affected household

## APPENDIX 6. SUBPROJECT SELECTION CRITERIA

### A. Selection Criteria for Subprojects through Entrusted Loans and Guarantees, and ESCOs

1. The subprojects supported by entrusted loans including credit lines to energy service company (ESCO) and Financial Leasing Companies, guarantees and financial leases, must meet the technical, financial, economic, environmental, and social criteria as presented below. These criteria will ensure that the selected subprojects lead and demonstrate air quality improvement, low-carbon development, energy efficiency and emission reduction work in greater Beijing–Tianjin–Hebei (BTH) region<sup>1</sup> with advanced technology, adequate financial returns, and provide substantial benefits to the economy, society, and environment. The following criteria will apply to the subprojects that are financed under the green financing platform.

#### 1. Subproject Technical Criteria

2. All subprojects must meet the following criteria, in particular:
  - (i) All subprojects must not result in an increase in energy consumption<sup>2</sup> and emissions comparing to the current situation in the facility where the subprojects are located, including CO<sub>2</sub>, SO<sub>2</sub>, NO<sub>x</sub>, and airborne PM,<sup>3</sup> or others may be approved by ADB.
  - (ii) Baseline for energy consumption and emissions shall be established before the subprojects are being implemented.
  - (iii) Energy consumption and emissions produced by the subprojects after implementation shall be monitored and recorded.
  - (iv) All subprojects must use proven technologies with reliable, measureable, and verifiable emission reduction that will contribute to the achievement of the Action Plan on Prevention and Control of Air Pollution (2013–2017) (CAAP), and the 13th Five-Year Plan of the People's Republic of China (PRC).
  - (v) The proposed technologies to be used shall be the best available technologies where feasible.
  - (vi) All subprojects shall comply with Asian Development Bank's (ADB) Energy Policy and the industry policies of where the subproject is located. Normally, the subproject should belong to the encouraged and prioritized sectors, local key supported projects or piloting project.
  - (vii) All subprojects shall contribute to at least one of the indicators set in the design and monitoring framework. And
  - (viii) All subprojects must be located in the geographic areas listed under greater BTH region and must address air pollution issues.

#### 2. Subproject Financial Criteria

3. All subprojects must be financially viable. The financial analysis should be prepared in accordance with ADB Financial Management and Analysis of Projects guidelines. In particular:
  - (i) The estimated subproject investment and operations costs, as well as cash inflows, must be clearly presented and must be reasonable.

<sup>1</sup> The greater Beijing–Tianjin–Hebei region refers to Beijing and Tianjin municipalities; Hebei, Henan, Shandong, Shanxi and Liaoning provinces; and Inner Mongolia Autonomous Region.

<sup>2</sup> Evaluated in ton of standard coal equivalent.

<sup>3</sup> CO<sub>2</sub> = carbon dioxide, SO<sub>2</sub> = sulphur dioxide, NO<sub>x</sub> = nitrogen oxide, and PM = Particulate matters.

- (ii) The financial internal rate of return (FIRR) shall be greater than the weighted average cost of capital.
- (iii) The FIRR must be robust under various sensitivity scenarios.
- (iv) The payback period of subprojects shall match the repayment period of subloans. And
- (v) The average debt-service coverage ratio shall be at least 1.2. If any subproject has debt-service coverage ratio less than 1.2, I&G will require the subborrower to provide additional credit enhancement measures.

### **3. Subproject Economic Criteria**

4. For all the proposed subprojects, the total economic benefits must exceed the total economic costs. The economic internal rate of return of the subproject must be greater than the discount rate of 12%, and must be viable under adverse sensitivity scenarios. The economic benefits include CO<sub>2</sub> savings valued at \$35.2/ton with 2% annual increase.

### **4. Subproject Social and Environmental Safeguards Criteria**

5. All subprojects must meet the following criteria, in particular:
- (i) The subprojects must not involve any land acquisition or housing demolition.<sup>4</sup>
  - (ii) The subproject must not have any adverse impacts on ethnic minorities.<sup>5</sup>
  - (iii) The subprojects must not be located in any designated environmental protection zone and cultural heritage site.
  - (iv) The subprojects must not support enterprises which have activities involving commercial development of cultural resources of Indigenous Peoples without their consent for the commercialization of such resources.
  - (v) Each subproject must be designed, constructed, and operated in accordance with relevant national and provincial social and environmental laws and regulations.
  - (vi) Subproject must meet requirements of the ESMS developed for the loan project,
  - (vii) Initial Poverty and Social Assessment and Summary Poverty Reduction and Social Strategy shall be prepared for all subprojects.
  - (viii) Each subproject must acquire proper approvals from proper national and provincial authorities in-charge. And
  - (ix) The subprojects shall not result in labor retrenchment and labor redundancies.

### **5. Subborrower Selection Criteria**

6. All subborrowers must be meet the following criteria, in particular:
- (i) All subborrowers must be financially creditworthy and not have a poor credit record, as recorded in the People's Bank of China credit history database.
  - (ii) The subborrowers must be capable to contribute a minimum of 20% of the total subproject investment cost as counterpart financing.
  - (iii) The subborrowers shall commit to enhance capacities in project planning, financing, implementing and monitoring during the subproject preparation and implementation periods.

---

<sup>4</sup> The subproject proposal will be screened through an involuntary resettlement impact screening checklist in accordance with procedures contained in the project's environmental and social management system (ESMS) which is included as Appendix 6 of the ESMS.

<sup>5</sup> The subproject proposal will be screened through an ethnic minorities impact screening checklist.

- (iv) The subborrowers must have complied with all relevant domestic environmental regulations and must acquire relevant environment permits with respect to the existing facilities. And
- (v) The subborrowers must be in compliance with relevant domestic occupational health and safety standard.

7. In the event that a subproject has good energy savings and emission reduction potential, but does not meet some of these criteria, I&G, may consider and recommend to ADB, ADB will review and approve.

## **B. Selection Criteria for Early Stage Investment**

8. **Sector Coverage.** The investment in early stage technology will focus on the introduction of innovative low-emission technologies in same targeted areas as specified for the overall loan project, including clean energy, energy efficiency, emission reduction, green transport, and other related low-emission technologies.

9. **Number of positions & investment size.** Targeting companies must be in the early to early growth stages. Early stage refers to typically pre-revenue, with business model in trial, while Early growth stage refers to typically early revenue, pre- or post-profit with existing business model.

10. **Return objective.** The return is expected to be greater than 10%.

### **11. Investment criteria.**

- (i) I&G will inject capital to the low-carbon technology investee, which are operating in the selected industries and fields mentioned in para. 1;
- (ii) The investee must conduct businesses with environmental/social return, which can generate enhanced financial return;
- (iii) The investee must possess patent(s), proprietary technology and/or technical know-how in the sectors mentioned in para. 1;
- (iv) The investee must have good growth potential with feasible technology;
- (v) The investee should be ready for initial commercialization or further scale-up;
- (vi) The investee must be registered within 8 years; and
- (vii) It will be a strong plus if other investment institutions have already invested to the investee.

12. **Geographic location.** The investee must be located in the greater BTH region.

13. **Social and environmental safeguards criteria.** The subprojects supported by the investment in early stage technology must meet the following criteria, in particular:

- (i) The subprojects must not involve any land acquisition or housing demolition. The subproject proposal will be screened through an involuntary resettlement impact screening checklist in accordance with procedures contained in the project's environmental and social management system (ESMS) which is included as Appendix 7 of the ESMS. The checklist will be submitted to ADB for approval to confirm that no land acquisition or house demolition will be required;
- (ii) The subproject must not have any adverse impacts on ethnic minorities. The subproject proposal will be screened through an ethnic minorities impact screening checklist. The checklist will be submitted to ADB for approval to confirm that there are no adverse impacts on ethnic minorities;



- (iii) The subprojects must not be located in any designated environmental protection zone and cultural heritage site;
- (iv) Each subproject must be designed, constructed, and operated in accordance with relevant national and provincial social and environmental laws and regulations;
- (v) Subproject must meet requirements of the ESMS developed for the project;
- (vi) Initial Poverty and Social Assessment and Summary Poverty Reduction and Social Strategy shall be prepared for all subprojects;
- (vii) Each subproject must acquire proper approvals from proper national and provincial authorities in-charge;
- (viii) The investees must have complied with all relevant domestic environmental regulations and must acquire relevant environment permits with respect to the existing facilities;
- (ix) The investees must be in compliance with relevant domestic occupational health and safety standard; and
- (x) The subprojects should not result in labor retrenchment and labor redundancies.

### **C. Selection Criteria for Subprojects through Financial Leasing Companies**

14. All the subprojects through financial leasing companies must meet the technical, financial, economic, environmental, and social criteria as presented below. These criteria will ensure that the selected subprojects lead and demonstrate air quality improvement, low-carbon development, energy efficiency and emission reduction work in the greater BTH region with advanced technology, adequate financial returns, and provide substantial benefits to the economy, society, and environment. The following criteria will apply to the subprojects that are financed under the green financing platform.

#### **1. Subproject Technical Criteria**

15. All subprojects must meet the following criteria, in particular:
- (i) All brownfield subprojects must not result in an increase in energy consumption<sup>6</sup> and emissions comparing to the current situation in the facility where the subprojects are located, including but not limited to CO<sub>2</sub>, SO<sub>2</sub>, NO<sub>x</sub>, and PM,<sup>7</sup> etc.
  - (ii) For all greenfield subprojects, baseline for energy consumption and emissions need to be established before the subprojects are being implemented.
  - (iii) Energy consumption and emissions produced by the subprojects after implementation will also need to be monitored and recorded.
  - (iv) All subprojects must use proven technologies with reliable, measureable, and verifiable emission reduction that will contribute to the achievement of the CAAP, and the 13th Plan of the PRC.
  - (v) The technologies to be used should be the best available technologies where feasible.
  - (vi) All subprojects should comply with ADB Energy Policy and the industry policies of where the subproject is located. Normally, the subproject should belong to the encouraged and prioritized sectors, local key supported projects or piloting project.
  - (vii) All subprojects must be located in the geographic areas listed under greater BTH region and must address air pollution issues.

#### **2. Subproject Financial Criteria**

<sup>6</sup> Evaluated in ton of standard coal equivalent.

<sup>7</sup> Particulate matters.

16. All subprojects must be financially viable. The financial analysis should be prepared in accordance with ADB Financial Management and Analysis of Projects guidelines. In particular:

- (i) The estimated subproject investment and operations costs, as well as cash inflows, must be clearly presented and must be reasonable.
- (ii) The FIRR shall be greater than the weighted average cost of capital.
- (iii) The FIRR must be robust under various sensitivity scenarios.
- (iv) The payback period shall match the repayment period.
- (v) The average debt-service coverage ratio shall be at least 1.2. If any subproject has debt-service coverage ratio less than 1.2, I&G will require the subborrower to provide additional credit enhancement measures.

### **3. Subborrower Financial Criteria**

17. All sub-borrowers must be financially creditworthy and not have a poor credit record, as recorded in the People's Bank of China credit history database. The subborrowers must contribute a minimum of 20% of the total subproject investment cost as counterpart financing.

### **4. Subproject Economic Criteria**

18. All subprojects must meet the following criteria, in particular:

- (i) For all the subprojects, the total economic benefits must exceed the total economic costs. The economic internal rate of return of the subproject must be greater than the discount rate of 12%, and must be viable under adverse sensitivity scenarios. The economic benefits include CO<sub>2</sub> savings valued at \$35.2/ton with 2% annual increase. And
- (ii) The subborrowers shall commit to enhance capacities in project planning, financing, implementing and monitoring during the subproject preparation and implementation periods.

### **5. Subproject Social and Environmental Safeguards Criteria**

19. All subprojects must meet the following criteria, in particular:

- (i) The subprojects must not involve any land acquisition or housing demolition. The subproject proposal will be screened through an involuntary resettlement impact screening checklist in accordance with procedures contained in the project's ESMS which is included as Appendix 7 of the ESMS. The checklist will be submitted to ADB for approval to confirm that no land acquisition or house demolition will be required;
- (ii) The subproject must not have any adverse impacts on ethnic minorities. The subproject proposal will be screened through an ethnic minorities impact screening checklist. The checklist will be submitted to ADB for approval to confirm that there are no adverse impacts on ethnic minorities;
- (iii) The subproject must have only minimal or no adverse environmental impacts, which is considered to be Category C for the environment.
- (iv) The subprojects must not be located in any designated environmental protection zone and cultural heritage site;
- (v) The subproject must not directly or indirectly result in significant conversion or degradation of natural habitat

- (vi) The subproject should not be located within, that abstract water from, or that discharge to a critical habitat
- (vii) The subproject should not be located within, that abstract water from, or that discharge to a legally protected area
- (viii) The subprojects must not support small and medium-sized enterprises (SMEs) which have activities involving commercial development of cultural resources of Indigenous Peoples without their consent for the commercialization of such resources;
- (ix) Each subproject must be designed, constructed, and operated in accordance with relevant national and provincial social and environmental laws and regulations;
- (x) Subproject must meet requirements of the ESMS developed for the loan project,
- (xi) Initial Poverty and Social Assessment and Summary Poverty Reduction and Social Strategy shall be prepared for all subprojects;
- (xii) Each subproject must acquire proper approvals from proper national and provincial authorities in-charge;
- (xiii) The subborrowers must have complied with all relevant domestic environmental regulations and must acquire relevant environment permits with respect to the existing facilities;
- (xiv) The subborrowers must be in compliance with relevant domestic occupational health and safety standard; and
- (xv) The subprojects should not result in labor retrenchment and labor redundancies.

## **APPENDIX 7. ADB EIA/IEE REQUIREMENTS**

1. Each subproject applies for a loan under the GFP will need to prepare EIA in accordance with the PRC EIA laws and regulations and all subprojects must obtain relevant approvals according to these laws and regulations. This Appendix of the ESMS summarizes the specific requirements for EIA/IEE report per ADB's SPS (2009) requirements. As described in the ESMS, an EIA and IEE report will be required for all environment category A and B projects, respectively. The level of detail and comprehensiveness of the EIA/IEE is commensurate with the significance of potential environmental and social (community and occupational health and safety) impacts and risks of the proposed subprojects. A typical EIA/IEE report contains the following major elements, and an IEE may have a narrower scope depending on the nature of the subproject.

### **A. Executive Summary**

2. This section describes concisely the critical facts, significant findings, and recommended actions in the EIA/IEE.

### **B. Policy, Legal, and Administrative Framework**

3. This section discusses the PRC national and local legal and institutional framework within which the environmental assessment is carried out. It also identifies subproject-relevant international environmental agreements to which the PRC is a party.

### **C. Description of the Project**

4. The proposed subproject needs to be described in this section. Its major components, ecological, social, and temporal context, including any associated facility required by and for the subproject will also be included in this section. In addition, drawings and maps showing the subproject's layout and components, the subproject site, and the subproject's area of influence should be included in this section.

### **D. Description of the Environment**

5. This section of EIA/IEE should include description of relevant physical, biological, and socioeconomic conditions (baseline data) within the study area. It also looks at current and proposed development activities within the subproject's area of influence, including those not directly connected to the project.

### **E. Anticipated Environmental Impacts and Mitigation Measures**

6. This section predicts and assesses the project's likely positive and negative direct and indirect impacts to physical, biological, socioeconomic (including occupational health and safety, community health and safety, vulnerable groups and gender issues, and impacts on livelihoods through environmental media, and physical cultural resources in the subproject's area of influence, in quantitative terms to the extent possible; identifies mitigation measures and any residual negative impacts that cannot be mitigated; explores opportunities for enhancement; identifies and estimates the extent and quality of available data, key data gaps, and uncertainties associated with predictions and specifies topics that do not require further attention; and examines global, trans-boundary, and cumulative impacts as appropriate.

7. When a proposed subproject involves expansion or modifications of existing activities or facilities, qualified external experts should be hired to perform a comprehensive environmental audit of the entire facility, not limited to the scope of the proposed subproject, to determine the existence of any areas where the subproject and the facility may cause or is causing environmental risks or impacts and environmental audit report should be prepared by the external experts.

8. A comprehensive air dispersion modeling will be required for a category A for environmental subproject with air pollutant emissions. Air quality impact from the proposed emission source of the subproject will be assessed using an appropriate dispersion model. In addition, air dispersion modeling of cumulative air quality impact from other nearby existing air emission sources as well as future planned emission sources will also be required.

## **F. Analysis of Alternatives**

9. The EIA reports prepared under the PRC EIA laws and regulations typically do not conduct analysis of alternatives but this is required for EIA and IEE reports prepared for ADB finance. This section should examine alternatives to the proposed project site, technology, design, as well as operation in terms of their potential environmental and social (community and occupational health and safety) impacts, and the feasibility of mitigating these impacts. The no subproject alternative should be analyzed as one of the alternatives. For each alternative, its capital and recurrent cost, suitability under local conditions, and the institutional, training, and monitoring requirements should be included. It also states the basis for selecting the particular subproject design proposed and, justifies recommended emission levels and approaches to pollution prevention and abatement.

## **G. Information Disclosure, Consultation, and Participation**

10. This section of the EIA/IEE should: (i) describe the process undertaken during subproject design and preparation for engaging stakeholders, including information disclosure and consultation with affected people and other stakeholders; (ii) summarize comments and concerns received from affected people and other stakeholders and how these comments have been addressed in the subproject design and mitigation measures, with special attention paid to the needs and concerns of vulnerable groups, including women, the poor, and Indigenous Peoples; and (iii) describes the planned information disclosure measures (including the type of information to be disseminated and the method of dissemination) and the process for carrying out consultation with affected people and facilitating their participation during the subproject implementation.

11. If meaningful consultation has not already been done in accordance with the ADB SPS (2009) for the domestic EIA, or If it has been done but I&G/ADB representative were not able to participate in at least one consultation for the pre-selected subprojects with Category A for the environment, the ESMS team at I&G in conjunction with the pre-selected subproject company shall carry out additional meaningful consultation, as part of EIA preparation, including survey with representatives of affected communities (neighboring residents and businesses), who are located within or near the anticipated boundaries of potential adverse impacts of a subproject. A template questionnaire for the EHS and social survey during public consultation is provided in Appendix 9. The results and analyses shall be included in the EIA report to be submitted to ADB for review.

## **H. Grievance Redress Mechanism (at Subproject Level)**

12. This section describes the grievance redress framework (both informal and formal channels), setting out the time frame and mechanisms for resolving complaints about environmental performance.

### **1. Objective**

13. A grievance redress mechanism (GRM), consistent with the requirements of the ADB SPS (2009) and relevant PRC requirements, will be established to prevent and address community concerns, reduce risks, and assist the project to maximize environmental and social benefits. In addition to serving as a platform to resolve grievances, the GRM is designed to help achieve the following objectives: (i) open channels for effective communication, including the identification of new environmental and social (community and occupational health and safety) issues of concern arising from each subproject; (ii) demonstrate concerns about community members and their environmental well-being; and (iii) prevent and mitigate any adverse environmental impacts on communities caused by project implementation and operations. The GRM will be accessible to all members of the community.

### **2. Approach**

14. With instruction and support from I&G, each subproject to be financed by the Fund will establish an appropriately staffed GRM at subproject company prior to construction in order to deal with complaints from affected persons (APs) throughout implementation of each subproject, including construction and operation phases. At the subproject level, detailed steps of GRM will be provided in the subproject specific EIA/IEE. At the Fund level, the designated person at I&G will be the main focal person of the Fund's GRM and will ensure effective GRM implementation through close cooperation and communications with all subprojects.

15. The designated staff at subproject company will be the key contact point for AP(s) who have an issue they would like to discuss. The designated staff at subproject company will maintain a complaints database and communicate with contractors, supervision engineers, the local EPBs and other relevant local government agencies.

### **3. GRM Steps and Timeframe**

16. Each subproject will be required to develop and implement a subproject specific GRM. Complaints and grievances should be resolved at the subproject level as much as possible. If any grievance was not effectively solved at subproject level, I&G, with support from specialists of ACEE, will further facilitate the development of reasonable, effective, and satisfactory resolution of any grievance.

## **I. Environmental Management Plan**

17. Environmental management plan (EMP) is an important part of the EIA/IEE. The EMP should include the set of mitigation and management measures to be taken during project implementation to avoid, reduce, mitigate, or compensate for adverse environmental impacts (in that order of priority). It may include multiple management plans and actions. It includes the following four key components (with the level of detail commensurate with the subproject's impacts and risks):

### **1. Mitigation**

18. Mitigation measures should be included in the EMP and they should:

- (i) identify and summarize anticipated significant adverse environmental impacts and risks;
- (ii) describe each mitigation measure with technical details, including the type of impact to which it relates and the conditions under which it is required, together with designs, equipment descriptions, and operating procedures, as appropriate; and
- (iii) provides links to any other mitigation plans required for the subproject.

## **2. Monitoring**

19. Monitoring and reporting of EMP should be included in the EMP and they should:

- (i) describe monitoring measures with technical details, including parameters to be measured, methods to be used, sampling locations, frequency of measurements, detection limits and definition of thresholds that will signal the need for corrective actions; and
- (ii) describe monitoring and reporting procedures to ensure early detection of conditions that necessitate particular mitigation measures and document the progress and results of mitigation.

## **3. Implementation arrangements**

20. The arrangements for implementing the EMP should:

- (i) specify the implementation schedule showing phasing and coordination with overall project implementation;
- (ii) describe institutional or organizational arrangements, namely, who is responsible for carrying out the mitigation and monitoring measures, which may include one or more of the following additional topics to strengthen environmental management capability: technical assistance programs, training programs, procurement of equipment and supplies related to environmental and social (community and occupational health and safety) management and monitoring, and organizational changes; and
- (iii) estimate capital and recurrent costs and describes sources of funds for implementing the environmental management plan.

## **4. Performance indicators**

21. The EMP should include desired outcomes as measurable events, such as performance indicators, targets, or acceptance criteria that can be tracked over defined time periods should be described.

## **J. Conclusion and Recommendation**

22. The last section of the EIA/IEE report should draw conclusions from the environmental assessment and provides recommendations.

## **APPENDIX 8. A SAMPLE LIST OF INFORMATION AND DOCUMENTS REQUIRED FOR ENVIRONMENTAL AUDIT OF EXISTING FACILITY**

1. The following sample list of information is provided below in order to support I&G for the ESMS implementation, which can be modified based on the relevance to a subproject.

2. In accordance with the ADB SPS (2009), an environmental audit is required for any subproject that involves existing facilities. Relevant external experts hired by I&G will perform environmental audit to determine the existence of any areas where the subproject may cause or is causing environmental and social (community and occupational health and safety) risks or impacts. The following list of information and documents need to be prepared by the subproject company prior to the environmental audit and submitted to I&G. The environmental audit will assess whether the subproject has sufficient capacity, institutional setup, system set-up, and sufficient resources to implement environmental, health, and safety (EHS) management, including occupational and community health and safety; emergency response and management procedure, including communities' response to accidents and emergency; whether the existing facilities are fully complied with the applicable environmental, health and safety regulations of the People's Republic of China and internally recognized EHS measures and standards, including the World Bank Group's EHS Guidelines; and others. The following comprises a checklist of relevant availability of information and documents prior to the audit visit. During the audit visit, interviews with local Environmental Protection Bureau and Environmental Monitoring Station Management who are familiar with the facility will be conducted.

<b>Information and/or Document</b>	<b>Yes</b>	<b>No</b>	<b>Remarks</b>
Location map indicating site in relation to surrounding residential and industrial properties, streams, rivers, conservation areas, etc.			
A copy of the land use permit; a summary of land use history, including the year the land is re-zoned from agricultural or residential to industrial land and the year the land is acquired by the current company.			
Summary of current site activities (including simplified process flow diagram, if available) and assess compliance with applicable environmental and social safeguard requirements			
Organizational chart indicating who is responsible for environmental matters at the facility			
General housekeeping of the premises.			
Adherence to health and safety requirements for industrial premises.			
Principal sources of energy and annual consumption			
Details of water use, including Sources of water used for industrial use, and domestic use, and drinking water(e.g. mains, well); Amount of water uses; and Amount of water discharge			
Plant layout to show locations of: (i) Hazardous chemicals, solvents, and oil storage, with details of storage arrangements (ii) Stacks and vents (iii) Proposed area for subproject components to be built; (iv) Buried services (pipes, drains, sewers);			



(v) Buried tanks (vi) Sumps and pits (vii) Lagoons and any points of wastewater discharge (viii) Onsite waste disposal areas (ix) Accident pools			
Descriptions of pollution control equipment at the facility (e.g., effluent treatment and air pollution control equipment).			
Planning permissions/operation permits.			
Details of consent agreements and licenses for: (i) Effluent discharges; (ii) Air emissions; and (iii) Waste disposal			
Copies of applicable national and local standards on ambient air, source emissions, fugitive emissions, effluent discharge standards, and specific approval conditions.			
Monitoring results last three years, which were produced by the facility, the regulatory authorities or by a third party on: Ambient air with projected areas with maximum concentrations and at nearest environmental receptors and/or downwind receptors; Source emissions; Fugitive emissions; Wastewater discharge before treatment and after treatment, if any, Noise impacts at the boundaries of the plant and at nearest environmental receptors; Integrity testing (underground tanks) Soil and groundwater testing; Types and amount of solid and hazardous wastes, including treatment methods; Records of wastes removed by contractors			
Correspondence with authorities relating to any environmental violations and pollution incidents (air, waste, effluent, wastes, and noise).			
Inventory and annual quantities used/generated of Chemicals, solvents, oils, etc. and Waste materials			
Details of storage arrangements: Volumes and contents of bulk storage tanks; Ages and monthly throughput of storage tanks; Alarms, vent pumps and cathodic protection fitted to bulk tanks; and documented procedures for filling and unloading bulk storage tanks.			
Surveys/disposal records of polychlorinated biphenyls and asbestos.			
Records of environmental and safety incidents and remedial steps taken.			
Recent third party audit reports on EMS and OHSAS indicating any gaps with respect to environment, health,			

and safety requirements and recommendations on corrective actions.			
Copies of environmental impact assessment approvals, environmental emission permits (environmental acceptance approvals), production safety impact assessment report and approval/permit (if applicable), and occupational disease hazard assessment report and approval.			
Details and outcome of complaints if any (plus correspondence).			
Documented procedures and operating manuals relating to environmental matters (e.g., emergency response, spill containment, waste handling and disposal).			
Copy of domestic EIA for the proposed subproject component, if any.			

## APPENDIX 9. A SAMPLE ENVIRONMENTAL, HEALTH, AND SAFETY AND SOCIAL CONSULTATION INTERVIEW QUESTIONNAIRE

1. The following sample questionnaire is provided below in order to support I&G for the ESMS implementation, which can be modified based on the relevance to a subproject.

2. For each of the environmental, health and safety and social areas, meaningful public consultation must be performed in accordance with the ADB SPS (2009). Meaningful public consultation must include affected people and communities, especially including residents and businesses within 300 meters or as deemed appropriate due to the anticipated boundaries of potential adverse impacts. During the public consultation, more detailed survey and/or interviews should extend to representatives of neighboring residents/ businesses. A representative from local Environmental Protection Bureau (EPB) familiar with the subproject would be present during the consultation process and the EHS representative(s) of I&G, if necessary, will meet with the local EPB officer separately. The following is the sample questions to be asked to obtain better understanding of public concern.

<i>Note: Survey questions should not be not limited to the following sample questions</i>			
Question	Choices	Yes	Comments
1. In your opinion, what are the major environment pollution issues in your areas?	Ambient air		
	Noise		
	Surface water		
	Ground water		
	Soil		
	Solid waste		
	Odor		
	Risks associated with chemicals and hazardous chemicals		
	Other concern		
2. Which are the impacts to surrounding environment by [name of subproject plant] during existing production process?	Ambient air		
	Noise		
	Surface water		
	Ground water		
	Soil		
	Solid waste		
	Odor		
	Risks to community health and safety		
	Other concern		
3. Are you satisfied with environment protection measures of [name of subproject plant]?	Very satisfied		
	Satisfied		
	Barely satisfied		
	Very disappointed		
	Do not understand		
4. Are you aware of chemical risks to the community associated with existing process of [name of subproject plant]?	Yes		
	No		
5. If any emergency, such as chemical spill, leaks, and explosion, occurs, do you know how to respond?	Yes		
	No		

6. Do you consider the impacts of existing production process of [name of subproject plant] to surrounding environment and your lifestyle are acceptable?	Yes		
	No		
	I do not know		
7. Before the survey, did you hear about the proposed subproject components by of [name of subproject plant]?	Yes		
	No		
8. Before the survey, did you understand environmental impacts associated with the proposed subproject components by of [name of subproject plant]?	Understand		
	Barely understand		
	Do not understand		
9. After knowing about the EIA findings, is it clear to you all the potential positive and adverse impacts of the proposed subproject components by of [name of subproject plant]?	Clearly understand		
	Somewhat understand		
	Barely understand		
	Do not understand		
10. In your opinion, what should be the most critical area that the subproject should focus on?	Exhaust air efficiency treatment		
	Controlling fugitive emissions		
	Wastewater treatment		
	Groundwater protection		
	Soil protection		
	Chemicals handling		
	Odor control		
	Make use of recyclable resources to reduce solid waste		
	Noise disturbing to residents		
	Protection for community health and safety		
	Protection to workers health and safety		
	Others		
11. Do you understand the potential adverse impacts during the construction of the proposed subproject components?	Clearly understand		
	Somewhat understand		
	Barely understand		
	Do not understand		
12. What do you think about the subproject construction? Do you think it is necessary?	Necessary		
	Barely necessary		
	Not necessary		
	It does not matter		
13. What would be the major impacts during project construction?	Noise		
	Dust		
	Solid waste		
	Traffic congestion		
	Others		
	No major impacts		

14. Without mitigation measures, do you accept anticipated construction phase impacts?	Accept		
	Barely accept		
	Do not accept		
	Have no idea		
15. After learning about mitigation measures during the construction, do you accept anticipated construction phase impacts?	Accept		
	Barely accept		
	Do not accept		
	Have no idea		
16. Do you agree with project construction after comprehensive consideration?	Yes		
	No		
	I do not know		
17. Do you understand all the anticipated environmental adverse impacts of the subproject during operation?	Clearly understand		
	Somewhat understand		
	Barely understand		
	Do not understand		
18. Do you understand all the anticipated health and safety adverse impacts of the subproject during operation?	Clearly understand		
	Somewhat understand		
	Barely understand		
	Do not understand		
19. Do you understand the proposed mitigation measures during the subproject operation?	Clearly understand		
	Somewhat understand		
	Barely understand		
	Do not understand		
20. Do you accept the impacts to ambient air quality by this subproject?	Accept		
	Barely accept		
	Do not accept		
	Have no idea		
21. Do you accept the impacts to surface water quality by this subproject?	Accept		
	Barely accept		
	Do not accept		
	Have no idea		
22. Do you accept the impacts to ground water quality by this subproject?	Accept		
	Barely accept		
	Do not accept		
	Have no idea		
23. Do you accept the impacts to acoustic environment quality by this subproject?	Accept		
	Barely accept		
	Do not accept		
	Have no idea		
24. Do you accept the impacts to solid waste pollution by this subproject?	Accept		
	Barely accept		
	Do not accept		
	Have no idea		
25. Do you accept the impacts to ecological environment by this subproject?	Accept		
	Barely accept		
	Do not accept		
	Have no idea		
26. Do you accept environment, health, and safety risks caused by this subproject?	Accept		
	Barely accept		
	Do not accept		
	Have no idea		
27. What are the major concerns of this subproject	Ambient air		
	Noise		

	Surface water		
	Ground water		
	Soil		
	Solid waste		
	Odor		
	Risks associated with chemicals and hazardous chemicals		
	Other concern		
28. Which is your top concern of this subproject?	Ambient air		
	Noise		
	Surface water		
	Ground water		
	Soil		
	Solid waste		
	Odor		
	Risks associated with chemicals and hazardous chemicals		
	Other concern		
29. Do you support the subproject?	Yes		
	No		
	I do not know		

**APPENDIX 10. INTERVIEW QUESTIONNAIRE WITH LOCAL ENVIRONMENTAL PROTECTION BUREAU AND ENVIRONMENTAL MONITORING STATIONS DURING ENVIRONMENTAL AUDIT**

1. The following sample interview questionnaire is provided below in order to support I&G for the ESMS implementation, which can be modified based on the relevance to a subproject.

2. During the audit visit of existing facilities, interviews shall be conducted with local EPB and Environmental Monitoring Station staff, who are familiar with the facility. In addition, interview with a plant manager, and an environmental, health and safety (EHS) manager, and some workers would be necessary. The following is sample questions, but not limited to, for the interviews.

Questions	Yes/No	Additional Remarks
<b>Environmental</b> (Attendants:)		
(i) whether the subproject company paid pollution charges or fines/penalties for noncompliance in the last 2 years in accordance with national laws.		
(ii) whether the subproject company is exposed to potentially significant liabilities, such as those arising from known or suspected land/groundwater contamination, major accidents and incidents related to the company's past or ongoing operations.		
(iii) state further actions required/planned by the subproject, in particular actions to address any non-compliance problems and liabilities.		
(iv) whether there are complaints from the public or local communities regarding the subproject company's environmental performance		
(v) whether there are complaints from the public or local communities regarding any accidents caused by the subproject company.		
<b>Safety</b> (Attendants:)		
(i) whether the subproject company paid safety or fire code related fines/penalties for noncompliance in the last 2 years in accordance with national laws.		
(ii) whether the subproject company has had any major safety accidents and incidents related to the company's ongoing operations or in the past 2 years.		
(iii) state further actions/mitigation measures required/planned by the subproject, in particular actions to address any noncompliance problems and liabilities.		
(iv) whether there are complaints from the employees, public or local communities regarding the subproject company's safety performance.		
<b>Health</b> (Attendants:)		
(i) whether the subproject company paid occupational health related fines/penalties for non-compliance in the last two years in accordance with national laws.		
(ii) whether the subproject company has had any major occupational health accidents and incidents related to the company's ongoing operations or in the past two years.		
(iii) state further actions/mitigation measures required/planned by the subproject, in particular actions to address any non-compliance problems and liabilities.		
(iv) Whether the facility conduct regular health exams for employees (if yes, please provide records for review).		

(v)	whether there are complaints from the employees regarding the subproject company's occupational health performance.		
(vi)	Whether the subproject company involves local communities for drills		
Human Resources or Plant Manager			
(i)	Would the proposed subproject create redundancy? If yes, how would you reassign or compensate the redundant workers?		
(ii)	What is the total number of employees in the facility? What is the number of female employees in the facility? What is the number of ethnic minority employees.		
(iii)	With the proposed subproject, would you tend to use more or fewer female employees?		
(iv)	How many NEW long-term job positions do you expect to create as a result of this subproject.		



**APPENDIX 11.SUGGESTED SCOPE FOR ENVIRONMENTAL AND SOCIAL  
MONITORING REPORT FOR SUBPROJECT COMPANY**

**Environment and Social Monitoring Report**

-Reporting Period-

**(Indicative Outline)**

**I. INTRODUCTION**

1. Describe scope of report and reporting period, and overall project implementation progress.

**II. PROGRESS IN IMPLEMENTING THE FOLLOWING (WHERE APPLICABLE)  
ENVIRONMENTAL MANAGEMENT PLAN/ENVIRONMENTAL  
MONITORING PLAN/ENVIRONMENTAL AND SOCIAL MANAGEMENT  
SYSTEM**

**III. COMPLIANCE WITH ADB LOAN COVENANTS AND APPLICABLE  
GOVERNMENT LAWS, REGULATIONS AND REQUIREMENTS**

**IV. SIGNIFICANT EVENTS OR ISSUES ENCOUNTERED, OR CHANGES IN  
PROJECT SCOPE AND CORRESPONDING SAFEGUARD MEASURES  
UNDERTAKEN, IF APPLICABLE (SEE ATTACHMENT TO THIS APPENDIX)**

**V. SUMMARY OF MONITORING REPORT FINDINGS**

**VI. FOLLOW-UP ACTIONS REQUIRED (IF ANY)**

**VII. SUMMARY/CONCLUSION**

2. The report should include the name, signature, position and contact address of the person submitting the report to ADB.

**Notes:**

1. Above outline is indicative and could be tailored-fit to the subproject.
2. In case a subproject is assisted by an external or independent panel, the panel's environmental and social issues monitoring report will suffice.

**APPENDIX 12. ENVIRONMENTAL INCIDENT REPORT FORM**

	<b>Name of Company</b>	
<b>Environmental Incident Report</b>		

An environmental incident is an unexpected event that may result in harm to the environment and requires some action to minimise the impact or restore the environment. See page 2 of this form for guidance notes.

Business unit:

Subproject name:  Subproject number:

<b>Incident details</b>	(Site manager to complete—Subproject Development Manager, Works Supervisor or Team Leader)	<b>Incident report number</b>
Date of incident: <input style="width: 170px; height: 30px;" type="text"/>	Time (24:00 format): <input style="width: 130px; height: 30px;" type="text"/>	(ESMS Coordinator to complete)
Exact location of the incident, including Region. (see <a href="#">note 1</a> )		

What type of activity was the team engaged in when the incident occurred?

Who notified you of the incident? (eg. employee, local authority, member of public):

Name and phone no. of complainant:

**Nature and level of the incident**

☐ Chemical spill (incl. fuel)    
 ☐ Major ☐ Minor (see [note 2](#))  
☐ Air emission    
 ☐ Noise complaint    
 ☐ Unauthorised removal of vegetation  
☐ Contaminated water discharged    
 ☐ Erosion & sedimentation  
 (Not muddy water)    
 Other: (specify)

**Description of the incident** (see [note 3](#))

Estimated quantity, volume or area involved (include unit of measure) <input style="width: 140px; height: 20px;" type="text"/>	<input type="checkbox"/> See pages attached
--	---

**Immediate actions taken and control measures implemented** (See note 4)

<input type="checkbox"/> See pages attached
---

**Proposed corrective (or preventive) action** (see [note 5](#))

<input type="checkbox"/> See pages attached
---

Sign	Print name	Position	Date
------	------------	----------	------

**After signing, forward to senior manager for further action**

<b>Further action</b>	Senior manager to complete—Subproject Director, Subproject Development Manager	
<b>Other authorities notified</b>	(see note 6)	Sign: <input style="width: 150px; height: 30px;" type="text"/>

**Follow up actions undertaken** (see [note 7](#))

<input type="checkbox"/> See pages attached
---

## Guidance Notes for Incident Reporting

### Note 1: Exact location of Incident

Provide details of the location of the incident in relation to the subproject site. Include:

- (i) the name of the region.
- (ii) distances from environmentally sensitive areas (e.g., watercourses, conservation reserves).
- (iii) landmarks, cross streets, etc.

### Note 2: Major or Minor Incident?

A major incident has occurred if:

- (i) material has escaped from site, or
  - (ii) clean-up requires external assistance (Fire brigade or other emergency services).
- If neither of these conditions apply, the incident is rated 'minor'.

### Note 3: Description of Incident

Provide a brief, succinct, factual description of the incident including:

- (i) what happened leading up to the incident.
- (ii) the material involved (if a leak or spill).
- (iii) the estimated volume of spilled or leaked material.
- (iv) the area of land or water affected.
- (v) who was affected by the incident.

### Note 4: Immediate Actions and Control Measures

Describe the actions taken immediately to minimize the impact of the incident.

### Note 5: Corrective and Preventive Action

Provide details of actions implemented to clean up and remediate the affected area and actions implemented to prevent the incident from occurring again.

### Note 6: Other Authorities Notified

Other authorities you might need to notify:

- (i) Fire brigade or other emergency services.
- (ii) local government if incident occurs within the local drinking water catchment area.

### Note 7: Follow-up Actions

- (i) Include any actions undertaken or proposed to be undertaken as a result of the incident (e.g., additional training, purchasing new plant, using alternative materials).
- (ii) Forward a copy of the incident report to I&G following company management review.

## APPENDIX 13. OUTLINE OF AN ENVIRONMENTAL AND SOCIAL MANAGEMENT SYSTEM IMPLEMENTATION REPORT

### ESMS Implementation Report

Subproject		Subproject number	
------------	--	-------------------	--

Report prepared by		Month and year	
--------------------	--	----------------	--

Item	Details, comments
<b>Institutional Aspects:</b> Whether there has been any changes to the ESMS, staffing of environment unit at I&G, budget available for ESMS implementation)  Whether there has been any major difficulties in implementing ESMS and if so the remedial actions taken.	
<b>Due diligence and/or audits undertaken during the year</b> (List the number and type of investigations undertaken.)	
<b>Exclusion of subprojects which have impacts on involuntary resettlement and ethnic minority</b> (If there were subprojects assessed that have potential involuntary resettlement and ethnic minority impacts that were excluded from financing)	
<b>Non-conformances report (NCR) and corrective actions report (CAR)</b> Whether the subprojects regularly submit the environment and social reports and the status of compliance of subprojects with EMP and other relevant environment and social requirements.  If there are major gaps or defects, the remedial actions taken by I&G.	
<b>Environmental Incidents</b> (Any incidents reported by subborrowers, provide details)	
<b>Training delivered</b>	
<b>Other environmental including health and safety or social issues (if any)</b> (Describe any other issues arising)	

**Environment and Social Safeguards Categorization: Definition**

<b>Category</b>	<b>Environment</b>	<b>Involuntary Resettlement</b>	<b>Indigenous Peoples (Ethnic Minorities)</b>
A – Significant	Subprojects that anticipate significant adverse environmental impacts are irreversible, diverse or unprecedented. These impacts may affect an area larger than the sites or facilities subject to physical works.	Investments where 200 or more persons will experience major impacts, which are defines as (i) being physically displaced from housing, or (ii) losing 10% or more of their productive assets (income generating).	Investment that is expected to significantly affect the dignity, human rights, livelihood systems, or culture of ethnic minorities or affects the territories or natural or cultural resources that ethnic minorities own, use, occupy, or claims as an ancestral domain or asset.
B – Less Significant	Subprojects with potential adverse impacts that are site-specific, few if any of them are irreversible, and in most cases mitigation measures can be more readily designed than for Category A investments.	Investments with involuntary resettlement impacts that are not deemed significant.	Investment that is likely to have limited impacts on ethnic minority communities.
C – Minimal Impact	Subprojects that have minimal or no adverse environmental impacts.	Investments with no involuntary resettlement impacts	Investment that are not expected to have impacts on ethnic minority communities.

Note: Full definition, explanations and requirements are contained in ADB's Safeguard Policy Statement (2009) which can be accessed at <http://www.adb.org/documents/safeguard-policy-statement>.

**APPENDIX 14. OUTLINE OF AN ENVIRONMENTAL AND SOCIAL  
MANAGEMENT SYSTEM FOR A FINANCIAL LEASING COMPANY**

- |    |  |
|----|--|
| 1. | INTRODUCTION   |
| a. | Subproject portfolio   |
| b. | Purpose of Environmental and Social Management System                                |
| c. | ESMS Implementation Arrangement  |
| 2. | ENVIRONMENTAL AND SOCIAL MANAGEMENT DUE DILIGENCE OF FINANCIAL LEASING COMPANY(-IES) |
| a. | Corporate ESMS Audit   |
| b. | Conclusion and Corrective Action Plan  |
| 3. | ESMS POLICY AND REQUIREMENTS   |
| a. | ESMS Policy  |
| b. | ESMS requirements on environmental and social safeguards                             |
| 4. | ESMS PRECEDURE   |
| a. | Screening and Categorization   |
| b. | Due Diligence (category C only)  |
| c. | Selection of Subprojects   |
| d. | Compliance Monitoring and Reporting  |
| e. | Grievance Redress Mechanism  |
| 5. | INSTITUTIONAL RESPONSIBILITY, STAFFING, AND TRAINING                                 |
| a. | Organization and ESMS responsibilities   |
| b. | Capacity and resources   |
| 6. | ASSURANCES (IF ANY)  |