



**Environmental and Social Management System (ESMS)
for Collaborative R&DB Programme for Promoting the
Innovation of Climate Technopreneurship**



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June 2024



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ABBREVIATIONS

AE	Accredited Entity
AMA	Accreditation Master Agreement
AMR	Annual Monitoring Report
APR	Annual Performance Report
CFC	Chlorofluorocarbon
CITES	Convention on International Trade in Endangered Species or Wild Fauna and Flora
CSS	Country Safeguard System
CTF	Climate Technopreneurship Fund
DD	Due Diligence
E&S	Environmental and Social
EAC	Experts Advisory Committee
EE	Executing Entity
EHS	Environment, Health and Safety
EIS	Electrochemical Impedance Spectroscopy
EP	Equator Principles
EPC	Engineering, Procurement and Construction
ESAP	Environmental and Social Action Plan
ESDD	Environmental and Social Due Diligence
ESGCT	Environmental, Social and Gender Compliance Team
ESIA	Environmental and Social Impact Assessment
ESM	Environmental and Social Manager
ESMP	Environmental and Social Management Plan
ESMS	Environmental and Social Management System
ESRMSC	Environmental and Social Risk Management Sub-Committee
ESRS	Environmental and Social Review Summary
ESS	Environmental and Social Standards
EV	Electric Vehicle
FAA	Funded Activity Agreement
FP	Funding Proposal
FPIC	Free, Prior and Informed Consent
GGGI	Global Green Growth Institute
GIIP	Good International Industry Practices
GPs	General Partners
GRM	Grievance Redress Mechanism
IA	Investment Agreement
IC	Investment Committee
IEE	Initial Environmental Examination
IFC	International Finance Corporation
IFC PS	International Finance Corporation Performance Standards
ILO	International Labour Organisation



IP	Indigenous Peoples
IP	Intellectual Property
IPP	Indigenous Peoples Policy
IPPF	Indigenous Peoples Planning Framework
IVC	In-Vessel Composting
JV	Joint Venture
KDB	Korea Development Bank
LPs	Limited Partners
LRP	Livelihood Restoration Plan
M&E	Monitoring and Evaluation
N-CEAP	National Climate Entrepreneur Programme
NDA	National Designated Authority
NSMUs	National Sustainability Management Unit
PCBs	Polychlorinated Biphenyls
PIC	Preliminary Investment Committee
PLT	Plant
PV	Photovoltaic
R&DB	Research and Development Business
RAP	Resettlement Action Plan
RMC	Risk Management Committee
RO	Reverse Osmosis
RR	Resettlement Plan
RSBI	Readiness Support Consulting Package
RSMU	Regional Sustainability Management Unit
SEAH	Sexual Exploitation, Abuse and Harassment
SEF	Stakeholder Engagement Framework
SMEs	Small and Medium-sized Enterprises
SMUs	Sustainability Management Units
TA	Technical Assistance
VGs	Vulnerable and Marginalised Groups
WB	World Bank



EXECUTIVE SUMMARY

This is an Environmental and Social Management System (ESMS) for the Collaborative R&DB Programme for Promoting the Innovation of Climate Technopreneurship (the “Programme” hereafter). The overarching objective of the Programme is to support ‘technology transfer via a joint venture (JV) as a result of collaborative R&DB’ in the five Southeast Asian countries, i.e. Cambodia, Indonesia, Laos, the Philippines and Vietnam.

This ESMS covers the entire Programme, which encompasses both Climate Technology Fund (“CTF” hereafter) and non-CTF components. To be more specific, the Programme is organized as a combination of: 1) Preparatory stages for CTF application (Component 1 and Component 2, i.e. country (local) and global acceleration respectively); 2) Application, approval, and implementation of the approved projects and sub-projects (Component 3, i.e. Climate Technology Fund operation) and; 3) A simultaneous/parallel programme for country capacity building (Component 4). CTF component (Component 3) pursues maximisation of sustainability outcomes beyond “do no harm” principles. Non-CTF components (Component 1, 2 & 4) are extension of the fund’s E&S risk management and due diligence. As such, non-CTF components of the ESMS (in Component 1 and Component 2) aim to support readiness of the applicant JVs as they will reduce rejection rates in the CTF approval stage in component 3. Non-CTF components also aim to generating co-benefits of capacitating the candidate JVs in E&S management performance, regardless of the fund application results.

This ESMS of the Programme is in line with the AE(KDB)’s Sustainability Policy and the Revised Environmental and Social Policy of GCF (Adopted in B.BM-2021/18).

Mainstreaming Environmental and Social Safeguards (ESS) into the Programme Implementation, CTF is committed to supporting projects with E&S Risk Category B/I-2 and below. The CTF adopts a common risk categorisation approach across the five countries. While micro scale sub-project investments of the CTF mostly anticipate minimal or no adverse social & environmental (E&S) risks – Category C/I-3, the programme set up an environmental and social management system (ESMS) to ensure systematically promoting sustainable co-benefits of the funded activities and safeguarding the ecosystem services, environment and the communities of the host countries from any environmental and social risks associated with the funded activities.

The Programme proactively follow the mitigation hierarchy to avoid, minimize, and mitigate any risks and impacts, and restore and compensate any residual risks and impacts where avoidance, minimization or mitigation measures area not available or sufficient.

The ESMS (esp. for the CTF component) ensures compliance with the respective countries’ safeguard system (EIA/E&S laws, regulations, and procedural requirements), GCF ESS/Sexual Exploitation, Abuse, Harassment (SEAH), IFC Performance Standards (KDB adherence to it as per the Equator Principles) and Exclusion List, the EHS Guidelines of the World Bank Group, and core labour standards of the International Labour Organisation (ILO), while integrating them into the business cycle to manage any associated E&S risk. The programme will not finance any project classified as Category A and/or likely to pose adverse impacts to the indigenous peoples (IP) in line with the IFC PS 7 (see ESMS Appendix E of the IP screening checklist and Appendix N of the Indigenous Peoples Plan Framework.).

The CTF’s E&S performance management is integrated to the Fund Risk Management. The CTF E&S and Gender Compliance Team (ESGCT) will carry out routine ESS compliance duties throughout the entire fund operation process: from the fund application (E&S screening and categorisation), fund appraisal and approval to contracting (E&S review summary and E&S covenant preparation, as required), to *ex-poste* due diligence (compliance monitoring and evaluation of JV-specific regular E&S progress report for Category B activities, recommendation on remedial/corrective actions to grievances/unexpected



occurrence of regular/justified risks/outstanding cases). For atypical proposal cases where E&S risks are uncertain and the nature of the risks are highly complex or unknown (i.e. in case the proposal involves a relatively new/emerging climate technologies, and there are not sufficient DB to assess the risks and impacts in advance), ESGCT will refer the case to the Expert Advisory Committee (EAC/ a sub-committee on ESS) for consultative process to determine the risk category and required E&S management measures (ESIA, ESMP or any other topical management plans).

In addition to the E&S risk screening process where the Category A (high risk) project will be excluded from investment possibility, in case a certain E&S issue poses potentially high risks to investors and host countries, necessarily including vulnerable groups such as the indigenous communities, the deprived, and women and girls, the E&S Risk Management Committee (ESRMC) will be convened *ad hoc* to ensure effective mitigative measures are prepared, inviting the representatives of the stakeholder groups, and in the framework of meaningful consultations seeking for the free, prior and informed consent of the communities involved. (In case such measures are not viable, the candidate projects/programmes shall be rejected from selection).

For the highest level of risk – unjustified, i.e., hard to remedy within the ESMS and the Covenant, so that the CTF is required to consider the cessation or cancellation of the investment agreement, the CTF senior management shall be activated to address the concerning red flags. In the latter case, an external audit will be strictly carried out with KDB’s direct engagement. In the event of any revision and change of the funded Programme’s operation, the relevant executive entity needs to inform KDB, the accredited entity of the Programme, through regular or ad hoc reporting process in a timely manner. KDB, through its monitoring and supervision process, will assess whether such operational change may adversely affect the planning, design, implementation, and monitoring of GCF-financed activities. In case as such, KDB shall report to GCF of it. As appropriate, GCF will require the KDB to make appropriate revisions in the ESMS or undertake other necessary actions to meet the requirements of the ESS standards of GCF.

Accelerating ESS Capacity Enhancement of Shortlisted JVs for Investment Readiness. Given that most of the local applicant companies and some of global innovators might not be properly equipped with a strong level of ESMS, the R&DB readiness and acceleration (components 1 and 2) shall assist local and/or JV level entities in strengthening their preliminary ESMS and climate impact status by providing diagnostic-based advisory support (“Nurture before evaluation” approach). In addition, upon request, the applicant JVs have access to readiness-stage ESS and climate impact consulting services: i.e., scoping, preliminary E&S screening, and categorisation. E&S advisory services as part of the non-CTF components.

For promotion of the environmental and social, and gender (sustainability) co-benefit maximisation, the programme will promote related policy formation and institutionalisation nationwide through the relevant ministries and government agencies of the respective five countries.

Information Disclosure & Grievance Redress Mechanism (GRM). For Category B projects, JVs may be required to establish a separate stakeholder engagement and commitment plan (SECP) including the information disclosure plan in accordance with the GCF IDP-aligned ESMS: the frequency and level of disclosure may vary in proportion to the level and nature of the E&S risks and impacts. This will be fine-tuned by the CTF ESGCT’s review, consultation, and capacity building support. Also, all the JVs are required to develop and operate the GRM in accordance with the GCF standards, as KDB, GGGI, SMU, and the GP can also be alternative receptors of grievances in the intermediate executing platform. Grievances lodged at the JV or country SMU level shall be reported through regular procedures to the CTF, which will be primarily reviewed by the CTF E&S Compliance Team. A high-risk grievance will be reported to the E&S Risk Management Committee for their attention and will be subject to the fund-level adjudication as a critical part of the CTF risk management mechanism. Depending on the nature of grievances and findings of the resultant audit (or internal investigation), the fund’s decision may be



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disclosed to the public through a website and other accessible means to country stakeholders for the sake of transparency and accountability.

This ESMS has been developed through a series of consultative process for more than 1.5 years with key stakeholders (See Table A below). This ESMS is a living document whose content would be revised and updated whenever needs arise, based on the accumulation of experiences and know-hows and specific knowledge on deployment of the funded climate technology in specific contexts of the five Southeast Asian countries. In all cases, the KDB's ESMS and GCF's Revised Environmental and Social Safeguard Policy as well as other relevant safeguard policies (Indigenous Peoples Policy, Information Disclosure Policy, Gender Policy, among others) will be adhered to through the entire period of the Programme's operationalisation.

[Table A. Stakeholder Consultation Activities Carried Out for ESMS and Gender Action Plan (GAP)]

Meeting Type		Date (Venue)	Participants*	Key Discussion Points	
Regular Progress Meeting Global Level	Kick-off	02 Sep 2021 (@Online)	GP, GAIA, PwC, GGGI, KDB	<ul style="list-style-type: none"> - Overall ESMS policies & implementation frameworks - Feedback from individual stakeholders (incl. eligibility and CTF investment criteria etc.) - Alignment of ESMS and GAP with overall programme management system etc. 	
	Interim	09 Nov 2021 (@KDB)			
	Progress	03 Nov 2021 (@Online)			
		06 Jan 2022 (@Online)			
		18 Mar 2022 (@Online)			
		05 Aug 2022 (@KDB)			
Country Level	NDA Consultation for No Objection Letter	Aug 2021 – March 2022 (@Online)	KDB, NDA, line ministries, GGGI, key local ecosystem stakeholders	<ul style="list-style-type: none"> - Inter-ministerial consultation arranged by the NDAs and relevant line ministries invited by the NDAs across the five NOL countries - Main discussion on country ownership 	
Topical Meeting	ESMS Development	29 Oct 2021 (@Online)	GAIA, GGGI, PwC, KDB	<ul style="list-style-type: none"> - Validation of AE & EEs' ESMS - Coordination of implementation mechanism across Component 1, 2, 3 & 4 	
		08 Jun 2022 (@KDB)			
		13 Dec 2022 (@PwC)			
			29 Mar 2023 (@KDB)	GCF, GAIA, PwC, KDB	- GCF Review results and Feedbacking on the draft ESMS
	Gender Assessment & Gender Action Plan (GA & GAP)	12 Nov 2021 (@Online)	GAIA, GGGI, KDB	<ul style="list-style-type: none"> - Overall Gender assessment process and action plan establishment - Consolidation of the GGGI's and KDB's review & feedback to the draft GA and GAP etc. 	
		14 Jan 2022 (@Online)	GAIA, GGGI		
		21 Jan 2022 (@Online)			
		27 Jan 2022 (@Online)			
		11 Feb 2022 (@Online)			
			21 Feb 2022 (@Online)	GAIA, GGGI, KDB	

* GAIA: Gaia Consult Inc./PwC: Price Waterhouse Coopers/GGGI: Global Green Growth Institute/KDB: Korean Development Bank



1 Introduction of the R&DB Programme

1.1 Objective of the Research and Development Business (R&DB) Programme

The overarching objective of the Research and Development Business (R&DB) Programme is to support “technology transfer via a joint venture (JV) as a result of collaborative R&DB’ in the five Southeast Asian countries, particularly by addressing double sided barriers on supply side and on demand side respectively. to specify:

- Component 1 and Component 4 address demand-side barriers of the five different countries, i.e. Cambodia, Laos, Indonesia, the Philippines and Vietnam through customized acceleration activities that fit into the country-specific climate technology ecosystems; and,
- Component 2 and Component 3 shall address supply-sided controversy by removing barriers for global technology providers participating in emerging markets, and strengthening business creations through local-global JV creations (thus going beyond the existent R&D, RD&D to RD&B)

1.2 R&DB Programme Components

1.2.1 Component 1: Country Driven Climate Acceleration Readiness

Component 1 aims to prepare eligible local firms for global acceleration (Component 2) through the National Climate Entrepreneur Programme (N-CEAP). It targets, by design, firms that have launched (or are on the verge of launching) their goods/services in the market and are generating revenue. The exact nature of N-CEAP depends on the individual needs of the beneficiary firm. However, it is anticipated to include (i) assessing salient barrier(s) to achieving commercial viability and scale (usually either inadequate funding, sub-optimal choice of technology, or inefficient business models resulting in poor unit economics), (ii) preparing, with the help of mentors and experts, a strategy to address the barriers, (iii) identifying the immediate actions by the firm and those that would be implemented once it enters the acceleration stage, and (iv) shortlisting the most qualified firms for Component 2.

Given the nature of the activities, environmental and social (E&S) impacts are not expected to occur in Component 1 or negligible, if any. Women-led and/or owned local small and medium-sized enterprises (SMEs) will be actively encouraged and supported to take part in the Programme. – up to 30% of the shortlisted entities.

The CTF investment criteria include the following provision related to the fund’s E&S risk:

Table 1. N-CEAP Investment Criteria for Local Entrepreneurs: Environmental and Social (& Sustainability) Component (Excerpted from the same table in Funding Proposal Section B3/p.25)

Criteria		Description
3	E&S Safeguards (ESS)	<ul style="list-style-type: none"> • Initial Negative Screening on E&S Risks <ul style="list-style-type: none"> - Local entrepreneurs who consider a business under the following conditions are NOT eligible:



		<ul style="list-style-type: none"> ✓ Defined in IFC Exclusion List (*Appendix A of this ESMS: IFC Exclusion List) ✓ With adverse impacts on indigenous peoples, by falling under one of the categories below¹: <ol style="list-style-type: none"> (1) Business/enterprises with negative impacts on lands and natural resources subject to traditional ownership or customary use or occupation. (2) Business/enterprises that results in relocation of indigenous people from lands and natural resources subject to traditional ownership or under customary use or occupation, or; (3) Business/enterprises that may potentially impact cultural heritage². <p>(*See Appendix E. Rapid Checklist for the Fund Applicant on the Applicability of IFC PS 7 on Indigenous Peoples)</p> ✓ Whose likely environmental and social impacts and risks are categorized as “high risk” (A category) by GCF/IFC risk categorisation criteria. (*For more details, see Section 3.3.1 below.)
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1.2.2 Component 2: Global Acceleration for Collaborative R&DB

The second Component aims to achieve the transfer of climate-responsive technology by translating fit technology solutions into shovel-ready joint venture (JV) businesses. This is to be established by matching local entrepreneurs (domestically nominated from the N-CEAP under Component 1) and global innovators (sourced under Component 2). Teams with a diverse array of expertise are ready to offer collaborative R&DB consulting services. This includes experts in the fields of Intellectual Property (IP), accounting, tax, law, financial modelling, technology valuation, marketing, fundraising, investment, business mentoring, environmental and social (E&S) management capacity assessment and support, and gender mainstreaming, Agile, project-based acceleration teams will be optimised with kernel professionals who have the expertise each JV needs. With the multi-disciplinary team on board, Component 2 shall proceed with sourcing talented global innovations, matchmaking with technology-deployable local companies, training JVs to devise technology-enabled climate solutions, enabling selected forward-looking businesses to advance their scalable capabilities in five countries, and finally reaching a commercialisation milestone, leading up to the investment phase of Component 3.

One of the investment criteria of the Climate Technopreneurship Fund (CTF) (to be established under component 3 of the proposed Programme) is that all business activities of the funded JVs are limited to medium (Category B) or lower (Category C) level of E&S risks at pre-mitigation stage. The consulting services will prepare the JVs to screen and categorise their proposed business

1 CTF would not invest any proposed business and activities that may require free, prior, and informed consent (FPIC) as defined by GCF IPP, esp. in Section 7.2.
 2 “Cultural heritage includes but is not limited to natural areas with cultural and/or spiritual value, such as sacred groves, sacred bodies of water and waterways, sacred mountains, sacred trees, sacred rocks, burial grounds and sites, as well as the non-physical expression of culture, such as traditions, language, identity, ceremonial, or spiritual aspects of the affected indigenous peoples’ lives.” (GCF IPP, Para 63)



activities against International Finance Corporation Performance Standards (IFC PS). It will assist to establish its own Environmental and Social Management System (ESMS) to identify, assess, avoid, minimize, and monitor E&S risks in their current and future business activities and provide further E&S documents as necessary (e.g. E&S screening and assessment reports, Environmental and Social Management Plan (ESMP³), Resettlement Plan (RP) etc.) to meet the CTF investment. As a result, all funded JVs for medium environmental and social risk (Category B) activities shall have a robust E&S management capacity and system. For this, the CTF ESGCT shall request additional supporting documents to assess the applicant JV’s (or constituting global entrepreneur’s) E&S management capacity and system (based on Appendix G. E&S Management Capacity Assessment Template). Component 2 will ensure better E&S management performance of the proposed Programme.

Table 2. Acceleration Investment Criteria for Global Entrepreneurs: Environmental and Social (& Sustainability) Component (Excerpted from the same table in Funding Proposal Section B3/p.31)

Criteria		Description
5	E&S Safeguards (ESS)	<ul style="list-style-type: none"> • Secondary Negative Screening on E&S Risk <ul style="list-style-type: none"> - Global entrepreneurs who consider a business defined in IFC Exclusion List and/or a business with adverse impacts on indigenous peoples are NOT eligible. - Global entrepreneurs whose ESG policy and ESMS are not aligned with the CTF E&S Safeguard Policy, principles and ESMS are required to adopt a “Common Approach on ESMS for the CTF activities.”

1.2.3 Component 3: Climate Technopreneurship Fund (CTF)

Component 3 will establish a fund of USD 200 million to provide equity investments to JVs who have proved to be most suitable to the individual countries through collaborative R&DB endeavours accelerated in Component 2 or otherwise). Only applicants whose readiness and business fitness have been validated by the General Partner (GP), can benefit from the CTF capital. GP will also administer the E&S compliance through ESGCT and EAC (for pre-investment and post-investment due diligence) and through the Investment Committee decisions (during investment appraisal).

While the operation of CTF should bring positive climate change mitigation and adaptation benefits to the targeted countries (and beyond in the longer term), some of the Funded activities may also bring about a level of negative E&S impacts to countries. For example, toxic or hazardous materials might be developed where physical infrastructure and manufacturing activities take place. The CTF investment criteria includes the following provision related to the fund’s E&S risk:

³ For indicative generic outline of the ESMP, refer to Section D of ESS 1 – Annex 1. Environmental and Social Assessment (p. 26-27) of the World Bank Environmental and Social Framework (2017)/ <https://thedocs.worldbank.org/en/doc/837721522762050108-0290022018/original/ESFFramework.pdf>



Table 3. CTF Investment Criteria: Environmental and Social (& Sustainability) Component

Criteria	Description
6 E&S Safeguards (ESS)	<ul style="list-style-type: none"> • Negative screening <ul style="list-style-type: none"> - Businesses defined in IFC Exclusion List NOT eligible for investment (See Appendix A. IFC Exclusion List) - Businesses with adverse impacts on indigenous peoples NOT eligible for investment, by falling under one of the categories below⁴: <ul style="list-style-type: none"> ✓ Business/enterprises with negative impacts on lands and natural resources subject to traditional ownership or customary use or occupation. ✓ Business/enterprises that result in relocation of indigenous peoples from lands and natural resources subject to traditional ownership or under customary use or occupation, or; ✓ Businesses/enterprises that may potentially impact cultural heritage⁵, and where the commercial use of the cultural heritage of indigenous peoples, including their knowledge, would need FPIC. (*See Appendix E. Rapid Checklist for the Fund Applicant on the Applicability of IFC PS 7 on Indigenous Peoples) • E&S risk categorisation (by CTF risk categorisation criteria⁶) <ul style="list-style-type: none"> - High risk businesses (Category A) NOT eligible for investment - A proposed business must be classified as Category B or C. • Post-investment commitment through Environmental and Social Management Plan (ESMP) for medium risk businesses (Category B) <ul style="list-style-type: none"> - All the supported JVs (partnerships) with medium risk level (Category B) must comply with the required duties and responsibilities on E&S compliance: e.g. E&S risk mitigation plan deployment, and regular reporting.

4 CTF would not invest any proposed business and activities that may require free, prior, and informed consent (FPIC) as defined by GCF IPP, esp. in Section 7.2.

5 “Cultural heritage includes but is not limited to natural areas with cultural and/or spiritual value, such as sacred groves, sacred bodies of water and waterways, sacred mountains, sacred trees, sacred rocks, burial grounds and sites, as well as the non-physical expression of culture, such as traditions, language, identity, ceremonial, or spiritual aspects of the affected indigenous peoples’ lives.” (GCF IPP, Para 63)

6 For more details, see ‘Section 3.3.1. Screening and Categorisation of Potential Risks and Impacts.’



8	Co-benefits & Sustainability	<ul style="list-style-type: none"> • Applicants are encouraged to fully deliver the following co-benefits: <ul style="list-style-type: none"> - Economic co-benefits, such as the creation of jobs, poverty alleviation and enhancement of income and financial inclusion, esp. amongst women; - Social co-benefits, such as improvements in health and safety, access to education, cultural preservation, improved access to energy, social inclusion, improved sanitation facilities and improved quality of and access to other public utilities such as water supply; - Environmental co-benefits, including increased air, water and soils quality, conservation and biodiversity - Gender empowerment co-benefits outlining how the project will reduce gender inequalities (* Further gender component is also included in Criteria #8 below.) - Promoting “indigenous-led businesses” to ensure indigenous climate technology and knowledge are fully tapped for the climate technology innovation in the five countries (* Further Indigenous component is also included in Criteria #10 below.) • Where appropriate, proposals should present the ability of the projects to enable the achievement of one or more of the Sustainable Development Goals (SDGs).
10.	Indigenous-led Enterprises	<ul style="list-style-type: none"> • Prioritisation of indigenous-led businesses <ul style="list-style-type: none"> - CTF will prioritize the proposed enterprises and activities meeting the following conditions: <ul style="list-style-type: none"> ✓ Application/combination of Indigenous knowledge and technology (*See the Box right below.) for climate tech RD&AB, and/or <div style="border: 1px solid black; padding: 10px; margin-top: 10px;"> <p>[Box]</p> <p>The technologies and knowledge of indigenous peoples</p> <p>The knowledge of Indigenous Peoples can be defined as the skills, know-how, innovations and practices that are passed on from generation to generation in a traditional context and that form part of the traditional lifestyles of Indigenous Peoples and communities (WIPO 2004). The knowledge of indigenous peoples can also be viewed as:</p> <p>... local knowledge that is unique to a culture or society. This knowledge is passed from generation to generation, usually by word of mouth and cultural rituals, and has been the basis for agriculture, food preparation, health care, education, conservation and the wide range of other activities that sustain societies in many parts of the world. (UNFCCC 2017)</p> </div>



	<p>Similarly, in a more climate-related context, the UNFCCC describes the knowledge of indigenous peoples as generally referring to:</p> <p>... knowledge systems embedded in the cultural traditions of regional, indigenous, or local communities. Traditional knowledge includes types of knowledge about traditional technologies of subsistence, such as tools and techniques for agriculture, ecological knowledge, climate knowledge, traditional health care and others. (UNFCCC 2018a)</p> <p>Other definitions developed by indigenous peoples themselves have placed greater emphasis on the biological, cultural, physical, spiritual and sometimes religious aspects of their knowledge and its transmission. They describe such knowledge as a systematic way of thinking, with insights based on evidence acquired through direct experiences and multigenerational observations, lessons and skills. Such knowledge is described as still developing in a living process (ICC 2021) and is considered crucial for subsistence and survival. The non-formal scientific status of the knowledge of indigenous peoples, and the manner in which it is communicated and transmitted, has attracted very little documentation or scientific research (Enda Energie 2017).</p> <p>The term technologies in this guide is defined as a piece of equipment, technique, practical knowledge or skills to perform a particular activity. It can refer to either hardware (tangible components), software (know-how, experience and practices), or orgware (institutional frameworks or organisation). When it comes to the specific case of indigenous technologies, it can refer to the technological knowledge, skills and resources that are transmitted or handed down from past indigenous peoples to present ones to meet their needs. As Indigenous Knowledge is part of the cultural heritage of Indigenous Peoples, its commercial use by people that are not part of the Indigenous community requires that FPIC be obtained.</p> <p>(Gumbo, M. 2014).</p> <p>(Except from the Global Technology Needs Assessment (TNA) Guidebook: “Indigenous Peoples and Climate Technologies: Acknowledging Indigenous Peoples’ technologies and identifying linkages with Technology Needs Assessments” (2021).⁷)</p>
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⁷ <https://tech-action.unepccc.org/publications/indigenous-peoples-and-climate-technologies/>



		<p>✓ Proposed business plan/design explicitly include participatory and inclusive approach with/of Indigenous Peoples.⁸</p> <p>As a result, the proposed businesses (should) include at least one key performance indicator (KPI) related to the one of the two conditions, as applicable, referred right above.</p> <ul style="list-style-type: none"> • Enterprise dimension <ul style="list-style-type: none"> - All the CTF investment JVs/activities are encouraged to integrate indigenous-led technology RD&B component, to the extent feasible. If the nexus to indigenous people is confirmed, the JVs/activities may need to develop an Indigenous Peoples Plan (IPP), as a stand-alone plan or as an integrated part of the environmental and social management plan (ESMP) of the proposed activities. - The proposed program will support, as appropriate: Monitoring, evacuation & any other due diligence as appropriate (incl. response/remedial/corrective measures in case of occurrence of unintended adverse impacts per Para 19 of the GCF IPP Guidelines (2019)). (Component 3 of the Proposed Programme) <p>※ Pls see CTF Indigenous Peoples Planning Framework (IPPF) in Appendix O below.</p>
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Once a JV proposal is approved and implemented, post-investment E&S due diligence by the ESGCT of CTF shall be activated through the entire process of the JV enterprise implementation. For medium risk (Category B) JV enterprises/activities, the JV’s performance shall be monitored through the regular E&S monitoring by the CTF against its E&S policy (as stipulated in this ESMS) and KDB’s E&S due diligence as AE of GCF. In case that a JV (or any other executing entity) is found unable to manage E&S risks and impacts properly in the course of their execution of the funded enterprises/ activities, CTF will re-assess the entity’s E&S management capacity, through field-based investigation by the ESGCT and the collective review by the E&S Risk Management (sub-)Committee (ESRMSC).

1.2.4 Component 4: Technical Assistance (TA)

Component 4 contributes to the development of a supportive ecosystem for the growth of climate technology firms in the five targeted countries. The outputs involve working with relevant ministries and local partnersto (i) design policy recommendations, (ii) build institutional capacity, (iii) establish a national entrepreneurship acceleration Programme and a platform through which it will be implemented (e.g. raising awareness, knowledge dissemination, and partnerships), (iv) create regional partnerships, and (v) monitor/evaluate the Programme’s progress.

⁸ A (mere) expression of the objective of benefiting indigenous peoples in the proposal would not be sufficient unless the aimed objective(s) are concretely materialized in the design of the proposed enterprises/businesses.



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Component 4 offers to create an environment for the climate technopreneurs to work on even after the closing of the Programme. The creation of the regional and national knowledge sharing hub would maximise the mitigation and adaptation impacts of climate technologies while ensuring the E&S management gender mainstreaming capacities of participating organisations.



2 ESMS Overview, Objectives and Methodology

2.1 Purpose of the Environmental and Social Management System (ESMS)

Korea Development Bank (KDB)'s Environmental and Social Management System (ESMS) requires all Category A and B projects funded by the Bank to develop or maintain an ESMS. As the Programme may involve investing in companies with Category B business activities, this ESMS has been developed to systematically manage E&S risks. This is in line with KDB's agreement and commitment to GCF as GCF Accredited Entity (AE), i.e. to observe the GCF's E&S Safeguard Policy and requirements.

The primary purpose of the R&DB ESMS is to provide a clear and unified E&S risk management process. This is in line with KDB and GCF's E&S safeguard policies and requirements as well as the target countries E&S management-related regulatory requirements.

The secondary purpose of the ESMS is to ensure all the entities and stakeholders involved (including all the executing entities (EEs) of the Programme) are capacitated for proper E&S risk management through this compliance and management process.

More specifically:

- Establish the legal framework, procedures, and methods for E&S screening, impact assessment, approval, monitoring and reporting of the Programme;
- Specify appropriate roles and responsibilities of various institutions/actors in different tiers, and outline reporting procedures and mechanisms for managing and monitoring E&S concerns related to the Funded-JVs;
- Provide guidance on determining the capacity building requirements of the JV candidates (including training and technical assistance (TA)) and the development of Environmental and Social Action Plan (ESAP) for the successful realisation of the ESMS;
- Provide guidance for in-depth consultation with all stakeholders to seek broad support for the intervention.

2.2 Methodology

This ESMS was formulated based on the following activities:

- Review of the background documents, including national (the five target countries) and international (other international, regional and similar GCF approved Programmes) experiences in nurturing climate technologies, financing arrangement and policies to identify typical E&S risks and impacts associated with the Programme;



- Review of KDB's ESMS focusing on requirements for the Programme's ESMS within the GCF's Revised Environmental and Social Safeguard Policy (B.BM-2021/18)⁹.
- Review of the sustainability policy and E&S safeguard requirements of the EEs of the Programme (i.e. Global Green Growth Institute's (GGGI) Sustainability and Safeguard Rules and GP's sustainability policies etc.)
- Identification of the Programme Components and descriptions including a typology of the JV candidates to be invested,
- Identification of relevant E&S activities in relation to each of the Programme Component operations and operational linkages;
- A series of consultations with AE, EEs and associated entities of the Programme to draw consensus on the E&S related investment criteria to design overall E&S capacity support services and decide on the overall Environmental and Social Due Diligence (ESDD) requirements such as: CTF E&S screening, review, fund approval and oversight of the JVs' E&S management performance of the Funded activities;
- Formulation of the CTF's standard templates and documents for CTF's ESDD for pre- and post- investment approval stages. This includes E&S Screening Form, E&S Review Summary, E&S Monitoring and Evaluation (M&E) Forms, Preparation of E&S guideline documents for the Portfolio companies and E&S management (including E&S Assessment, ESMS, ESMP and RP development as applicable).

⁹ [decision-bbm-2021-18-bbm-2021-18-decision-board-revisions-gcf-esp-reaffirm-fund-s-commitment.pdf \(greenclimate.fund\)](#)



3 THE ESMS

The System sets out the overall policy, guiding principles, implementation arrangement, rules, guidelines, and procedures to assess, mitigate and manage E&S risks, while enhancing positive impacts and opportunities.

3.1 Environmental and Social (E&S) Policy

In accordance with the Revised E&S Policy of GCF and KDB's ESMS, the Programme has established the ESMS. The System sets out the overall policy, guiding principles, implementation arrangements, rules, guidelines, and general procedures, through the operation of the Programme and CTF, to assess, mitigate and manage E&S risks and impacts. The ESMS also reflects Equator Principles (EP). The Programme's ESMS policy adopts, the IFC PS on Social and Environmental Sustainability, IFC Exclusion List (see APPENDIX A), WB's Environmental, Health and Safety (EHS) Guidelines, IFC's Industry Sector Guidelines and any subsequent revisions to those standards. In addition, the ESMS is also committed to the eight core conventions of the International Labour Organisation (ILO), the key provisions of which are reflected in the relevant IFC PS.

The ESMS requires compliance with the country safeguard system (CSS). The applicant for the CTF needs to fulfil legal permits and licensing requirements including environmental compliance permits. The CTF does not invest in high E&S risk business and activities, i.e. "A Category" activities/projects, (See CTF Investment Criteria #5: E&S Risk Criteria/ Table 3 above.). Activities/Projects that are categorised as high risk by the CSS must not be proposed for CTF funding.

The overriding principles are IFC PS and in case of any discrepancies with CSS, in risk categorisation and quality standards etc., more stringent measures shall prevail¹⁰.

The E&S policy applies to all activities under the Programme and therefore shall be adopted by the CTF as well as to its JVs/projects. For the Country Driven Acceleration Readiness Program (N-CEAP, Component 1) and Technical Assistance (TA) (Component 4), GGGI, through the mobilisation of national SMU in respective five countries, shall take direct responsibilities of ensuring the E&S policy compliance of each of the activities. For the Global Acceleration for Collaborative R&DB (Component 2) and CTF (Component 3), the CTF's Managing Partner (GP, NH Investment & Securities and NH Absolute Returns Partner (NH ARP)) have the overall responsibility for setting (& updating in the future, as necessary) this policy and overseeing its implementation. The Managing Partner of CTF (NH Investment & Securities),¹¹ in collaboration with KDB, will identify qualified E&S and Gender specialists to form an Environmental, Social and Gender Compliance Team (ESGCT) within the CTF, possibly by procuring a third-party institution, to ensure compliance and performance of the E&S Policy and ESMS. Beyond the Component-specific E&S management arrangement, the overall responsibility for ensuring E&S management and compliance of all the activities across the components lies in the KDB (AE) as an umbrella supervisory body in line with the GCF requirements

¹⁰ In case CSS categorises a proposed business/activities as "medium risk"(category B), or "low risk"(Category C) but the IFC PS as "high risk (category A)" the latter will apply and the proposed business/activities would not be eligible for CTF.

¹¹ Managing partners have the ultimate responsibility in implementing funded activities for ensuring the effectiveness of the ESMS policy and its implementation. The Managing Partners are supported in this by E&S and Gender Compliance Team, Legal team, and the investment professionals.



3.1.1 Guiding Principles

The following principles shall guide how KDB will implement and achieve the objectives of ESMS:

- **Integration of E&S Risk Management & Sustainability into the Programme’s Overall Management Framework.** The Programme positions E&S risk management as part of the overall sustainability management framework. Thus, ESMS goes beyond the “do no harm” principle to the maximum sustainability effects in the target countries and JVs. In particular, the Programmes ensure the Funded entities and activities are mainstreamed by gender and sustainability principles. Thus, gender and sustainability mainstreaming of the participating entities, will generate sustainability co-benefits in addition to climate change mitigation and adaptation benefits through the E&S management and gender capacity service of the Programme (through Component 1 and Component 2).

As KDB is the AE of the GCF, this ESMS shall be consistent and linked with the relevant policies and practices of GCF (including revised E&S Policy) such as those related to monitoring and accountability, redress mechanism, information disclosure, gender, Sexual Exploitation, Abuse, Harassment (SEAH) and others as appropriate. Based on these, the overall risks (including potential conflict analysis) shall be assessed associated and addressed with the overall operation of the Programme.

- **Scaled risk-based approach.** In line with the GCF and KDB’s safeguard policy, the Environmental and Social Standards (ESS) will be implemented in a risk-based manner and not in a one-size-fits-all approach. The level of E&S risk management shall be designed and implemented proportionately to the level and nature of the E&S risks of a specific funded activity.
- **‘Nurture before evaluate’ approach.** The Fund is aware that most local tech enterprises as well as some of the global participating entities for JV formation may not be fully equipped with the

required level of its own ESMS. Thus, through the diagnosis process in Component 1 and Component 2, the Programme will provide a gap analysis. If agreed, it shall also provide customised E&S management capacity building support to the applicants for CTF investment to prepare them for E&S management during business operations and obtain approval from the Fund.

- **Equality, non-discrimination, and attention to women, indigenous peoples and vulnerable groups.** All the activities financed by the Programme will require adverse impacts to not fall disproportionately on women and girls, **Indigenous Peoples** or any other vulnerable and marginalized groups (VGs). To do this, the proposed activities for CTF funding shall be screened by this principle and will suggest, if necessary, to correct the current design of the Funded activities to gender and VG-mainstreamed.
- **Mitigation hierarchy.** The Programme adheres to the mitigation hierarchy as an overall principle to managing any E&S risks and impacts. The mitigation hierarchy aims to:
 - Anticipate and avoid adverse risks and impacts on people and the environment.
 - Where avoidance is not possible, adverse risks and impacts are minimised through abatement measures.



- Mitigate any residual risks and impacts; and
- Where avoidance, minimisation or mitigation measures are not available or sufficient, and where there is sufficient evidence to justify and support viability, design and implement measures that provide remedy and restoration before adequate and equitable compensation of any residual risks and impacts.
- **Continuous improvement and best practices.** The ESMS will be continuously reviewed and updated in a transparent and participatory manner to sustain its relevance and responsiveness to the prevailing organisational, social, economic and political conditions. The ESMS will also be consistently aligned with international best practices and applicable standards.
- **Stakeholder engagement and disclosure.** The ESMS requires that there is broad multi-stakeholder support and participation throughout the lifecycle of the Programme, including the development of measures to mitigate, manage and monitor E&S risks and impacts. The process to build support shall be inclusive, gender-responsive and culturally aware, and will be supported by the disclosure of relevant information pursuant to the GCF Information Disclosure Policy.
- **Zero-tolerance of SEAH.** As GCF has revised its E&S policy to incorporate SEAH policy in its decision B.BM-2021/18, this E&S policy will comply with the decision by applying zero tolerance for all forms of SEAH in all the GCF-funded activities by adopting the zero-tolerance policy on SEAH as its key principle and integrating the SEAH consideration at all the relevant steps and procedures. From risk screening stage (Appendix D). As such this ESMS has mainstreamed the SEAH consideration at all the relevant steps and procedures. At the risk screening stage, the applicant for the CTF shall prepare the 'Initial E&S Checklist for Fund Applicant' (Appendix D) which inquires the possible risk related to SEAH of the invested activities (e.g. involvement of children, young and vulnerable individuals including women, ethnic minorities etc.) as employees, beneficiaries or delivery partners along the supply chains etc.) This will be actively considered when the E&S Manager of the ESGCT of CTF prepares the fund's own E&S Screening form (Appendix F. 'E&S Screening Form for CTF E&S Manager (ESM)').
- **Knowledge-sharing.** KDB will lead and promote the sharing of lessons and experiences in applying ESS and in implementing the ESMS among entities and stakeholders. KDB will integrate

these lessons with capacity development, communications, and outreach activities.

- **Compliance with applicable laws.** KDB will not support activities that do not comply with applicable laws, including national laws and/or obligations of the country directly applicable to the activities under relevant international treaties and agreements, whichever is the higher standard.

3.2 Implementation arrangements

This section provides the institutional and implementation arrangements, including the roles and responsibilities of AE and EEs, for implementation of the ESMS.



3.2.1 Accredited Entity: KDB

KDB, as the AE of GCF, will be responsible for overall oversight and delivery of the System. The Bank will report to the GCF under the terms and conditions agreed under the Accreditation Master Agreement (AMA) and the Funded Activity Agreement (FAA). The FAA will include the investment criteria that determine the inclusion of the investments under CTF (Component 3 of the Programme).

KDB will ensure that the overall ESMS operation is in line with the Bank's own risk management governance and control process. The Bank will be reported by each of the EEs of the Component 1~4 on the E&S compliance on a regular basis. KDB may also participate in preliminary and main CTF Investment Committee (IC) sessions as an Observer. KDB will also actively intervene when E&S issues arise during the operation of the Programme / CTF, by monitoring and by having a seat at the E&S Risk Management Sub-Committee of the CTF. With respect to any particular investment of the CTF, the level of KDB's engagement is determined by the nature and scope of the project, as well as the specific circumstances of the collaboration and relationship with the client. As an umbrella oversight organisation of the overall operation of the proposed Programme, KDB will integrate E&S risk management Component into each of the following operational mechanism:

- A dedicated specialist in financial transaction advisory will ensure transactions meet the eligibility criteria, including E&S risk categorisation and management planning requirements.
- Diagnosis of the portfolio companies' ESMS and E&S capacity, as well as, if required, capacity building support such as business development, processing of transactions and identification of pipeline projects.
- Fund-level E&S management and due diligence: overall E&S performance of CTF shall be subject to the Bank's continuous scrutiny. The Bank will ensure to keep up E&S performance of the CTF in coordination with the EEs of each of the four Components of the Programme. At the overall Programme-level, the Bank will ensure and regularly monitor operationalisation of information disclosure, stakeholder engagement, grievance redress and accountability mechanism. Overall E&S performance of the Programme will be assessed on a regular basis by the KDB and be reported to GCF in view of the Programme's compliance with the GCF E&S Safeguard Policy.

3.2.2 Co-executing Entity of Component 1 and Component 4: KDB & Global Green Growth Institute (GGGI)

The programme will leverage the proven three-tier venture investment platforms (KDB NextRound, NextOne, and NextRise) and global VC and acceleration networks of KDB Headquarters and its Singapore/London Venture Desk and KDB Silicon Valley LLC (VC subsidiary). Above all, KDB will serve as the control tower that aims at seamless interlinked management amongst the four (4) different components across five (5) NOL countries in capacity of both Accredited Entity and Executing Entity.

GGGI is the Co-executing Entity for Components 1 and 4 of the Programme. GGGI will set-up the Regional Sustainability Management Unit (RSMU) in GGGI headquarter in Seoul and one in each of the five countries. The main purpose of the SMUs will be to communicate and coordinate with local stakeholders such as government bodies and business communities, to provide support in implementing the Programme activities. Especially for potential local firms to participate in the CTF-funded activities (in Component 1) and nurturing the country ecosystem through various TA activities (in Component 4).



3.2.2.1 Regional Sustainability Management Unit (RSMU)

Headquartered in GGGI, the RSMU will be overseeing the operation of the five National Sustainability Management Units (NSMUs) and reporting the work of all SMUs to KDB.

3.2.2.2 National Sustainability Management Unit (NSMUs)

NSMUs will be established for each of the five countries. The specific members of the NSMUs may differ by design, but in general, it will be comprised of GGGI and local implementing entities/delivery partners and technical experts. In terms of E&S management, NSMUs will extend TA to the Funded-JVs, facilitating their E&S management activities on-the-ground to ensure they are in line with the E&S covenants of the CTF IA.

Members: GGGI country office, local implementing bodies/delivery partners, technical experts

Roles and Responsibilities

- Undertake and oversee the delivery of all outputs of Components 1 & 4 in a timely, effective, and cost-effective manner in line with ESMS;
- Provide advisory support to the JVs, especially in implementing their E&S management for their compliance with E&S requirements as conditions for the CTF approval.
- Coordinate with key country stakeholders including NDA, relevant country government agencies, business and community actors on E&S grievances and overall E&S performance of the JVs and associated parties as such needs arise; and
- Jointly strategize and develop country-level operational work plans, including E&S risk management plans to support timely delivery of the project with the Co-GPs.

For the Local Acceleration Programme (Component 1), GGGI and KDB shall ensure the Local Entrepreneur level Investment Criteria (See Table 1 above) compliance with the arms of National SMUs in respective countries. The same implementation mechanism shall be applied for the TA Programme (Component 4): GGGI will ensure any activities related to the Programme are in line with this ESMS and GCF requirements through its country-specific SMUs.

3.2.3 Executing Entity of Component 2, 3: NH Investment & Securities & NH Absolute Return Partners (NH ARP)

For Global Acceleration Programme (Component 2), NH Investment & Securities will ensure the overall E&S compliance (esp. Acceleration Investment Criteria for Global Entrepreneurs, See Table 2 above) together with a group of expert/consulting entities shall form an acceleration advisory consortium to assist the formation of JV and JV enterprises/activities in accordance with all the required compliance conditions and requirements by the CTF, including E&S and gender compliance. Gaia Consult Inc. specialises in this function and will be taking active roles.

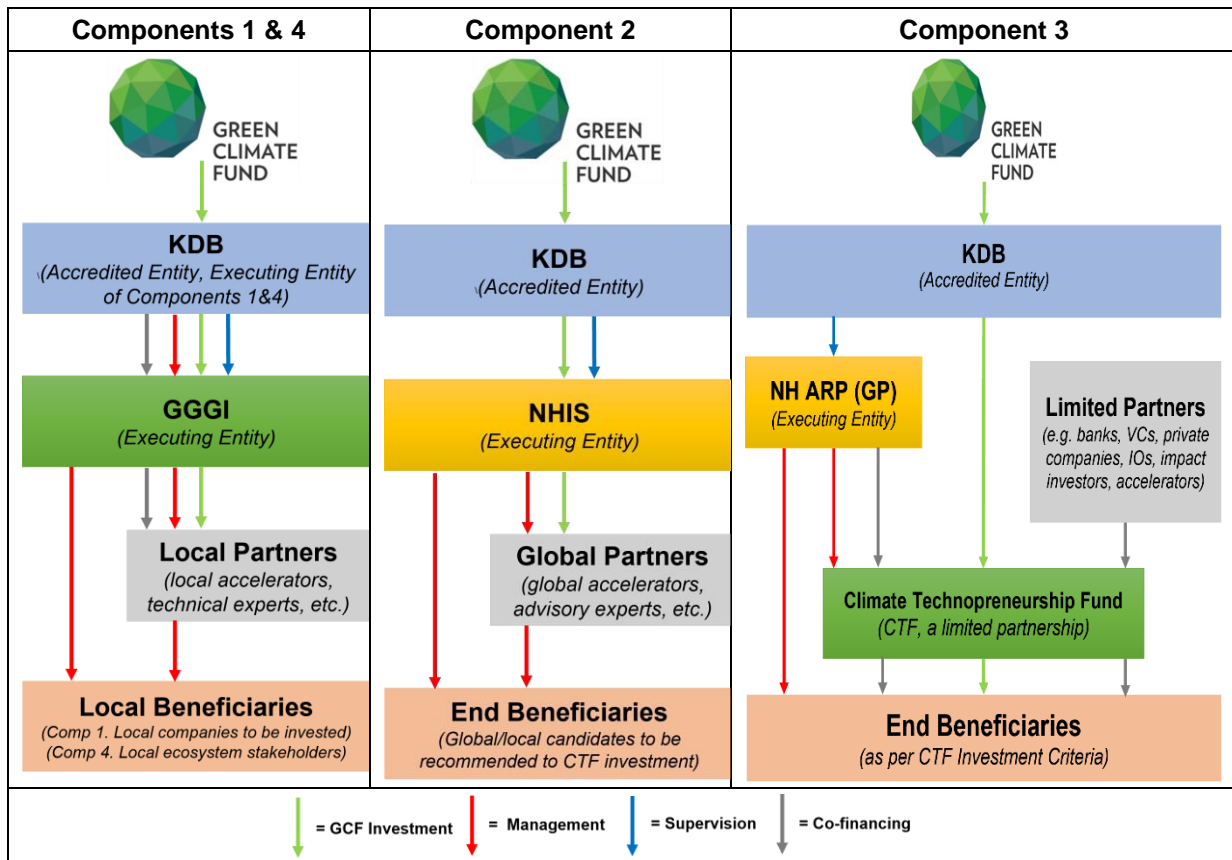
NH ARP will be the executing entity for CTF operation (Component 3). NH ARP Pte. Ltd., a subsidiary 100% owed by NH Investment & Securities (NH I&S) under the NH Financial Group (A+/S&P, A1/Moody's, A/Fitch), is a licensed fund management company in Singapore, with global investment expertise in private equity and debt deal opportunities. It has successfully driven performance with several leading investments in notable deals across Southeast Asian countries: in particular, specialised in growth stage investments in innovative technology-based companies



within Southeast Asia. NH ARP’s capacity in leveraging core networks and securing high-quality investment opportunities will support the CTF to optimise investment portfolio and achieve returns.

For component 3, a more complicated E&S compliance machinery will be activated. While the Component 1 and Component 2 focus on capacitating the applicant local and global entrepreneurs to enable to be ready for an eligible and qualified JV formation, (i.e. “nurturing before evaluating” approach), Component 3 requires vigorous application of E&S risk controlling measures throughout the entire stage of pre-investment (proposal application stage), investment decision (including E&S compliance check against the CTF Investment Criteria: See Table 3 above) and post-investment E&S due diligence. Here GP of CTF, NH Investment & Securities, shall take full direct responsibility of the entire process together with the Investment Committee. ESGCT, (E&S) Expert Advisory Committee (EAC), as well as the (E&S) Risk Management (sub-) Committee (ESRMC) shall be institutionalized within the CTF Secretariat to ensure the E&S Compliance and risk management as well as to execute the fund-related E&S due diligence.

Figure 1. Implementation Arrangements of Entities in in the Programme



3.2.3.1. Global Acceleration Advisory Secretariat

A Secretariat will be established to implement Component 2 of the Programme. In addition to essential administrative personnel, the Secretariat will also be staffed (or outsourced) with qualified sector experts (of the relevant climate technology and sectors/industries), as well as specialists on international development/climate change cooperation, sustainability (including safeguard and gender), among others, to provide customized consulting services to the willing applicants.



When global tech companies (“the global applicant”) holding a patent of climate technology to apply to any of the five target countries approach the Programme, the Secretariat will assist them to form a viable JV with local candidates through a matchmaking process. Through this, JV candidates with a concrete enterprise and climate technology scale-up and diffusion plan (funded activities) shall be concretized for CTF application.

[CTF Readiness Support & Business Incubation Consulting Package (“RSBI Package”)]

Once the JV candidates are profiled and screened, the Secretariat determines whether the applicant is ready to apply for the Fund (Component 3). If judged not ready based on the diagnosis of the applicant’s capacity and system gaps (identified through the pre-assessment of the JV candidates against the CTF Investment Criteria), the Secretariat will inform the results and recommend the applicants to receive the “CTF RSBI Package” to apply for the Fund.

The Secretariat, through ESGCT, will carry out a gap analysis and diagnose the need for consulting support and capacity building of the global JV candidates against the CTF Investment Criteria. This will include an assessment of the applicant firms’ current ESMS and E&S management capacity (See Appendix G below). The proposed plans of the funded activities will also be closely reviewed, preliminarily screened and categorised according to the E&S risk category and will be asked to submit E&S impact assessment (either simplified ESIA (also called, Initial Impact Examination (IEE) or other terms by the respective host countries) and topical impact assessment (such as health impact assessment) per the nature of the proposed project/activities) and management plans (See Section 3.3.3 below for specific types of these ESMPs), to the level required for the CTF approval against the CTF Investment Criteria. In this process, those whose funded activities are not in line with the GCF’s purpose (e.g. achieved impacts not serving for climate change adaptation and mitigation and relevant technology diffusion in target countries) or the potential E&S risks of the proposed activities is significantly large (e.g. those that are clearly subject to risk Category A, or falls into the category of the Fund’s Exclusion list activities) will be either screened out or customized advice shall be provided to adjust the original plans to meet CTF E&S requirements.

An experienced team of ESGCT will monitor CTF’s investment activities on an ongoing basis. The ESGCT will manage daily E&S operations.

Roles and Responsibilities

- Oversee the implementation of the ESMS of the CTF and its periodic reviews, improvements and amendments.
- Regular reporting to the Limited Partners (LPs), including KDB, about its ESMS performance.
- Ensure that each application has been screened against the CTF E&S Policy, Exclusion List, and that the proposed project has been categorised for potential E&S risks.
- Ensure that the reference terms of the ESIA comply with CTF E&S Policy.
- Oversee the JV candidate due diligence (DD) process and ensure that the CTF E&S review procedures, guidance and checklists have been followed and that the potential business activities’ environmental performance/compliance against applicable requirements has been assessed.
- Ensure that JVs are supervised and monitored against ongoing compliance with the applicable E&S requirements.



- Review all submitted E&S monitoring reports of JVs;
- Prepare an annual environment and social performance report, based on the periodic monitoring reports prepared by the JVs, and other E&S reports that may be required.
- Work with Sustainability Management Units (SMUs) and local stakeholders to ensure that adequate resources are available for effective implementation of E&S policies and procedures.
- Convene *ad-hoc* E&S Risk Management Committee (RMC) meetings as necessary and make decisions on the corrective and preventive actions when E&S issues are reported.

3.2.3.2 Experts Advisory Committee (EAC)

The Experts Advisory Committee (EAC) will be established within the CTF to examine potential JV candidates with business activities that need further examination by relevant experts at the early stage of the investment cycle. Otherwise, JV candidates with typical and low E&S risk business activities will be examined solely by the ESGCT. The members of the EAC will be comprised of CTF Managing Partners, CTF ESGCT, sectoral and technology expert(s) (case dependent), and third-party E&S expert(s) (case dependent). The Co-GPs will keep a pool of international and local experts who will be summoned to the EAC depending on the proposed business activities and the location of the JV candidates under review. EAC is expected to evaluate the E&S risks and management capacity of JV candidates as well.

Committee Members: CTF Managing Partners, CTF ESGCT, sectoral and technology expert(s) (case dependent), and third-party E&S expert(s) (case dependent).

Role and Responsibilities

- Screen out any JV candidates with activities included in the Exclusion List.
- Examine and evaluate the potential E&S risks of the products, services and technologies of the JV candidates.
- Examine and evaluate the E&S risk management capacity of the JV candidates.
- Determine the boundaries of the use/scale of the technology under review to comply with the E&S risk management capacity of the JV candidates, adjust the level of monitoring and oversight of the company's invested activities; and
- Prepare an E&S Review Summary (ESRS) (See APPENDIX H) with validation of the proposed E&S risk category and appropriateness of the proposed management plan, which includes, as appropriate, the EAC's suggestion on the necessity for additional review (requesting the JVs to
- submit additional E&S supporting documents, and/or recommending conditionalities for E&S compliance to the portfolio prior to the Fund approval etc.), for submission to the Preliminary IC.

3.2.3.3 Preliminary Investment Committee (PIC)

The Preliminary Investment Committee (PIC) of the CTF will be the formal committee to review the information gathered from the applicant, opinions of the ESGCT, and the recommendation of



the EAC, if applicable. PIC will not make any investment decisions but is the official place to record the opinions of KDB, the AE, PwC (the provider of the DD service for the CTF) and the ultimate management institution of the Programme.

Committee Members: CTF Managing Partners, KDB (observer), Investment DD Partner (PwC)

Roles and Responsibilities

- Review the ESRS and examine whether the JV candidates are set for the investment decision stage in the IC or requires a further DD; and
- Prepare a PIC meeting notes which formally records the discussion for submission to the IC or the entities providing consulting services in Component 2 if the JV candidates require further DD or preparation.

3.2.3.4 Investment Committee (IC)

The IC of the CTF will be the sole investment decision-making body. The committee is comprised of the four experienced Managing Partners and bears the ultimate responsibility of the investments. The IC will make its investment decision after considering all the information gathered from the JV candidates, including the business proposal, relevant studies (including E&S studies) and independent opinions from the EAC (if applicable) and PIC.

Committee Members: CTF Managing Partners, KDB (as an observer)

Roles and Responsibilities

- Review the ESRS, PIC meeting notes to make final investment decisions.
- Review the draft Investment Agreement (IA) and the E&S covenant; and
- Formally record the discussion and its investment decision

3.2.3.5 E&S Risk Management Sub-Committee (ESRMSC) (Post investment stage E&S Due Diligence)

The E&S Risk Management Sub-Committee (ESRMSC) is an *ad-hoc* committee that will be convened when outstanding E&S risk occurrences are identified and/or reported during the Programme operation (in the post-investment stage), such as: the deployed climate technology is relatively new that a significant level of EHS-related risk previously unidentified are revealed and reported; or a grievance is lodged against the JVs and its invested activities which may pose adverse impacts on the project operation by damaging the credibility and reputation of the implementing entities as well as the health and safety of the host country and communities. In such cases, ESRMSC will be convened to duly assess the issue and identify required corrective/remedial/grievance address measures according to the nature and level of the posed risks.

ESRMSC may invite external experts on specific technology and E&S safeguard issues (e.g. cultural heritage impacts, etc.) as well as key country stakeholders including the National Designated Authority (NDA) to GCF (as appropriate), affected communities including women, Indigenous



Peoples and vulnerable groups, as appropriate among others. After committee consultation, the case will be submitted to the RMC¹² of the CTF for Managing Partners to decide on response measures.

Committee Members: CTF Managing Partners, KDB, Local Stakeholders, External Experts (if needed)

Roles and Responsibilities

- Review the identified and/or reported E&S issues.
- Invite key country stakeholders, including NDA and affected community, to the committee as appropriate; and
- Prepare Committee Meeting Notes for record and submission to the RMC.

3.2.4 JV Candidates and Other Fund Applicant Entities

JV candidates will approach the Programme, and their readiness for the CTF will be reviewed (including the E&S management capacity, status as well as the E&S policy compliance of their proposed activities). Through this process, JV candidates will be provided with opportunities to strengthen their internal E&S management system, build capacity and better prepare their funding proposal (FP) to CTF in E&S safeguard compliance perspectives.

In case the proposed activities under CTF require special attention on specific E&S issues (e.g. potential soil and groundwater pollution & workers' and community's safety and health risks, related to battery manufacturing, use and disposal of PV installation and EV manufacturing etc.), JV candidates will be required to strengthen their ES impact assessment and M&E plans on the issues identified by the Programme. Overall, ESMS procedural requirements shall be reflected in their E&S covenant, and they will need to commit to fulfil the requirements (to be articulated in a form of ESAP as part of the E&S covenants upon signing on the CTF IA, drafted by the ESGCT.).

It is desirable for JVs to designate an E&S in-housed safeguard focal point(s) to support these functions throughout the entire cycle of the Funded activities.

3.2.5 Key Country Stakeholders

Key country-level stakeholders will include, among others, the relevant ministries and other related government entities. (For details of the country-level stakeholders, see: GGGI's Demand-driven Pre-Feasibility Study, as the submission package of the Programme.)

Country-level SMUs will be coordinating mechanism involving various country stakeholders. A concrete coordination mechanism shall be established in consultation with the key country stakeholders by the GGGI, in the process of formulating the respective Country SMU.

3.2.6 Contractors/Sub-contractors, Suppliers and Other Key Actors in the Value Chain

This ESMS covers not only the entities directly participating in the Programme (i.e. AE, EEs and direct recipient JVs of the proposed Programme) but also the entities who work with the direct beneficiary JVs through various contractual arrangements. In a nutshell, to the extent possible and

¹² Risk Management Committee of CTF can be understood as the Board of CTF, where the Managing Partners will meet regularly to discuss the operation of the Fund.



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desirable, the entire valuechain along the life cycle of the technology deployment and diffusion (and project implementation) will be considered.

The range of the entities involved will vary case by case, subject to each of the items of the CTF. Preparation and execution of stakeholder analysis and engagement plans will be facilitated by the country SMU, and duly monitored by the Co-GPs throughout the operation of the project. Stakeholder entities will be invited to these dynamic consultative processes at the JV level.

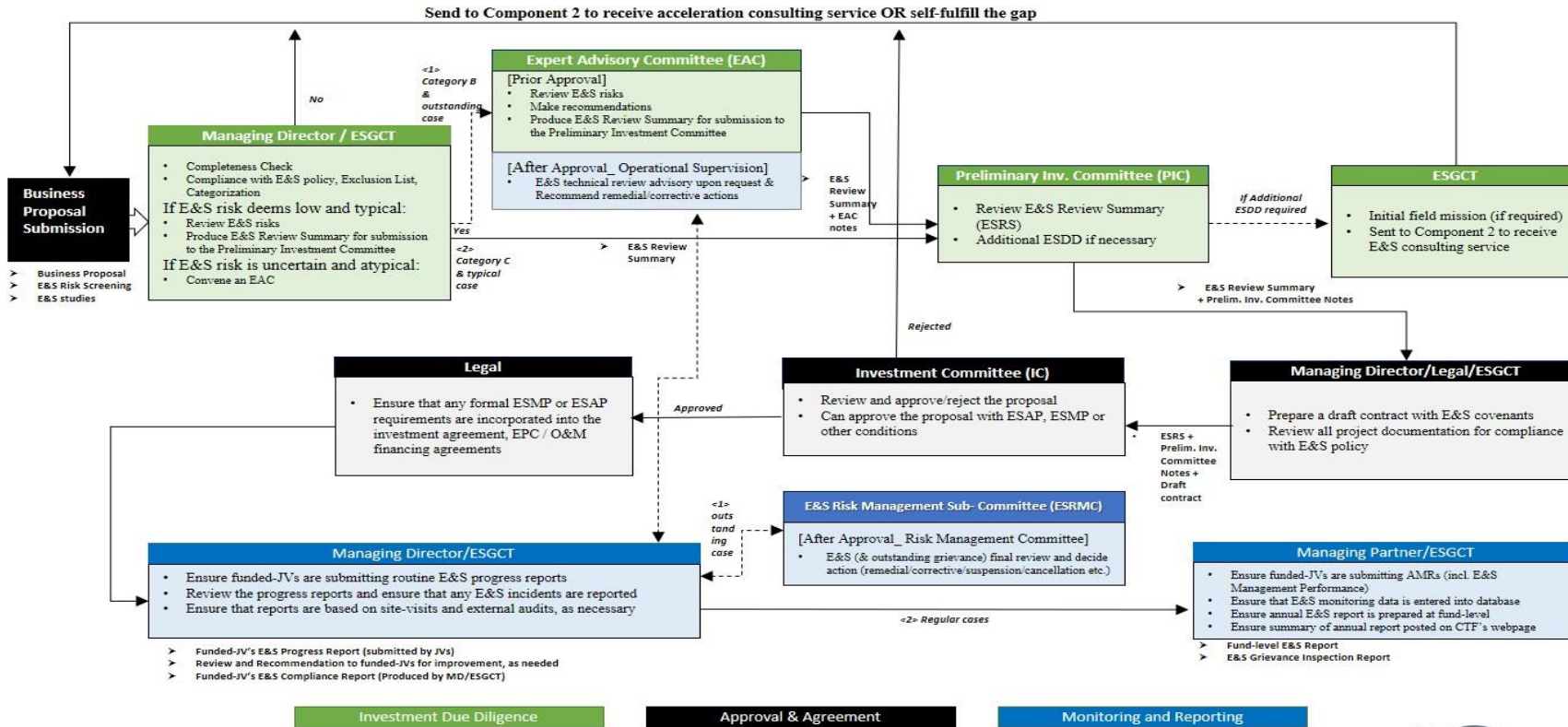
In addition, GCF NDAs of the five target countries are requested to review and issue “no objection” to each of the proposed projects in the CTF review and approval process. NDAs of the five countries will also be invited to take part in an *ad hoc* steering committee meeting at the overall Programme (by KDB) level, the CTF level (by Co-GPs) or at the specific JV level (by NSMUs) depending on the issues raised which necessitate a consultative decision-making process.



3.3 E&S Risk Assessment and Management Process

Figure 2. Operation Cycle for E&S Compliance (for CTF/Component 3)

Process Summary_E&S



ESGCT = E&S and Gender Compliance Team





3.3.1 Screening and Categorisation of Potential Risks and Impacts

As stated in Section 1.2.3 above, CTF does not approve of any proposed businesses and activities that are subject to any of the IFC Exclusion List (See Appendix A), “High Risk (A)” Category (see Table 4 below) and/or businesses/activities with adverse impacts on indigenous peoples.

When a JV applicant proposes a programme with multiple subproject components within a country or across the countries, CTF will categorize the proposed programme with the highest risk category of its subprojects. The financial intermediaries in this proposed programme shall also be subject to an ESMS and capacity assessment by the CTF (based on Appendix G: E&S Management Capacity Assessment Template below). Relevant stakeholders without their own system might be required to take the “Common approach on E&S safeguards” which aligns their safeguard policies for the invested program activities with this ESMS for this Programme, which is aligned with the KDB’s ESMS and GCF’s Revised Environmental and Social Policy (B.BM-2021/18) and other related policies, in case they do not have their own institutional system.

When a JV applicant proposes a financial intermediation, such investment activities need to be categorized in their risks with their intended end use.

Risk Categorisation will be in accordance with the GCF ESS Standards (i.e. IFC PS as interim standards of GCF) and the Revised Environmental and Social Policy (particularly, Para 27 and 34). Decision on a specific proposed JV activities’ risk categorisation will be determined by KDB and validated by GCF. The identified risks shall include direct, indirect, cumulative and imposed impacts, in line with the relevant ESS standards.

Table 4. E&S Risk Categorisation (Source: GCF Revised Environmental and Social Policy(B.BM-2021/18), Para 33)

Not eligible for CTF	<ul style="list-style-type: none"> Category A: Activities with potential significant adverse environmental and/or social risks and impacts that, individually or cumulatively, are diverse, irreversible, or unprecedented. 	<ul style="list-style-type: none"> High Level of Intermediation (I-1): When a JV applicant intermediary’s existing or proposed portfolio includes or is expected to include financial exposure to Category A activities.
Eligible for CTF	<ul style="list-style-type: none"> Category B: Activities with potentially limited adverse environmental and/or social risks and impacts that individually or cumulatively, are few, generally site-specific, largely reversible, and readily addressed through mitigation measures. Category C: Activities with minimal or no adverse environmental and/or social risks and/or impacts. 	<ul style="list-style-type: none"> Medium¹⁴ Level of Intermediation (I-2): When a JV applicant intermediary’s existing or proposed portfolio includes or is expected to include financial exposure to Category B activities and include no Category A activities. Low Level of Intermediation (I-3): When a JV applicant intermediary’s existing or proposed portfolio includes or is expected to include financial exposure to Category C activities.

In addition to the international safeguard risk categorisation criteria (of IFC PS 1 in particular), the JV applicant also needs to comply with the host country’s environmental (and social) impact assessment



requirements. Thus, the JV (and other types of the) CTF Applicant is recommended to go through the host country’s E(S)IA procedures simultaneously: The Applicants are requested to submit them (either draft or approved E(S)IA and associated documents including ESMPs) as the ‘E&S documents’ to be submitted when the CTF Initial E&S Checklist (See the Appendix D below) is filled and submitted to the Secretariat. In case the host country safeguard system categorizes the concerned activities as “high risk” requiring full ESIA and a stringent ESMP, CTF shall examine it thoroughly to ensure that such activities are not also categorized as “A” category by the CTF criteria. In such case, the proposed project/activities shall not be further considered for CTF programme. (For the five host countries’ E&S Risk Categorisation system, see Appendix C. below.)

In the development of a JV business/enterprise and preparation of its proposal (through Component 2), the JV applicant needs to be clearly informed of this CTF investment (negative selection) criteria related to the risk categorisation in advance and prepare their proposal accordingly.

The following subsections provide a preliminary indicative guideline for a JV applicant to assess the potential high-risk activities related to selective climate technologies prioritized for the proposed Programme (based on the ‘Table: Seven (7) Prioritized Climate Technology Groups in Section C. of Funding Proposal/p.11). Given the uncertainty of the specific application/deployment modalities of a particular climate technology, only generic, selective, indicative guidelines are provided below.

3.3.1.1. Priority Technology 1: Bioenergy (Renewable Biomass)

Bioenergy is energy made from biomass and is a sustainable alternative to fossil fuels. Types of biomasses used for bioenergy include wood, food crops such as corn, energy crops, and waste from forests, yards, or farms. Renewable biomass is the biomass originating from forests, cropland and/or grassland.

A biomass power plant produces electricity from the steam that is released during the combustion of biomass in a boiler. The key technology of biomass power plants is biomass-fired boiler (fluidized bed boiler). The biomass boilers are designed and manufactured only by European, Korean, or Chinese manufacturers. No five countries have the technology.

The following table shows key environmental and social impacts related to the concerned technology with their respective typical mitigation measures. The scale, timing, and magnitude of these impacts are always context-specific and highly dependent on the local conditions and the type of biomass.

Table 5. Key Environmental and Social Impacts with General Mitigation Measures of Bioenergy¹³

Item	Impacts	Mitigation Measures
Air Quality	Emissions from combustion of bio-residues can lead to air pollution.	<p>[Production]</p> <ul style="list-style-type: none"> • Spreading manure can lead to odorous emissions and should be kept to a minimum of time over the year. <p>[Conversion]</p> <ul style="list-style-type: none"> • Use efficient trucks and minimise transportation distances can reduce the impact • Equip facilities with adequate abatement systems to remove pollutants like nitrogen

¹³ This Table is an extraction of IFC guidelines: “Converting Biomass to Energy: A guide for Developers and Investors” (June 2017), Section 15. Environmental and Social Consideration /<https://documents1.worldbank.org/curated/en/451461502956339912/pdf/118738-WP-BioMass-report-06-2017-PUBLIC.pdf>



		<p>oxides, sulphur oxides, and other harmful particles from air emissions</p> <ul style="list-style-type: none"> • Implement efficient plant operations to minimize combustion of biomass feedstocks and prevent local pollution from soot particles and carbon monoxide • Employ proper storage, transport, and treatment methods to minimize the spread of bacteria
Ecosystem & Biodiversity	<p>If demand for residues increase beyond supply, new agricultural areas can be created from conversion of, for example, wetlands, shrubland, or forest, which can negatively impact biodiversity.</p>	<p>[Production]</p> <ul style="list-style-type: none"> • Minimize the risk of biodiversity loss by avoiding any significant impact on rare, unique, endemic, or geographically restricted species or habitats • Reduce the size of the area impacted or focus site activities in less-sensitive areas • Long-term impact can be reduced by preserving and maintaining buffer zones of local vegetation, while loss of ecosystem services can be compensated by considering the use of stakeholder engagement approaches to help identify locally preferred or important services. • Nutrient leakage and the use of pesticides, fertilizers, and other chemicals should be appropriately managed to avoid negative impacts on flora and fauna. <p>[Conversion]</p> <ul style="list-style-type: none"> • Correct treatment of effluents (through physical, chemical, and biological treatment) can minimise the impact on the local environment and biodiversity.
Water	<p>Both water quality and quantity can be affected, for example by discharge of wastewater or increased use of groundwater for production of biomass.</p>	<p>[Production]</p> <ul style="list-style-type: none"> • Selection of bioenergy feedstock should be matched to geoclimatic conditions (for example, available water resources and rainfall patterns) 14 • Lack of water also can be mitigated by more efficient irrigation if this is needed (for example, drip irrigation) or by harvesting rainwater. • Minimizing fertilizer and pesticide use can mitigate impacts on water quality, which can be complemented by practicing mixed production systems (for example, double cropping). <p>[Conversion]</p> <ul style="list-style-type: none"> • Decision on the end products to be used should consider the water availability. • Cleaner production technologies at the plant (e.g. water recycling, on-site physical, chemical, and biological treatment of wastewater, etc.)



		<ul style="list-style-type: none"> Consider natural systems of wastewater treatment, such as the construction of wetlands, as appropriate.
Soil and Land Resources	<p>If only secondary resources are used, local impacts on land are probably small. However, if other users already utilize the feedstocks, environmental consequences could arise if these users pursue other feedstocks.</p>	<p>[Production]</p> <ul style="list-style-type: none"> No-till practices and irrigation can help maintain soil moisture. <ul style="list-style-type: none"> No-till practices, use of cover crops to avoid erosion and build soil organic matter, and growth of different crops and use of manure or fertilizer to ensure nutrient levels in soils and avoid depletion. Planting of riparian buffer zones can minimize erosion and nutrient leakage to water bodies. Avert excessive use of pesticides, herbicides, and other chemicals can reduce pollution of soil, groundwater, and surface water <p>[Conversion]</p> <ul style="list-style-type: none"> Proper treatment of water effluents can reduce the impact on soil resources Disposal of waste should be carried out in designated facilities

• Identification of High-Risk (“Category A”) Activities for Eligibility Assessment

Indonesia regards bioenergy – renewable biomass with more than 10 MW categorized as “high risk” activities. In Laos, bioenergy – renewable biomass with more than 10 MW is categorized as “high risk” activities.

Table 6. Risk Categorisation of Bioenergy (Renewable Biomass) by Country Safeguard System in the five host countries

Country	Priority Climate Responsive Technologies Project/Activities	Risk Categorisation by Country Safeguard System		
		High	Medium	Low
Indonesia	Power plant construction electricity from other types (among others: PLT Solar, Wind, PLT Biomass / Peat , PLT Bayu)	> 10 MW	-	-
Laos	Biogas and biofuel technology - Coal, oil or biomass power plant project	>10 MW	≤10 MW	-

A common approach for high-risk categorisation across the five countries:



Each of the identified environmental and social impacts will be screened in their significance and CTF shall determine the overall E&S risk categories. Upon which, the proposals finally screened as “B/I-2” (medium) or “C/I-3” (low) risk categories shall be eligible for CTF investment “High risk” activities under the country risk screening system shall be rigorously examined by the CTF to ensure to comply with the CTF E&S risk screening and management criteria.

Comprehensive analysis of all the major environmental and social impacts including cumulative, indirect and imposed impacts:

In addition to the types and scale of the activities mentioned above, **various environmental and social impacts** (such as biomass market price, negative impact on the relation of biomass production workers and biomass power plant owners, biomass market price, etc.) the presence of indigenous communities and cultural heritages, etc.) needs to be also considered in a comprehensive manner. As a standard practice, all the subproject applicants shall apply for the country EIA procedures in each of the country the activities shall take place. A (simplified) environmental and social impact assessment according to management planning (in line with the international standards’ mitigation hierarchy) for medium risk projects (Category B) shall be submitted to the Programme as requested by the Programme at the earliest stage possible either in draft or in the final version for review and compliance check with the Programme’s E&S safeguard requirements. If deemed necessary, the applicant shall be required to complement the impact assessment and management plans as advised by the Programme.

CTF’s Review & KDB and GCF’s Validation:

Each of the proposed enterprise/activities shall be reviewed case by case on its own individual merits by the CTF Secretariat (ESGCT). If the anticipated risks and impacts are of complex nature, the CTF will convene an Expert Advisory Committee (EAC) to collectively determine the risk category of the proposed activities through the consultative process of the experts. The decision made by the CTF shall be also validated by the KDB’s ESMS.

3.3.1.2. Priority Technology 2: Solar energy

Various solar applications on- and off-grid, for home installation system for lighting and cooking purposes, solar-based irrigation and other agricultural purposes are needed across the countries. In essence, all the solar PV technology requires manufacturing, operationalisation and demolition, recycling and disposal of the panels and the batteries.

The following table shows key environmental and social impacts related to the concerned technology with their respective typical mitigation measures. The scale, timing, and magnitude of these impacts are always context-specific and highly dependent on the local conditions.

Table 7. Key Environmental and Social Impacts with General Mitigation Measures of Solar Energy Development

Item	Impacts	Mitigation measures
Land, Ecosystem & Biodiversity	<p>[Construction]</p> <ul style="list-style-type: none"> In case the land availability is scarce, there may be conflict of land use between agricultural or other land-based economic activities and solar energy development. 	<ul style="list-style-type: none"> Ensure the land claimed is in line with the existing land use plan. Consider, in rural setting, a hybrid approach (e.g. agrophotovoltaic energy development etc.)



	<ul style="list-style-type: none"> Relocation of residents may occur. 	<ul style="list-style-type: none"> A large scale of economic and physical relocation should be avoided in determining the project site. For an acceptable level of relocation taking place, a simplified resettlement action plan (RAP) needs to be established in line with the IFC PS 5 (2012)¹⁴. In the site selection process, consider national regulations on ecosystem conservation and protection, IUCN and CITES Lists.
Soil, Ground and Surface Water	<p>[Operation & Decommissioning]</p> <ul style="list-style-type: none"> Release of hazardous materials (e.g. lead and lithium ion) from improperly disposed storage batteries at the end of their lifecycle will pollute ground and surface water in the project location 	<ul style="list-style-type: none"> Battery suppliers to take back used batteries for recycling once they reach the end of their life cycle.
Workers & Community Health & Safety	<p>[Construction, Operation & Decommissioning]</p> <ul style="list-style-type: none"> Solar installation, repair and maintenance (regular replacement of panels etc.) may pose workers and users safety accidents due to work from height, slips and falls from elevated structure, electric shocks. In urban setting, construction and installation activities and material transportation increase road traffic, affecting local communities in transport ease and safety, noise and dust pollution. 	<ul style="list-style-type: none"> Proper EHS risk identification and mitigation measures need to be integrated into construction stage ESMP in compliance with the host country's legal requirements and the IFC EHS guidelines and international good practices. Develop a traffic management plan for the construction and operation and decommissioning stage of the project. Comply with the host country's noise and air quality standards during construction.
Community Health and Safety	<p>[Construction and Operation]</p> <ul style="list-style-type: none"> Waste generation, vibration and dust In-migrant construction workers' unregulated interaction with the local communities may generate conflict with the communities, communicable 	<ul style="list-style-type: none"> Establish labour policy and occupational health and safety plan Stakeholder Engagement Plan and Grievance Redress Mechanism, as necessary Contractor's and Workers' Code of conduct, training and

¹⁴ <https://www.ifc.org/content/dam/ifc/doc/2010/2012-ifc-performance-standards-en.pdf>



	diseases (incl. COVID-19, STI and HIV/AIDS) and social ills (Gender-based violence, prostitution etc.)	awareness raising, reporting and GRM activation
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- **Identification of High-Risk (“Category A/I-1”) Activities for Eligibility Assessment**

A common approach for high-risk categorisation across the five countries:

Cambodia regards the battery industry of all sizes related to the various solar energy-application (rooftop solar, mini-grids (rural), solar cold storage, streetlights, EV battery charging) as high-risk activities, thus subject to full ESIA and ESMP. In Indonesia, any solar PV-based power plant construction with a power generation capacity of more than 10 MW is categorized as high-risk activities. In Vietnam, Solar PV power plant construction with more than 200 hectares in area size is “high risk” activities.

Each of the identified environmental and social impacts will be screened in their significance and CTF shall determine the overall E&S risk categories. Upon which, the proposals with the finally screened as “B/I-2” (medium) or “C/I-3” (low) risk categories shall be eligible for CTF investment. “High risk” activities under the country risk screening system shall be rigorously examined by the CTF to ensure to comply with the CTF E&S risk screening and management criteria.

Table 8. Risk Categorisation of Solar Technology by Country Safeguard System in the five host countries

Country	Priority Climate Responsive Technologies Project/Activities	Risk Categorisation by Country Safeguard System		
		High	Medium	Low
Cambodia	Solar technologies: rooftop solar, mini-grids (rural), solar cold storage, street lights, EV battery charging - Battery industry	>50 MW	5-50 MW	5 MW<
Indonesia	Solar PV technologies; Power plant construction electricity from other types (among others: PLT Solar, Wind, PLT Biomass / Peat, PLT Bayou)	> 10 MW	14 -	-
Vietnam	Construction projects for wind power plants, photo-electric power plants, hydroelectric plants for the Solar PV power plant technology	at least 200 hectares of Plant Area	From 50 hectares to under 200 hectares of Plant Area	
	Solar-PV power plant	Large-scale projects requiring migration and relocation.		



Comprehensive analysis of all the major environmental and social impacts including cumulative, indirect, and imposed impacts:

In addition to the types and scale of the activities mentioned above, **various environmental and social impacts** (such as E&S risks on the manufacturing, production, installation/ operation/ disposal/ pre-recycling phases of Solar Panels and Solar Batteries, the key E&S Impacts and Risks in the Pre-construction, construction, operation and decommissioning stage) need to be also considered in a comprehensive manner. As a standard practice, all the subproject applicants shall apply for the country EIA procedures in each of the country the activities shall take place. A (simplified) environmental and social impact assessment and according to management planning (in line with the international standards’ mitigation hierarchy) for medium risk projects (Category B) shall be submitted to the Programme as requested by the Programme at the earliest stage possible either in draft or in the final version for review and compliance check with the Programme’s E&S safeguard requirements. If deemed necessary, the applicant shall be required to complement the impact assessment and management plans as advised by the Programme.

CTF’s Review & KDB and GCF’s Validation:

Each of the proposed enterprise/activities shall be reviewed case by case on its own individual merits by the CTF Secretariat (ESGCT). If the anticipated risks and impacts are of complex nature, the CTF will convene an Expert Advisory Committee (EAC) to collectively determine the risk category of the proposed activities through the consultative process of the experts. The decision made by the CTF shall be also validated by the KDB’s ESMS.

3.3.1.3. Priority Technology 3: Modern renewable off-grid energy systems

- **Off-grid energy systems in the five countries**

Worldwide, around 1.1 billion lack access to electricity where 84% of the population, mainly located in rural and remote areas, do not enjoy modern energy access. While Lao PDR and Viet Nam’s electrification rate amounted to 100% in 2021, Cambodia, Indonesia and the Philippines still lag with respectively 82.5%, 99.2% and 97.5% access to electricity.

Hence, off-grid microgrid systems, using solar photovoltaic and storage systems, integrated with very high-efficiency lighting appliances, are a promising solution to supply energy for rural and remote locations in areas which lack access to the electric grid.

The most common off-grid energy systems in the five countries are as indicated in the table below:

Table 9. State-of-the-art in off-grid energy system use in Cambodia, Indonesia, Laos, Philippines and Vietnam

Country	Technologies
Cambodia	Non-renewable energy (RE): - Privately operated diesel-fired mini-grids Renewable: - Hydropower plants - Small and mini-hydro sites - Solar off-grid lamps - PV modules installed



Indonesia	Renewable: - Mini grids owned and operated by local communities - Micro-hydro facilities
Laos	Non-renewable: Renewable: - Hydropower plants - Small and mini hydro power plants - PV systems
Philippines	Non-renewable: - Diesel-based mini-grid Renewable: - Solar PV - Biogas, solar, wind hybrid mini-grid
Vietnam	- Small hydropower - Biomass - Biogas

The table below provides a list of Nationally Determined Contributions (NDCs) of the five countries with focus on renewable energy off-grid energy systems.

Table 10. NDCs on renewable energy off-grid systems

Country	Technologies
Indonesia	Solar rooftop PV Direct Utilization of Biomass and Biogas for off-grid power generation
Vietnam	- Smart grids

● **Key Environmental and Social Impacts**

Renewable off-grid systems are the least-costly option to supply electricity in small remote villages with low load demand. Among renewable off-grid systems, wind turbines and lead acid batteries, as opposed to solar PV and lithium batteries, have the most negative environmental externalities, with special regard to agricultural land occupation potential, fossil depletion potential, global warming potential, mineral depletion potential, natural land transformation potential, Ozone depletion potential, particulate matter formation potential and urban land occupation potential (See Table 11 below). When it comes to solely GHG emissions for single technologies, micro-hydro turbines and biogas generators produce more emissions compared to PV modules, wind turbines, vanadium redox flow (VRF) batteries and inverters (See Table 12 below).

Table 11. Life cycle environmental impacts of household-scale (H) power systems

Hybrid off-grid technology	ALOP	FDP	FETP	GWP	HTP	MDP	NLTP	ODP	PMFP	ULOP	WDP
household-scale-PV + lead acid batteries	6.8	3.8	2.3	13.1	2.2	1.9	20.3	23.0	3.8	1.6	1.6
household-scale-PV + lithium batteries	5.9	3.0	2.0	10.5	2.3	0.5	14.0	19.1	2.8	1.3	1.7
household-scale-wind turbines + lead acid batteries	23.6	11.4	5.3	47.1	5.5	8.8	28.1	34.3	17.9	10.7	5.8
household-scale-wind turbines + lithium batteries	22.1	10.3	4.9	43.7	6.1	7.3	20.8	27.7	16.9	10.5	5.6
household-scale-PV + wind turbines + lead acid batteries	13.3	6.4	3.2	26.2	3.1	4.3	17.1	22.7	9.5	5.6	3.4
household-scale-PV + wind turbines + lithium batteries	12.6	5.8	3.0	24.4	3.2	3.6	13.5	14 19.5	8.9	5.4	3.4

Note: Life cycle environmental impacts of household-scale (H) power systems considering stand-alone and hybrid systems, comprising differing combinations of solar photovoltaics (PV), wind turbines (WT), lead acid (LA) and lithium (LI) batteries. ALOP: agricultural land occupation potential; FDP: fossil depletion potential; FETP: freshwater ecotoxicity potential; GWP: global warming potential; HTP: human toxicity potential; MDP: mineral depletion potential; NLTP: natural land transformation potential; ODP: ozone depletion potential; PMFP: particulate matter formation potential; ULOP: urban land occupation potential; WDP: water depletion potential.

Table 12. GHG emissions in kg CO₂-eq per kWh according to renewable energy off-grid component

Component	GHG emissions (kg CO ₂ -eq/kWh)
PV module	0.045
Wind turbine	0.011
Micro-hydro turbine	0.0597
Biogas generator	0.06
VRF battery	0.0402
Inverter	0

In terms of job creation, one PV module creates 2.70 jobs per MW followed by micro-hydro turbine (1.50 jobs), wind turbine (1.10 jobs), biogas generator (0.19 jobs per GWh per year) and lastly battery (0.01 jobs per MWh).

The following table shows key environmental and social impacts related to the concerned technology with their respective typical mitigation measures. The scale, timing, and magnitude of these impacts are always context-specific and highly dependent on the local conditions.

Table 13. Key Environmental and Social Impacts with General Mitigation Measures of off-grid renewable energy system

Item	Impacts	Mitigation Measures
Air Quality	<p>[Construction and Operation]</p> <ul style="list-style-type: none"> Negative impact on human health and/or wildlife due to dust and other emissions caused during construction and/or operation. Potential GHG emission from the construction site and running of camp diesel gensets. 	<ul style="list-style-type: none"> Establish Pollution Prevention Plan inc. dust management plan, occupational health and safety plan, emergency preparedness and response plan, as necessary in line with the country regulations and international environmental safeguard standards.
Water Resources	<p>[Construction and Operation]</p> <ul style="list-style-type: none"> Impact on surface and groundwater supplies of communities and ecosystems as a result of water demands during construction and operation. 	<ul style="list-style-type: none"> Establish a Water Management Plan in water-sensitive areas No allocated abstraction without prior approval of relevant authorities Promotion of water efficiency (including leak detection and preventative maintenance of equipment) and water recycling.



Lan Use	<p>[Construction Stage]</p> <ul style="list-style-type: none"> • Loss of land used for agriculture, livestock or other productive uses. • Relocation of residents may occur. 	<ul style="list-style-type: none"> • A large scale of economic and physical relocation should be avoided in determining the project site. For an acceptable level of relocation taking place, a simplified resettlement action plan (RAP) needs to be established in line with the IFC PS 5 (2012)15.
Soil run-off, Flooding, Sedimentation	<p>[Construction Stage]</p> <ul style="list-style-type: none"> • Interruption of drainage patterns and lack of water table replenishment because of ground clearance and earthworks 	<ul style="list-style-type: none"> • Minimize cleared areas and soil disturbance, with revegetation with native species as soon as feasible. • Avoid areas liable to flooding, slope instability, and water crossings where possible. - Retention of topsoil for restoration (including tilling and revegetation) as soon as practicable. • Establish Biodiversity Management Plan and Drainage Plan, as necessary
Pollution Prevention (Hazardous, E-waste and Pesticides)	<p>[Construction and Operation]</p> <ul style="list-style-type: none"> • Inefficient waste management during construction and maintenance can create excess material consumption and waste generation. • Generation of electrical and electronic waste (e-waste) and hazardous waste through the projects, especially when batteries and solar panels are not disposed of correctly when they reach their end of life, leading to contamination. • Pesticides from farm activities powered by mini grids 	<ul style="list-style-type: none"> • Establish Waste Management Plan, including: <ul style="list-style-type: none"> - Waste hierarchy of prevent, reduce, reuse, recycle and recover. - Identification of key waste streams generated during construction, operation and decommissioning phases (e.g., general, domestic, hazardous, recyclable, etc) • Develop a hazardous waste collection and storage strategy, where waste is stored in safe and secure manner and only disposed of at licensed and fit-for-purpose facilities • Staff training. • Training on the use of pesticides, provision of SDS, testing of effluent discharge from the farms and establishment of Effluent Discharge Plants.
Community Health and Safety	<p>[Construction and Operation Stage]</p> <ul style="list-style-type: none"> • Waste generation, vibration and dust 	<ul style="list-style-type: none"> • Establish labour policy and occupational health and safety plan

¹⁵ <https://www.ifc.org/content/dam/ifc/doc/2010/2012-ifc-performance-standards-en.pdf>



	<ul style="list-style-type: none"> In-migrant construction workers' unregulated interaction with the local communities may generate conflict with the communities, communicable diseases (incl. COVID-19, STI and HIV/AIDS) and social ills (Gender-based violence, prostitution etc.) 	<ul style="list-style-type: none"> Stakeholder Engagement Plan and Grievance Redress Mechanism, as necessary Contractor's and Workers' Code of conduct, training and awareness raising, reporting and GRM activation
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● **Identification of High-Risk (“Category A”) Activities for Eligibility Assessment**

Table 14. Risk Categorisation of RE off-grid technology by Country Safeguard System in Cambodia, Indonesia, Philippines, and Vietnam

Country	Priority Climate Responsive Technologies Project/Activities	Risk Categorisation by Country Safeguard System		
		High	Medium	Low
Cambodia	Solar technologies: Rooftop solar, mini grids (rural), solar cold storage, streetlights, EV battery charging; Battery industry	All sizes		
	Small scale hydropower	While the CSS categorise 1-50 MW capacity for medium risk project, the CTF will be eligible only to the hydropower project with: up to 10 MW capacity only ¹⁶ . (≥-10 MW)		
Indonesia	Construction of Solar Power Plant (PLTS)			≥ 50 MW a. . Requires a fairly large area following the capacity of PLTS; b. There needs to be a handling standard regarding the waste management of the waste produced.

¹⁶ In accordance with the IFC’s suggested guideline for small scale hydropower project criteria. In risk screening, however, other factors such as: flood design and climate disaster and hazard risks & economic values of assets at risk in case of dam failure, shall be also taken into account. For details, see: IFC Good Practice Note: Environmental, Health, and Safety Approaches for Hydropower Projects (March 2008) (esp. Annex A: General Description of Industry Activity).



Laos	Small scale hydropower	While the CSS categorise 1-15 MW capacity for medium risk project, the CTF will be eligible only to the hydropower project with: up to 10 MW capacity only ¹⁷ . (≥-10 MW)		
Philippines	Off-grid RE and battery storage for climate disaster vulnerable regions: Substation / switchyard		> 220 KV	≤ 220 KV
Vietnam	Cell and battery production	All projects with at least 600 tonnes of products or 200,000 KWh/year (Large Capacity) For projects with less than 600 tonnes of products or 200,000 KWh/year, further strategic environmental assessment is required (Medium Capacity)		For Small Capacity Projects, further strategic environmental assessment is required.

A common approach for high-risk categorisation across the five countries:

Each of the identified environmental and social impacts will be screened in their significance and CTF shall determine the overall E&S risk categories. Upon which, the proposals with the finally screened as “B/I-2” (medium) or “C/I-3”(low) risk categories shall be eligible for CTF investment. “High risk” activities under the country risk screening system shall be rigorously examined by the CTF to ensure to comply with the CTF E&S risk screening and management criteria.

Comprehensive analysis of all the major environmental and social impacts including cumulative, indirect and imposed impacts:

In addition to the types and scale of the activities mentioned above, **various environmental and social impacts** (such as biomass market price, negative impact on the relation of biomass production workers and biomass power plant owners, biomass market price, etc.) the presence of indigenous communities and cultural heritages, etc.) needs to be also considered in a comprehensive manner. As a standard

¹⁷ In accordance with the IFC’s suggested guideline for small scale hydropower project criteria. In risk screening, however, other factors such as: flood design and climate disaster and hazard risks & economic values of assets at risk in case of dam failure, shall be also taken into account. For details, see: IFC Good Practice Note: Environmental, Health, and Safety Approaches for Hydropower Projects (March 2008) (esp. Annex A: General Description of Industry Activity)



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practice, all the subproject applicants shall apply for the country EIA procedures in each of the country the activities shall take place. A (simplified) environmental and social impact assessment and according to management planning (in line with the international standards' mitigation hierarchy) for medium risk projects (B Category) shall be submitted to the Programme as requested by the Programme at the earliest stage possible either in draft or in the final version for review and compliance check with the Programme's E&S safeguard requirements. If deemed necessary, the applicant shall be required to complement the impact assessment and management plans as advised by the Programme.

CTF's Review & KDB and GCF's Validation:

Each of the proposed enterprise/activities shall be reviewed case by case on its own individual merits by the CTF Secretariat (ESGCT). If the anticipated risks and impacts are of complex nature, the CTF will convene an Expert Advisory Committee (EAC) to collectively determine the risk category of the proposed activities through the consultative process of the experts. The decision made by the CTF shall be also validated by the KDB's ESMS.

3.3.1.4. Priority Technology 4: EVs (e.g., e-cars, e-motorbikes, e-bicycles)

- **Electric vehicles (EVs) in the five countries**

Electric vehicles (EVs) have been spotlighted as an alternative form to conventional vehicles which use fuel engines. In most of the five hosting countries, trying to provide incentives to local manufacturers for EVs, and provide wider business opportunities for companies that specialises in electric bicycles, electric motorcycles (including tuk-tuks), and electric cars (including car-sharing or taxi services such as Grab).

Although using Lead Acid or Lithium-ion batteries is a more efficient approach to increasing the number of EVs, relevant infrastructure, for instance, battery charging stations, battery exchanging facilities, and used battery disposal plants, needs to be prepared adequately. As each host country has different stages of EV ecosystem development, EV or EV battery import policies and governments' incentives differ across the countries. Indonesia, the Philippines, and Vietnam have relatively advanced in the EV industry, while Cambodia and Laos are more at the early stage of adopting EV technologies. EVs have been developed rapidly, however, there are still several risks that need to be considered.

Table 15. Examples of EV technologies demand of five hosting countries (Refer to Annex 2)

Country	Technologies
Cambodia	- Electric vehicles (EVs) (motorbikes, cars, buses, bicycles) - EV battery swapping systems - E-mobility (EVs and EV infrastructure)
Indonesia	- Electric vehicles (EVs) (adoption of sustainable technologies)
Laos	- Electric mobility technology - Battery management technology - Electric vehicle (EV and charging station developer)
Philippines	- Electric vehicles (EVs) (jeepneys and electric tricycles) - Battery-swappable private motorcycles and public utility EVs
Vietnam	- Electric vehicles (EVs) (car, bus, motorbike, scooter)

- **Key Environmental and Social Impacts**

Civil works (e.g. installation of charging stations and construction of renewable energy generation facilities). Environmental and social impacts are expected to happen during the preconstruction, construction, and operation phase as a result of construction and maintenance of e-(public) transport facilities (e.g. road junctions and Transit Operation Development (TOD) and charging station construction). Depending on the scale of the project, land acquisition may occur resulting in physical and economic relocation of the residents),

Battery disposal | A battery is a necessary component of EVs; however, a proper disposal methodology has not been made. Although Lead Acid or Lithium-ion batteries are treated as environmentally friendly (and GHD mitigative) engines, these include some chemical elements such as cobalt, graphite, nickel, etc. These chemical moieties may generate environmental harm if improperly treated at the end of the EV batteries' lifespan.

End-of-life EV battery management: In a rising demand for EVs worldwide, the issue of the end-of-life management of the batteries is getting important. There are several end-of-life strategies: (1) Battery recycling; (2) Battery repurposes; (3) Battery repair and reuse; (4) Battery refurbishment/recondition, and (5) Battery remanufacturing. To make the best strategy, the volume of the used battery feeds, financial returns and specific market conditions of a country (with competition and regulation etc.) need to be considered in a specific context.

In the developing countries' context, **repurposing and reusing the used EV batteries with the residual electricity can be a promising choice**, with its energy-, resource- and cost efficiency. Reuse and repurposing the used EV batteries can serve to charge other purposes, such as smaller size EVs (e.g. E-tuktuk and E-motorbikes), smaller machines and lighting for mobile street vendors and sewing machine workers (as in the case of India, Numan "second life batteries"¹⁸). In remote rural and urban slum areas, where the grid connectivity is weak, unstable or absent, this residual electricity provision can support this energy-poor community for further economic gains and socio-economic betterment. A joint venture of the local startup (for need identification, localization of the second life batteries, collection and distribution etc.) and a global tech supplier could be an ideal enterprise model. (As in the case of a social venture of Audi, a German car manufacturer, for Numan Second life battery production¹⁹).

Recycling and remanufacturing of EV batteries includes the complete disassembly of the battery, cleaning of each component, and further examination of damages. Battery recycling system is yet to be optimized at the technology level and various pilot projects are being attempted. The physical and chemical processes to recycling li-ion batteries include thermal treatment, mechanochemical process, dissolution process, acid-leaching chemical processes, bioleaching solvent extraction, chemical precipitation and electrochemical processes. Operation of the recycling centres of the EV batteries requires rigorous environmental, health and safety regulations to be adhered in the process of extracting the critical materials of the EV batteries, i.e. cobalt, nickel, manganese and lithium which are high-value materials for battery productions but toxic and hazardous materials to the environment and the public health. A few European car makers, such as Volkswagen and Renaults, are operating their own recycling plants (in Germany, by Volkswagen) or working with waste management companies (in France, by Renault)

Few cases exist in developing countries where proper battery recycling processes have been institutionalized. This requires appropriate technology and high upfront costs. At the same time, it is highly important that the regulations and possible government support and subsidy may need to be consorted. With the advent of a sizable EV markets in the five target countries, it is desirable that each country take a proactive action to introduce in a timely manner effective policies, including environmental management and safety regulation on battery production, recycling and dismantling: regulation on the associated business operators.

Battery production and supply chain | In addition, as the batteries consist of some raw materials, the supply chain is a matter. Metals need to be extracted and those activities can lead to water shortages, water and soil contamination, flooding, soil erosion, and so on. The places that have relatively weak regulations on E&S management for mining sectors, direct or indirect E&S issues may occur. The Democratic Republic of Congo is a leading country in cobalt mining, over 50 percent of the world's cobalt reserves are in DRC. Cobalt mining is a hazardous activity, meaning that child labour is restricted. In fact, children in DRC often work in cobalt mines because DRC has poor monitoring and enforcement systems over mining industries. Also, for other raw materials like nickel which is one of the key elements of EVs, proper regulation is required for its safe treatment, including mining and shipping. Nickel mines have destroyed some forests and led to a huge amount of sulphur dioxide emissions. As

¹⁸ <https://youtu.be/Tu5N3-JW2k?si=DShyy8wGIfVIO6es>

¹⁹ Ibid.

host countries have weak regulations on raw materials' treatment such as delivery, it may lead to workers' and communities' health and safety issues like lead poisoning.

Indirect GHG emission from using electricity | Fewer fossil fuel is required for the mobilisation of EVs, reducing GHG emissions than engine-based vehicles. Depending on the source of electricity generation, indirectly contributes to GHG emissions. If the power is generated through fossil fuels, it still has a significant impact on GHG emissions. The level of using renewable fuel for electricity generation is low in all five hosting countries. Energy supply from coal or oil still takes a big portion of fuels. Therefore, a renewable energy development strategy for power generation may contribute significantly to GHG emission reduction.

Health and gender issues | Besides reducing GHG emissions, EVs also contribute to mitigating air pollution and respiratory diseases. In addition, transferring to EV technologies can generate job opportunities as it requires reskilling for driving, repairing, and maintaining. As EV industries enlarged, EV public transportation also can be used. When EV public transport is broadly used, likewise conventional transport, safety regulations for preventing gender-based violence are required.

The following table shows key environmental and social impacts related to the concerned technology with their respective typical mitigation measures. The scale, timing, and magnitude of these impacts are always context-specific and highly dependent on the local conditions.

Table 16. Key Environmental and Social Impacts with General Mitigation Measures of Electric Vehicles (EVs)

Item	Impacts	Mitigation Measures
Land, Ecosystem & Biodiversity	<p>[Construction of physical facilities (civil works)]</p> <ul style="list-style-type: none"> Land use change and impact on land 	<ul style="list-style-type: none"> Ensure the land claimed is in line with the existing land use plan. Consider, in rural setting, a hybrid approach (e.g. agrophotovoltaic energy development etc.) In site selection process, consider national regulations on ecosystem conservation and protection, IUCN and CITES Lists & Establish Biodiversity Management Plan, as necessary
Water & Soil	<p>[Construction of physical facilities (civil works)]</p> <ul style="list-style-type: none"> Water run-off Pollution of waterways <p>[Battery maintenance and disposal]</p> <ul style="list-style-type: none"> groundwater and soil contamination from used batteries Safety and health impacts on workers and communities 	<ul style="list-style-type: none"> Minimize cleared areas and soil disturbance, with revegetation with native species as soon as feasible. Avoid areas liable to flooding, slope instability, and water crossings where possible. - Retention of topsoil for restoration (including tilling and revegetation) as soon as practicable. Establish Drainage Plan, as necessary Battery suppliers to take back used batteries for recycling once they reach the end of their life cycle.
Land Acquisition	<p>[Construction of physical facilities (civil works)]</p>	<ul style="list-style-type: none"> A large scale of economic and physical relocation should be avoided in determining the project

	<ul style="list-style-type: none"> Loss of land used for agriculture, livestock or other productive uses. Relocation of residents may occur (temporary or permanent) 	<p>site. For an acceptable level of relocation taking place, a simplified resettlement action plan (RAP) needs to be established in line with the IFC PS 5 (2012)²⁰.</p>
Worker Health & Safety	<p>[Construction of physical facilities (civil works)]</p> <ul style="list-style-type: none"> Waste generation, vibration and dust 	<ul style="list-style-type: none"> Proper EHS risk identification and mitigation measures need to be integrated into construction stage ESMP in compliance with the host country's legal requirements and the IFC EHS guidelines and international good practices. Develop a traffic management plan for construction and operation and decommissioning stage of the project. Comply with the host country's noise and air quality standards during construction.
Community Health and Safety	<p>[Construction & Operation Stage]</p> <ul style="list-style-type: none"> Waste generation, vibration and dust In-migrant construction workers' unregulated interaction with the local communities may generate conflict with the communities, communicable diseases (incl. COVID-19, STI and HIV/AIDS) and social ills (Gender-based violence, prostitution etc.) 	<ul style="list-style-type: none"> Establish labour policy and occupational health and safety plan Stakeholder Engagement Plan and Grievance Redress Mechanism, as necessary Contractor's and Workers' Code of conduct, training and awareness raising, reporting and GRM activation

• Identification of High-Risk (“Category A/I-1”) Activities for Eligibility Assessment

A common approach for high-risk categorisation across the five countries:

Cambodia regards all sizes of battery industries for electric vehicles as high risk (Category A) activities. In Laos, automotive battery, and alkaline battery factories with production amounts of more than 70 tons per year are categorized as “high risk” activities. In the Philippines, fuel cells for EV industries, when the size of electricity production is greater than 100MW, the activities are regarded as high-risk activities. Vietnam deems projects for the manufacture or processing of electrical or electronic equipment and electronic components for electric-powered cars. When electronic equipment, and electronic components capacity is more than 500,000 products per year or electrical equipment capacity is greater than 500 metric tons of products per year is categorized as "high risk" activities.

Each of the identified environmental and social impacts will be screened in their significance and CTF shall determine the overall E&S risk categories. Upon which, the proposals with the finally screened as “B” (medium) or “C” (low) risk categories shall be eligible for CTF investment. “High risk” activities under the country risk screening system shall be rigorously examined by the CTF to ensure to comply with the CTF E&S risk screening and management criteria.

²⁰ <https://www.ifc.org/content/dam/ifc/doc/2010/2012-ifc-performance-standards-en.pdf>

Table 17. Risk Categorisation on electric vehicles by Country Safeguard System in the five host countries

Country	Priority Climate Responsive Technologies Project/Activities	Risk Categorisation by Country Safeguard System		
		High	Medium	Low
Cambodia	Electric vehicles (EVs) (motorbikes, cars, buses, bicycles) - Battery industry	All sizes	-	-
	EV battery swapping systems - Battery industry	All sizes	-	-
Indonesia	-	-	-	-
Laos	Electric mobility technology - Automotive battery and alkaline battery factory	> 70 tons/year	≤ 70 tons/year	-
	Battery management technology - Backup battery processing factory	-	All	-
Philippines	Electric vehicles (EV) - Fuel cell	≥ 100 MW	5 MW < x < 100 MW	≤ 5 MW
Vietnam	Electric powered car - Projects for manufacturing or processing of electrical or electronic equipment and electronic components	Electronic equipment, electronic components capacity:		-
		at least 500,000 products/year	from 100,000 products per year to under 500,000 products/year	
		Electrical equipment capacity:		
		at least 500 metric tons of products/year	from 100 to under metric tons of products/year	

Comprehensive analysis of all the major environmental and social impacts including cumulative, indirect and imposed impacts:

In addition to the types and scale of the activities mentioned above, **various environmental and social impacts** (such as the source and method of electricity generation, transmission, and distribution, EV batteries' charging, changing and disposal, gender-based violence in the public transportation, the presence of indigenous communities and cultural heritages, etc.) needs to be also considered in a comprehensive manner. As a standard practice, all the subproject applicants shall apply for the country EIA procedures in each of the country the activities shall take place. A (simplified) environmental and social impact assessment and according to management planning (in line with the international standards' mitigation hierarchy) for medium risk (B category) projects shall be submitted to the Programme as requested by the Programme at the earliest stage possible either in draft or in final version for review and compliance check with the Programme's E&S safeguard requirements. If deemed necessary, the applicant shall be required to complement the impact assessment and management plans as advised by the Programme.

CTF's Review & KDB and GCF's Validation:

Each of the proposed enterprise/activities shall be reviewed case by case on its own individual merits by the CTF Secretariat (ESGCT). If the anticipated risks and impacts are of complex nature, the CTF will convene an Expert Advisory Committee (EAC) to collectively determine the risk category of the proposed activities through the consultative process of the experts. The decision made by the CTF shall be also validated by the KDB's ESMS.

3.3.1.5. Priority Technology 5: Lighting

Lighting remains an important source of energy demand, representing approximately 15 to 20% of building loads, despite its decreasing energy use in the last decades with the introduction of energy-efficient solutions. The consumer market is governed by light-emitting diode (LED) lights whose manufacturers and suppliers are pushing for innovation, product diversification and cost affordability. More than ten years ago, several countries began phasing out incandescent lamps, and are currently phasing out fluorescent lighting. Despite constant enhancements in lighting efficiency, the growing use of lighting led to increasing total energy consumption in 2022, especially in Southeast Asian emerging markets.

The most common lighting systems and practices adopted in the five countries are as indicated in the table below.

Table 18. State-of-the-art in the lighting industry in Cambodia, Indonesia, Laos, Philippines, and Vietnam

Country	Technologies
Cambodia	<ul style="list-style-type: none"> - Kerosene lamps - Linear fluorescent lamps (LFL) - Compact fluorescent lamps (CFL)
Indonesia	<ul style="list-style-type: none"> - CFL and fluorescent lamps (41%) - LED (52%) - Incandescent and halogen lamps (7%)
Laos	Rural: <ul style="list-style-type: none"> - LED lamps (36.07%) - Fluorescent lamps (30.76%) - Incandescent lamps (12.27%) - Compact fluorescent lamps (12.20%) Urban: <ul style="list-style-type: none"> - LED lamps (47.46%) - Fluorescent lamps (21.87%) - Compact fluorescent lamps (18.69%) - Incandescent lamps (11.26%)
Philippines	<ul style="list-style-type: none"> - CFL (64% in the residential sector and 77% in the commercial/industrial sector) - Incandescent lamps
Vietnam	<ul style="list-style-type: none"> - Incandescent lamps - Halogen lamps - CFL - LED

The table below provides a list of Nationally Determined Contributions of the five countries with focus on lighting.

Table 19. Demand for lighting technology in Indonesia and Vietnam

Country	Technologies
Indonesia	- Street lighting with efficient lamp
Vietnam	- Use of energy-saving lighting

- **Key Environmental and Social Impacts**

Following are some of the typical environmental and social impacts related to the lighting industry:

Mining and manufacturing | Producing and packaging an incandescent light bulb necessitates large amounts of glass, silica, tinplate, lead, black glass, glue and cardboard while a compact fluorescent lamp requires large amounts of copper and polyethylene terephthalate (PET).

End-use | Fluorescent lamps are filled with inert gas and contain up to 15 mg of mercury, partially in vapor form. When an electric current is applied to the electrodes, the mercury vapor is excited and, upon return to the ground state, emits ultraviolet radiation. Incandescent lamp's energy consumption is relatively high compared to those of CFL and LFL lighting, as much as 5 to 6 times higher.

End-of-life | Fluorescent lamps contain toxic components including mercury, which are discharged into the atmosphere if not properly treated during recycling and remain for at least two weeks after treatment. Mercury can cause damage to the nervous system and thus, lead to brain damage and even death when under high exposure rate. Furthermore, fluorescent and incandescent lamps use adhesives to seal the glass which are known to contain calcium carbonate and resin, complicating the recycling process in need to extract and dispose of those components carefully.

Life cycle assessment (LCA) of the different types of lighting is illustrated below (See Figure 3 below): In general, in the production phase, LED lamps possess more associated impacts, as the lamps require more components and have greater mass. The environmental impacts due to usage, are markedly greater for halogen incandescent lamps. This can be explained by the low efficiency of these lamps, which consume more electric energy per lumen produced. These impacts are primarily related to the generation of electric energy, which results in the emission of environmental pollutants and greenhouse gases. While LED has undisputable advantages of energy and economic efficiency and excellent environmental impact performance during the end use stage, the manufacturing process (esp. of LED drivers and panels in the industrial lighting sector²¹) would require stringent environmental management.

²¹ A recent study (2022) reports that an LCA finds that LED driver and panels are responsible for 78% and 20% of the environmental impacts respectively in the production phase. (Source: <https://www.sciencedirect.com/science/article/pii/S0195925522000701>)

Figure 3. Contribution to Environmental impacts of different lighting types in the manufacturing (left) and use (right) phases²²

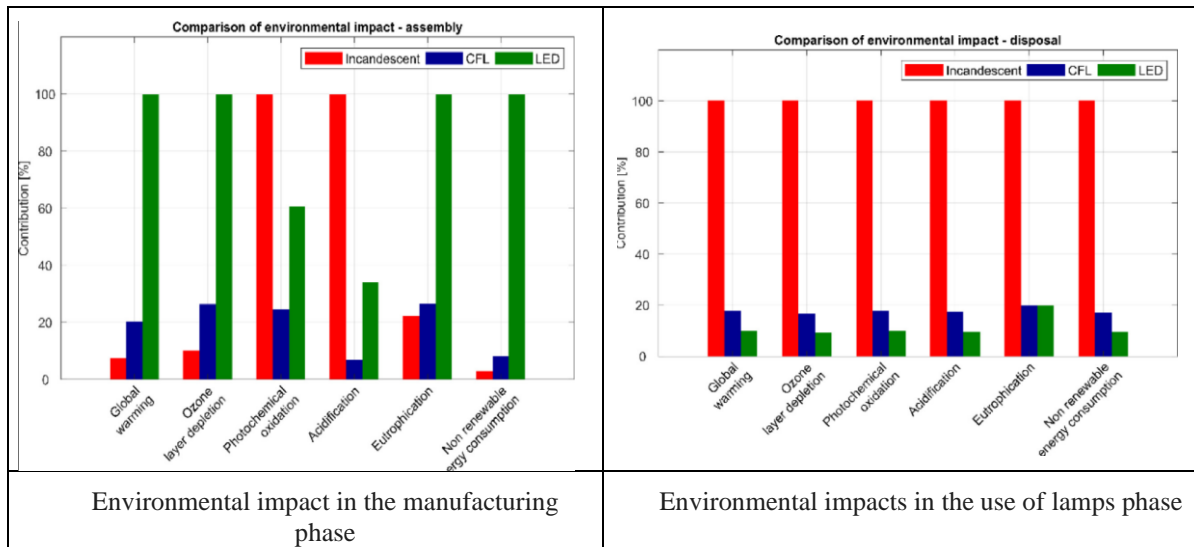


Table 20. Key Environmental and Social Impacts with General Mitigation Measures of Lighting

Item	Impacts	Mitigation Measures
Land, Ecosystem & Biodiversity	<p>[During Construction of physical facilities (civil works)]</p> <ul style="list-style-type: none"> Land use change and impact on land Interference 	<ul style="list-style-type: none"> Ensure the land claimed is in line with the existing land use plan. Consider, in rural setting, a hybrid approach (e.g. agrophotovoltaic energy development etc.) In site selection process, consider national regulations on ecosystem conservation and protection, IUCN and CITES Lists & Establish Biodiversity Management Plan, as necessary
Noise & Dust	<p>[Installation stage]</p> <ul style="list-style-type: none"> Installation and replacement (esp. for street lighting in scale etc.) may involve sizeable machine mobilizations, which incur noise, dust 	<ul style="list-style-type: none"> Limit activities during nighttime. Provide ear plugs, dust masks and PPEs to the workers Watering on the road during machine operation as necessary
Water & Soil Health & safety	<p>[Lamp maintenance and disposal]</p> <ul style="list-style-type: none"> In case the LED replaces existing fluorescent bulbs and CFLs, disposal of used and retired fluorescent tubes and bulbs may incur leakage of mercury contamination. Safety and health 	<ul style="list-style-type: none"> Retired fluorescent bulbs and CFLs are categorized as hazardous wastes and segregation, and separate designated disposal are required by law.

²² <https://www.sciencedirect.com/science/article/pii/S2352484718303652>

	impacts on workers and communities	<ul style="list-style-type: none"> Comply with the country's laws and regulations on the disposal of the used lamps. (* See Table 19 below.)
Worker's health & safety	<p>[Operation and decommissioning stage]</p> <ul style="list-style-type: none"> Safety accidents due to work in height, electrification in lightning installation and replacement 	<ul style="list-style-type: none"> Comply with IFC EHS Guidelines (esp. Section 2. Workers Health and Safety) (including providing PPE and regular safety training and awareness)

Table 21. Key Laws and regulations in the five countries on solid waste disposal and management related to lighting industry²³

Country	Disposal Management / Regulations / Laws
Cambodia	<ul style="list-style-type: none"> - Sub-decree No. 36 on Solid Waste Management (1999) - Sub-Decree No. 16 on E-waste Management (2016)²⁴
Indonesia	<ul style="list-style-type: none"> - Government Regulation Regarding Hazardous and Toxic Waste Management (Reg/No.19/1994) (1994) - Indonesia Act No. 18/2008 on Solid Waste Management (2008) - Government Regulation of the Republic of Indonesia No.101/2014 Concerning Management of Hazardous and Toxic Waste (2014)
Lao PDR	<ul style="list-style-type: none"> - Industrial Waste Discharge Regulation No. 180/MIH (1994)/<i>*Not yet into force</i> - The Regulation on Control of Import, Export and Consumption of Ozone Depleting Substances, No. 2358/STEA-PMO (2004) - Law on Environmental Protection, No. 29/NA (2012) - Ministerial Instruction on Hazardous Waste Management (2015)²⁵
Philippines	<ul style="list-style-type: none"> - Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990 (RA 6969) (1990) - Procedural Manual Title III of DAO 92-29 "Hazardous Waste Management" DENR AO – Series of 2004 (DAO 2004-36) 2004 - Technical Guidelines for Specific Categories of Treatment, Storage, and Disposal (TSD) Facilities (ERM²⁶ MC 2016-002) (2016) - Provisional Guidelines on the Hazardous Wastes Management during the Extended Enhanced Community Quarantine Period (EMB MC 2020-20) (2020) - Guidelines on the Registration Requirements for Category A Hazardous Waste Treatment, Storage and Disposal (TSD) Facility (EMB MC 2021-03) (2021)

²³ For reference only: the presented laws and regulations are subject to revision and amendment over time: The applicant is encouraged to check the updates of the host country's regulation.

²⁴ Cambodia has no centralized management regulation/law regarding the disposal of hazardous wastes, including toxic lighting substances. As stated in the table, these sub-decrees outline guidelines for solid waste management in Cambodia. However, there are no specific restrictions on the export of hazardous wastes for final disposal. Imports of hazardous wastes into the country are strictly prohibited. Dyakanal SOPHAL, "Update on Regulations and Implementation Status of the Basel Convention in Cambodia," *Asian Network Workshop*, 12-14 November 2019, https://www.env.go.jp/en/recycle/asian_net/Annual_Workshops/2019_PDF/Session1/S1_04_Cambodia_ANWS2019.pdf.

²⁵ Ministry of Finance (MOF) through its Fiscal Policy Department (FPD), "The Lao PDR Public Financial Management Reform Project (P179016)," March 7, 2023, https://www.mof.gov.la/wp-content/uploads/2023/04/E-waste-Management-Plan-Draft_Rev-3_10-Mar.pdf.

²⁶ The Environment Management Bureau (EMB) is a national agency that critically safeguards the Philippines' environment. Its essential functions include as follows: (1) policy formulation and implementation, (2) Environment Impact Assessment (EIA), (3) waste management and pollution control, (4) monitoring and Enforcement, and others.

Vietnam	<ul style="list-style-type: none"> - Law on Environmental Protection (2020)²⁷ - Decree No. 08/2022/ND-CP (2022) - Circular No. 02/2022/TT-BTNMT (2022)
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- **Identification of High-Risk (“Category A”) Activities for Eligibility Assessment**

Table 22. Risk Categorisation of Lighting by Country Safeguard System in Indonesia, Laos, Philippines, Vietnam

Country	Priority Climate Responsive Technologies Project/Activities	Risk Categorisation by Country Safeguard System		
		High	Medium	Low
Cambodia	None	-	-	-
Indonesia	None	-	-	-
Laos	Building energy efficiency technology: Home appliances, office equipment, and electrical tools processing factory		All	
Philippines	Energy-efficient lighting and cooling: Fuel cell	EIS: ≥ 100 MW	IEE Checklist: 5 MW < x < 100 MW	≤ 5 MW
Vietnam	High-efficient residential lighting: Construction projects for bulb and thermos plants	Capacity: at least 1,000,000 metric tons of products/year	Capacity: 100,000 - 1,000,000 metric tons of products / year	

A common approach for high-risk categorisation across the five countries:

Each of the identified environmental and social impacts will be screened in their significance and CTF shall determine the overall E&S risk categories. Upon which, the proposals with the finally screened as “B/I-2” (medium) or “C/I-3”(low) risk categories shall be eligible for CTF investment “High risk” activities under the country risk screening system shall be rigorously examined by the CTF to ensure to comply with the CTF E&S risk screening and management criteria.

²⁷ Effective January 1st, 2022, the Ministry of Natural Resources and Environment (MONRE) issued decrees on mitigating Greenhouse Gas (GHG) emissions and guiding general environmental protection, including waste management. One significant enforcement of the Law on Environmental Protection (2020) is strengthening the recycling responsibility of manufacturers and importers. Products required to recycle at mandatory rates are Batteries (8-12%) and electrical/electronic equipment (3-15%). KPMG, “Legal Alert - New regulations on environmental protection,” March 2022, <https://assets.kpmg.com/content/dam/kpmg/vn/pdf/Legal-Update/2022/3/Legal-Alert-New-regulations-on-environment-protection-EN.pdf>.

Comprehensive analysis of all the major environmental and social impacts including cumulative, indirect and imposed impacts:

In addition to the types and scale of the activities mentioned above, **various environmental and social impacts** need to be also considered in a comprehensive manner. As a standard practice, all the subproject applicants shall apply for the country EIA procedures in each of the country the activities shall take place. A (simplified) environmental and social impact assessment and according to management planning (in line with the international standards’ mitigation hierarchy) for medium risk (B category) projects shall be submitted to the Programme as requested by the Programme at the earliest stage possible either in draft or in final version for review and compliance check with the Programme’s E&S safeguard requirements. If deemed necessary, the applicant shall be required to complement the impact assessment and management plans as advised by the Programme.

CTF’s Review & KDB and GCF’s Validation:

Each of the proposed enterprise/activities shall be reviewed case by case on its own individual merits by the CTF Secretariat (ESGCT). If the anticipated risks and impacts are of complex nature, the CTF will convene an Expert Advisory Committee (EAC) to collectively determine the risk category of the proposed activities through the consultative process of the experts. The decision made by the CTF shall be also validated by the KDB’s ESMS.

3.3.1.6. Priority Technology 6: Heating, Ventilation, and Air Conditioning (HVAC)

- **HVAC in the five countries**

Global warming results in more frequent and intense extreme heat waves, further causing adverse heat-related impacts, and thus, human fatalities and economic damages. Heat stress has been identified as one of the direct and negative impacts of climate change which can increase morbidity and mortality and reduce work productivity worldwide. Urbanization contributes to about 30–50% of the heat stress index increase during the summer season. Heat waves put at risk the most vulnerable populations who may suffer from heat strokes. Sleeping difficulty is often associated with heat. Heat waves are also associated with increased hospital admissions for cardiovascular, kidney, and respiratory disorders.

In most cities of Southeast Asia, the daily maximum air temperature often exceeds 30 °C with high humidity of approximately 70–90%. This condition may force occupants to use air conditioners (ACs) to meet thermal comfort. Nevertheless, there are concerns that the spread of ACs among urban residential buildings in Southeast Asia will contribute to further increase in urban heat, primary energy consumption and CO² emissions in the near future. In general, higher-income households use AC more, and it is expected that the AC ownership rate will increase as household income increases. In fact, the number of ACs in Southeast Asia is expected to skyrocket to reach 350 million in 2040, mostly for use in residential buildings. The electricity consumption for cooling in the region is projected to amount to approximately 330 TWh by 2040. That said, Southeast Asian countries should prioritize sustainable and high-efficiency HVAC systems.

The most common HVAC systems and technologies adopted in the five countries are as indicated in the table below:

Table 23. HVAC use in Cambodia, Indonesia, Laos, Philippines and Vietnam

Country	Technologies
Cambodia	<ul style="list-style-type: none"> - Fans (more than 90%) - Air conditioners (around 50%)



Indonesia	<ul style="list-style-type: none"> - Inverter AC - AC Central - AC split-unit - Windows - Inverter DC - Inverter and fan DC
Laos	<ul style="list-style-type: none"> - Inverter (39%) - Fixed speed (61%)
Philippines	<ul style="list-style-type: none"> - AC
Vietnam	<ul style="list-style-type: none"> - AC

The table below provides a list of Nationally Determined Contributions (NDCs) of the five countries with focus on heating and cooling systems.

Table 24. Demand for HVAC technology in Cambodia

Country	Technologies
Cambodia	<ul style="list-style-type: none"> - Climate-friendly cooling of public sector buildings - Implementation of National Cooling Action Plan - Inclusion of performance requirements of Passive Cooling Systems in Building Energy Code of Cambodia - Implementation of “passive cooling” measures in the cities (addressing urban heat island effect), public buildings and commercial buildings. - Room air conditioners (fixed speed), room air conditioners (inverter type), chiller systems (centrifugal type), variable refrigerant flow systems, fans

● **Key Environmental and Social Impacts**

Mining and manufacturing | HVAC systems’ production requires steel, copper and nickel which contribute to the greatest resource consumption impact of AC manufacturing. The amount of nickel required to produce 1 kg of copper (0.03 kg) and 1 kg of iron (0.03 kg) is considered relatively high due to the mining stage.

End-use | Most negative impacts of HVAC systems originate from their end-use. First, the conventional HVAC systems account for 40–60% of energy usage in buildings or 15% of the world’s total energy consumption. The presence of hydrofluorocarbons (HFCs) as AC refrigerants specifically contributes to ozone depletion and global warming by releasing chlorine and bromine atoms into the stratosphere HFCs have a global warming potential tens of thousands of times higher than that of carbon dioxide (CO²), and they account for the equivalent of roughly 4 billion metric tons of CO² emissions every year. Second, although hydrocarbons are considered cost-effective, they are combustible and need special safety precautions to reduce flammable risks. Third, HVAC systems are considered the respiratory system of a building, and the potential risk to develop various microbial contaminations that threaten occupant health and work performance when poorly designed.

End-of-life | Recycling of HFCs-relying on AC requires peculiar separation processes for the selective recovery of HFCs and hydrofluoroolefins (HFO) from exhausted refrigerant mixtures.

With this into consideration, the AC stocks of the five countries should shift away from low-efficiency equipment relying on refrigerants with high global warming potential towards higher-efficiency equipment including HFOs-ACs. HFOs present zero-ozone depletion potential, negligible toxicity, reduced atmospheric lifetimes and hence, global warming potentials of several orders of magnitude below those of the most commonly used hydrofluoro.

Table 25. Key Environmental and Social Impacts with General Mitigation Measures of HVAC

Item	Impacts	Mitigation Measures
Water, Land, Ecosystem & Biodiversity	<p>[Production]</p> <ul style="list-style-type: none"> Steel, copper and nickel extractions for HVAC production can lead to pollution, deforestation, habitat destruction and water contamination. Depending on context, indigenous rights may also be affected. Copper-nickel mining operations resulting in emissions, pollution and health and safety risks to the workers. 	<ul style="list-style-type: none"> Apply strict international safety standards and implement safety interventions that are specifically designed to address the health risks associated with welding fumes and nanomaterial exposures²⁸. Following IFC’s EHS guidelines for base metal smelting and refining (IFC EHS Guidelines on Base Metal Smelting and Refining. 2007²⁹)
Air Quality & Climate Change	<p>[Production & Use]</p> <ul style="list-style-type: none"> HFCs as AC refrigerant contribute to ozone depletion and global warming (“super pollutant” with high global warming potential (GWP)). <p>[End-of-Life/Disposal]</p> <ul style="list-style-type: none"> HFCs and hydrofluoroolefins (HFO) from exhausted refrigerant mixtures are toxic materials. 	<ul style="list-style-type: none"> Promote the HFC phasedown policy and initiatives³⁰. by adopting more environmentally friendly (with less GWP level) and safe (less or non-inflammable) refrigerant. Producer of the HVAC system to provide reclaiming system for safe and clean recycling and disposal.
Worker & Community Health & Safety	<p>[Operation/Use]</p> <ul style="list-style-type: none"> Safety accidents due to the inflammation accident of the HVAC system As the respiratory system of a building, HVAC system has the potential risk to develop various microbial contaminations that threaten occupant health and work performance when poorly designed. 	<ul style="list-style-type: none"> Ensure labelling on the information on the model and GWP level of the refrigerant of the HVAC products (in packaging, manuals or specs) (e.g. R32, “non-ozone-depleting refrigerant,” inflammability etc.).

²⁸ For more details, see: CPWR, “Sheet Metal & HVAC Safety Intervention Adoption & Best Practices Research” K. “Hurtado et al (Aug 2023)/ https://www.cpwr.com/wp-content/uploads/SS2023_Sheetmetal-HVAC-best-practices.pdf

²⁹ <https://www.ifc.org/content/dam/ifc/doc/2000/2007-metal-smelting-refining-ehs-guidelines-en.pdf>

³⁰ The Kigali Amendment to the Montreal Protocol is the international agreement that aims at reducing the consumption and production of hydrofluorocarbons (HFCs) and thus protect the ozone layer. The status of the five target countries are committed to the Amendment as follows: (1) Cambodia accepted (A) the KA on 8 April 2021; (2) Indonesia ratified the KA on 14 Dec 2022; (3) Laos accepted (A) the KA on 16 Nov 2017; (4) Philippines ratified the KA on 3 Nov 2022, and; (5) Vietnam approved (AA) the KA on 27 Sep 2019 respectively. (Source: https://treaties.un.org/Pages/ViewDetails.aspx?src=IND&mtdsg_no=XXVII-2-f&chapter=27) In all five countries international good practice on the regulation of the HFCs or HCFCs and other ozone depleting materials shall be applied.

- Identification of High-Risk (“Category A”) Activities for Eligibility Assessment

Table 26. Risk Categorisation of HVAC technology by Country Safeguard System in Laos, Philippines, Vietnam

Country	Priority Climate Responsive Technologies Project/Activities	Risk Categorisation by Country Safeguard System		
		High	Medium	Low
Laos	Building energy efficiency technology: Home appliances, office equipment, and electrical tools processing factory		All	
Philippines	Energy-efficient lighting and cooling: Fuel cell	EIS: ≥ 100 MW	IEE Checklist: $5 \text{ MW} < x < 100 \text{ MW}$	$\leq 5 \text{ MW}$
Vietnam	Production of electrical and electronic parts and devices	All projects with at least 1 million devices and parts/year or at least 1,000 tonnes of products/year (Large Capacity) For projects with less than 01 million devices and parts/year or less than 1,000 tonnes of products/year, further strategic environmental assessment is required (Medium Capacity)		For Small Capacity Projects, further strategic environmental assessment is required.

A common approach for high-risk categorisation across the five countries:

Each of the identified environmental and social impacts will be screened in their significance and CTF shall determine the overall E&S risk categories. Upon which, the proposals finally screened as “B/I-2” (medium) or “C/I-3” (low) risk categories shall be eligible for CTF investment. “High risk” activities under the country risk screening system shall be rigorously examined by the CTF to ensure to comply with the CTF E&S risk screening and management criteria.

Comprehensive analysis of all the major environmental and social impacts including cumulative, indirect and imposed impacts:

In addition to the types and scale of the activities mentioned above, **various environmental and social impacts** (such as biomass market price, negative impact on the relation of biomass production workers and biomass power plant owners, biomass market price, etc.) the presence of indigenous communities and cultural heritages, etc.) needs to be also considered in a comprehensive manner. As a standard practice, all the subproject applicants shall apply for the country EIA procedures in each of the country the activities shall take place. A (simplified) environmental and social impact assessment and according to management planning (in line with the international standards' mitigation hierarchy) for medium risk projects (B category) shall be submitted to the Programme as requested by the Programme at the earliest stage possible either in draft or in final version for review and compliance check with the Programme's E&S safeguard requirements. If deemed necessary, the applicant shall be required to complement the impact assessment and management plans as advised by the Programme.

CTF's Review & KDB and GCF's Validation:

Each of the proposed enterprise/activities shall be reviewed case by case on its own individual merits by the CTF Secretariat (ESGCT). If the anticipated risks and impacts are of complex nature, the CTF will convene an Expert Advisory Committee (EAC) to collectively determine the risk category of the proposed activities through the consultative process of the experts. The decision made by the CTF shall be also validated by the KDB's ESMS.

3.3.1.7. Priority Technology 7: Sustainable Agriculture

- **Livestock-related technologies in the five countries**

The world consumption of animal products is projected to double in the next four decades, largely in Asia, due to rapid world human population growth, demographic factors (age structure and urbanisation), and socio-economic status improvement.

Current supplies of animal proteins, however, are inadequate to meet human requirements in the face of rapidly depleting resources (arable land, water, fossil fuels, nitrogenous and other fertilizers), increase in population, and increase in drought risk caused by frequent climate extremes. As a result, food shortage becomes a critical social issue impacting health, academic and economic potential, and there has been a global transformation of livestock production to overcome such an issue from a family small-scale animal husbandry to an industrialized type of farm animal rearing operations, which involves rearing livestock in a densely populated environment.

Continuous growing demand for the products had also led to intensification in livestock farming in Southeast Asia region, and efficient fodder and feeding management technologies are seemingly more important in intensified livestock farming in countries such as Indonesia, Laos, Philippines, Cambodia, and Vietnam, where ranching and grazing were more common (Refer to Annex 2).

- **Fodder improvement and feeding management technologies in the five countries**

With an intensification in livestock farming, a great amount of attention has been paid to the importance of appropriate feeding, but many Southeast Asia countries are still feeding rice straw and a relatively low nutrient value fodder in factory livestock farming process.

Consequently, conditions of livestock and poultry remain poor during drought and flooding periods when they are incapable of cropping sufficient amounts of rice, cereal, etc. Improper feeding also leads to productivity losses and an increase in the emission of pollutants in the form of methane and nitrogen

and phosphorus release in soil and water channels, which if not managed properly could cause water pollution, resulting in erosion of biodiversity, deterioration of human health and decrease in agricultural productivity.

Hence, modern and intensive fodder cropping and feeding technology, system and strategy such as automated production management system (APMS) and precision livestock farming (PLF) technology should be adopted in order to produce a more sufficient amount of nutritious fodder in a more efficient and sustainable way for an enormous quantity of livestock with minimal environmental impacts. The most common system and strategy practices adopted in the five countries are as indicated below table:

Table 27. Examples of the type of technology and system used in five target Southeast Asia countries

Type of Tech/system	Country	Opportunities and challenges
Three-strata forage system (TSFS)	Indonesia	Scaling up Potential application particularly in semi-arid AEZs in Asia
Food-feed system	Philippines	Wider adaptation in S.E.Asia Use of alternate forages in cropping systems e.g . Cassava and Gliricidia
NH ₄ treated rice straw utilisation	Many locations in Asia	Scaling up on- farm Strategic supplementation with treated straw Increased use of leguminous forage supplements Economic benefits
Rice-fish -pigs / -ducks / -azolladuck system	Vietnam	Wider adoption Scaling up Policy support Demonstrate sustainability
Forage option for crop-animal system	S.E Asia	Priority for forage development Scaling up Training
Sloping agricultural land technology (SALT)	Philippines	Potential application for uplands Sustainable crop – animal system

- **Key Environmental and Social Impacts**

Pollution from Nitrogen Oxide (NO_x) | Nonetheless, improving the **fodder production efficiency** may have social and environmental impacts on society, and considerable amounts of attention must be paid attention before adoption. For example, the phosphorus and nitrogen used while producing fodder not only pollute the local air but also adversely impact the soil and local water courses (rivers, streams, brooks and other surface waters), and any local or indigenous people used water from such courses may then accumulate nitrogen compounds which may cause long-term health impacts.

Zoonosis | In a similar vein, intensive livestock systems generally have high-density populations of low genetic diversity, which may facilitate increased transmission and adaptation, and greater frequency of movement of people and vehicles on and off farms increases the risk of pathogen transmission through environmental pathways from livestock to human. This can ultimately cause the spread of zoonotic diseases (e.g. Ebola, SARS etc.) and threaten public health.

Deforestation and land ownership conflicts | Physical establishment of the plantation is related to the reclamation of large forest areas and exploitation of local natural resources (soil, wood, water), and not only the potential problems of deforestation but also potential croplands, where individual farmers could

sow for their own and regional use. In areas where land tenure is uncertain, a zero-sum approach is taken to secure tenure, meaning that gains to one party have almost always been matched by losses to others. This causes a land dispute between cropping, livestock and biomass energy industries, and choosing an industry with which to work will deprive one of an opportunity to create social and environmental values and pose social conflicts.

Biodiversity | In addition to that, some fish-based dry fodder consists of ground and compressed tons of small species of fish, with some of the oil and water removed from the meat, and such manufacturing process requires catching huge amounts of small fish species, which may negatively affect the aqua biodiversity.

Table 28. Key Environmental and Social Impacts with General Mitigation Measures of Livestock Farming

Item	Impacts	Mitigation Measures
Air, Water, Land, Ecosystem & Biodiversity	<p>[Operation]</p> <ul style="list-style-type: none"> • GHG emission (largely from enteric fermentation (methane released during digestion) and manure management) • Nitrogen Oxide (NOx) emitted in fodder production process pollutes air, water and soil • Pollutants such as BOD, COD, SS and other chemicals discharged in industrial wastewater • Deforestation • Biodiversity loss and water resource degradation (due to unsustainable small fish harvest for fodder production & expansion of grazing area affecting wildlife and plant species) • Large consumption of water (feed to the livestock and for fodder production) may exacerbate water shortage. 	<ul style="list-style-type: none"> • Comply with the host country and international standards on effluents and wastewater treatment requirements to control them (e.g. installation of wastewater treatment equipment and adequate monitoring) • Establish adequate use/disposal standards for livestock wastes • Prevent contamination of surface water and groundwater by wastewater, effluents or leachates from rangelands. • Minimize the waste and recycle, if feasible. • Avoid illegal logging and monitor possible long-term impacts of the manure/livestock farming operation on ecology such as wildlife habitat and desertification. • Adopt FAO's low-carbon livestock guidelines³¹, including: <ol style="list-style-type: none"> (1) Boost efficiency of livestock production and resource use (2) Intensify recycling efforts and minimise losses for a circular bioeconomy (3) Capitalize on nature-based solutions to ramp up carbon offsets (4) Strive for healthy, sustainable diets and accounting for protein alternatives.

³¹ FAO, Five practical actions towards low-carbon livestock, 2019/ <https://openknowledge.fao.org/server/api/core/bitstreams/bffcb50b-bf4f-4fa9-a88d-b664a935f06e/content>

Health and Safety	<p>[Operation]</p> <ul style="list-style-type: none"> Nitrogen Oxide (NOx) emitted in fodder production process may affect health of workers and adjacent communities in the long term. Intensive livestock system (e.g. habitat destruction due to factory farming) may engender higher zoonotic diseases (e.g. Ebola, SARS etc.), loss of diversity and resilience (genetic in animals and biodiversity in the environment) Overuse of chemical input (antibiotics and chemical agents) causes cancer and antimicrobial resistance (AMR), increases non-communicable disease, and threatens public health. 	<ul style="list-style-type: none"> Comply with the host countries' food production and manufacturing, health and safety standards. Regular training and awareness raising of the workers and adjacent communities for prevention of the pandemics in cooperation with the relevant health authorities in the country and local government, as feasible.
Land dispute & impacts on indigenous people ³²	<p>[Construction of Facilities [Civil Works]]</p> <ul style="list-style-type: none"> Plantation establishment, reclaiming large forest or crop cultivating areas and exploitation of local natural resources (soil, wood, water), incurring economic losses and disputes with the resident communities, land disputes, potentially affecting indigenous rights. Small-scale traditional farmers may lose out if big-scale factory farming and meat import industry prevails, which may lead to over-production and illnesses due to high level of chemical treatment and processing. 	<ul style="list-style-type: none"> Understand the local context whether the conversion is the only viable option. See the possible benefits of combining forestry and crop farming with the cattle farming³³. Avoid to the extent possible any involuntary resettlement and loss of means of livelihoods. For an acceptable level of relocation taking place, a simplified resettlement action plan (RAP) needs to be established in line with the IFC PS 5 (2012)³⁴. Consider potential impacts on heritage, landscape and ethnic minorities or indigenous peoples, as early as possible. As necessary, consult key stakeholders in the country including the affected persons and communities and prepare mitigation and compensation plan in line with the country regulations. Consult the CTF E&S Safeguard Specialist.

³² For more details, see: "Impacts of a Just Livestock Transition on Farming in Asia: Human rights and Health Perspective" at the Just Transition Forum in Asia 2022 (JTFA) organised by Climate Action Network Southeast Asia (CANSEA) and Friedrich-Ebert-Stiftung (FES) on September 8th 2022/ https://youtu.be/uoCvKF4vu0Q?si=P2fEla8-Aqa_ZNaB

³³ "It is important to avoid creating a false dichotomy in which livestock and crop agriculture are separate entities for which the environmental outcomes of one are assumed to be superior to the other. Evidence has shown that agricultural systems with livestock can be less damaging than cropping alone and can help restore productivity of degraded lands through nutrient recycling." Carles F. Nicholson et al. Environmental Impacts of Livestock in the Developing World, March 2001/

https://www.researchgate.net/publication/263925537_Environmental_Impacts_of_Livestock_in_the_Developing_World

³⁴ <https://www.ifc.org/content/dam/ifc/doc/2010/2012-ifc-performance-standards-en.pdf>

- **Identification of High-Risk (“Category A”) Activities for Eligibility Assessment**

Cambodia regards all sizes of faecal sludge treatment plants and Anaerobic digestion treatment of organic waste as high risk (Category A) activities. In Indonesia, cultivation of food/horticultural crops with or without processing units of more than 2,000 and 5,000 ha is classified as high risk (Category A). Laos sees sustainable rice cultivation and pest management technology with a scale of more than 400 ha, sustainable forest management technology, optimal forest plantation technology, forest protection technology and sustainable forest management technology with more than 200 ha as high-risk activities. In the Philippines, the activities regarding the artificial reefs that cover more than 25 ha are categorized as high-risk activities. Vietnam considers the livestock and poultry husbandry and wildlife animal caring related project as a high-risk project if more than 500 heads of livestock, 20,000 heads of poultry and 50 heads of wildlife animals are involved. Potential local/global entrepreneurs on this technology need to avoid the activities listed above.

Table 29. Risk Categorisation on Agriculture-related technology by Country Safeguard System in the five host countries

Country	Priority Climate Responsive Technologies Project/Activities	Risk Categorisation by Country Safeguard System		
		High	Medium	Low
Cambodia	Anaerobic digestion treatment of organic waste - Waste processing, burning	All sizes	-	-
	Faecal sludge treatment plants - Waste processing, burning	All sizes	-	-
Indonesia	Cultivation of food crops with or without processing units	≥2,000 ha	-	-
	Cultivation of horticultural crops with or without processing units	≥5,000 ha	-	-
Laos	Sustainable forest management technology - Planting and cutting industrial trees plantation	>200 ha	20-200 ha	-
	Sustainable rice cultivation - Industrial crops growing	>400 ha	20 - 400 ha	-
	Optimal forest plantation technology - Planting and cutting industrial trees plantation	>200 ha	20-200 ha	-
	Pest management technology - Industrial crops growing	>400 ha	20 - 400 ha	-
	Livestock disease control technology - Livestock raising such as: cattle, buffalo, horse and others	-	≥500 heads	-
	Forest protection technology - Planting and cutting industrial trees plantation	>200 ha	20-200 ha	-
	Sustainable forest management technology	>200 ha	20-200 ha	-



	- Planting and cutting industrial trees plantation			
Philippines	Artificial reefs - Fishery/Aquaculture Projects using fresh or brackish water including pearl farm and similar activities	≥25 ha	- EIS: ≥5 ha but <25 ha - IEE Checklist: >1 ha but <5 ha	≤1 ha or seaweed farming
	Grazing Projects	≥500 Animal Unit(AU)	- EIS: 100-499 AU - IEE Checklist: <100 AU	1 - 10 AU
	Livestock/piggery Projects(e.g. pigs/goats)	-	- EIS: ≥5,000 heads - IEE Checklist: >100 but <5,000 heads	≤100 heads
	Ostrich Farming	-	- EIS: ≥1,000 heads or ≥1 ha - IEE Checklist: <1,000 heads	≤100 heads AND ≤1 ha
	livestock/poultry Projects(e.g. birds)	-	- EIS: ≥100,000 heads - IEE Checklist: >10,000 but <100,000 heads	≤10,000 heads
	Other Livestock projects	-	- EIS: ≥50 AU - IEE Checklist: >10 AU but <50 AU	≤10 AU
	Agricultural plantation	-	- EIS: ≥500 Ha - IEE Checklist: >50 Ha but <500 Ha	≤50 Ha
	Animal feed mill	-	- EIS: ≥2,500 MT	≤200 MT



			- IEE Checklist: >200 MT but <2,500 MT	
Vietnam	Construction projects for livestock and poultry husbandry establishments, wild animal raising	Livestock: ≥500 heads Poultry: ≥20,000 heads Wildlife animal: ≥50 heads	Livestock: 100-500 heads Poultry: 5,000-20,000 heads Wildlife animal: 5-50 heads All (except for construction projects for wild animal caring	All (except for construction projects for wild animal caring

A common approach across the five countries:

Each of the identified environmental and social impacts will be screened in their significance and CTF shall determine the overall E&S risk categories. Upon which, the proposals with the finally screened as “B” (medium) or “C”(low) risk categories shall be eligible for CTF investment. “High risk” activities under the country risk screening system shall be rigorously examined by the CTF to ensure to comply with the CTF E&S risk screening and management criteria.

Comprehensive analysis of all the major environmental and social impacts including cumulative, indirect and imposed impacts:

In addition to the types and scale of the activities mentioned above, **various environmental and social impacts** (such as the location of the livestock and fodder production plants, whether they are adjacent to the river and protected areas due to rich biodiversity and the presence of indigenous communities and cultural heritages etc.) needs to be also considered in a comprehensive manner. As a standard practice, all the subproject applicants shall apply for the country EIA procedures in each of the country the activities shall take place. A (simplified) environmental and social impact assessment and according to management planning (in line with the international standards’ mitigation hierarchy) for medium risk (B category) projects shall be submitted to the Programme as requested by the Programme at the earliest stage possible either in draft or in final version for review and compliance check with the Programme’s E&S safeguard requirements. If deemed necessary, the applicant shall be required to complement the impact assessment and management plans as advised by the Programme.

CTF’s Review & KDB and GCF’s Validation:

Each of the proposed enterprise/activities shall be reviewed case by case on its own individual merits by the CTF Secretariat (ESGCT). If the anticipated risks and impacts are of complex nature, the CTF will convene an Expert Advisory Committee to collectively determine the risk category of the proposed activities through consultative process of the experts. The decision made by the CTF shall be also validated by the KDB’s ESMS.

3.3.1.8. Priority Technology 8: Management of Water Resources

- **Identification of High-Risk (“Category A/I-1”) Activities for Eligibility Assessment**

Various technologies and tools are included in sustainable water resource management technologies. Following are the five countries’ criteria to categorize related activities as “high risk” groups.

Table 30. Risk Categorisation on Management of Water Resources by Country Safeguard System in the five host countries

Country	Priority Climate Responsive Technologies Project/Activities	Risk Categorisation by Country Safeguard System		
		High	Medium	Low
Cambodia	Irrigation technology - Irrigation systems	≥5,000 ha		
	Water resource management - Irrigation systems	≥5,000 ha		
	Nature-based solutions - Hydropower	≥1 MW		
	Flood protection of water sources, flood proofing and structural retrofitting, source - Dredging	≥50,000 m ³		
	Changes in water treatment processes to accommodate higher variable pollutant load - Water supply - Drainage systems	- ≥10,000 Users - ≥5,000 ha		
Indonesia	Water harvesting (well & Infiltration pond) - Swamp reclamation for irrigation purposes - Dredging waters with capital dredging - Taking clean water from lakes, rivers, springs, or other surface water sources - Underground water extraction (shallow ground wells, deep ground wells)	- ≥1000 ha - ≥500,000 m ³ - ≥250 l/second, this is equivalent to the need for clean water for 250,000 people - 50 litres/second (from one or more wells in < 10 ha area)		
Laos	Forest protection technology - Planting and cutting industrial trees plantation	>200 ha	20 – 200 ha	
	Flood and drought management technology - Construction of reservoir and dams	>200 million m ³ or height of dam > 10m	1 - 200 million m ³ or height of dam ≤10m	
Vietnam	Conservation and protection of existing natural forest in mountainous areas - Construction projects for irrigation and water supply and	Work area at least 500 ha	Work area >50 ha and <200 ha	



	drainage works for agricultural, forestry and fishery production			
	<p>Water-efficient irrigation technology</p> <ul style="list-style-type: none"> - Construction projects for water reservoirs - Construction projects for irrigation and water supply and drainage works for agricultural, forestry and fishery production - New construction projects for sea or river dykes - Projects for water exploitation for business and human resumption - Construction projects for refined water and bottled refined water plants - Construction projects for aquaculture establishments 	<ul style="list-style-type: none"> - Reservoir volume $\geq 500,000 \text{ m}^3$ - Work area at least 500 ha - Length at least 1,000 m - Underground water more than $5,000 \text{ m}^3 / \text{day}$, surface water capacity more than $100,000 \text{ m}^3 / \text{day}$ - More than 2,000,000 litres of water / year - Water surface area $> 10 \text{ ha}$ 	<ul style="list-style-type: none"> - Reservoir volume $< 500,000 \text{ m}^3$ - Work area $> 50 \text{ ha}$ and $< 200 \text{ ha}$ - Length $< 1,000 \text{ m}$ - Underground water $500-5,000 \text{ m}^3 / \text{day}$, surface water $5,000-100,000 \text{ m}^3 / \text{day}$ - 500,000-2,000,000 litres of water / year - Water surface area 5-10 ha 	

Table 31. Key Environmental and Social Impacts with General Mitigation Measures of Water Resource Management

Item	Impacts	Mitigation Measures
Soil	<p>[Construction]</p> <ul style="list-style-type: none"> • Loss of soil material and sedimentation to the surface and/or groundwater systems from the site due to earthwork activities • Soil contamination • Disposal of excess soil/silt 	<ul style="list-style-type: none"> • Adopt and regularly monitor erosion and sediment control plan & storm water management plan • Earth work schedule should consider rainfall and wind speed periods of the location to avoid and minimize vegetation disturbance. • Strip and stockpile topsoil for use during revegetation and/or place removed soils back onto agricultural lands • Adopt the drainage control measures to avoid runoff contact in the contaminated areas & adhere to best practices for the removal and disposal of contaminated soil/ material from the site (if required). • Reuse the silt recovered (e.g. return to farmland, brick making, etc. as tested suitable).
Air Quality	<p>[Construction]</p> <ul style="list-style-type: none"> • Increase in dust levels at sensitive receptors • Increase in vehicle machinery emissions 	<ul style="list-style-type: none"> • Dust control measures (e.g. road speed limits, avoidance of sensitive locations, considering weather for construction (to minimize the disturbance to vegetation), Sufficient watering, etc.)

		<ul style="list-style-type: none"> • Ensure all the vehicles and machines meet the design standards and qualifications & limit the number and time of their use to the necessary level only • Induction to all site workers
Noise and Vibration	<p>[Construction]</p> <ul style="list-style-type: none"> • Increased noise levels • Vibration due to construction 	<ul style="list-style-type: none"> • Identify sensitive properties, structures and habitat locations to noise and vibration. • Consider noise level in selecting equipment and specific design practices & apply noise reduction devices (e.g. silencers and mufflers). • Consider construction time (esp. nearby residents' activities) • Temporary construction noise barriers • Onsite incident reporting system duly addresses noise and vibration complaints • Induction to all site workers
Water	<p>[Construction]</p> <ul style="list-style-type: none"> • Elevated suspended solids and other contaminants in surface water systems. • Increase of gross pollutants, hydrocarbons, metals and other chemical pollutants in the groundwater environment 	<ul style="list-style-type: none"> • Site-specific Erosion, Drainage and Sediment Control Plan • Strict management and control of fuel, oil and chemical or other hazardous liquid storage • Regular surface and groundwater quality monitoring • Avoid stockpiling construction materials and construction equipment near the water sources • Vegetate the disturbed areas once works are complete for gradual stabilization • Regular surface and groundwater quality monitoring
Flora and Fauna (Terrestrial and aquatic)	<ul style="list-style-type: none"> • Habitat loss and disturbance of fauna • Introduced flora and weed species 	<ul style="list-style-type: none"> • Identify sensitive flora and fauna areas and adopt protective measures as required by law • Limit vegetation clearing and minimise habitat disturbance, recover and rescue any injured or orphaned fauna, • Revegetate disturbed areas using native and locally endemic species that have high habitat value.
Land dispute & impacts on indigenous people	<ul style="list-style-type: none"> • Change in land ownership and customary tenure • Involuntary relocation and resettlement including impacts on the indigenous rights 	<ul style="list-style-type: none"> • Avoid to the extent possible any involuntary resettlement and loss of means of livelihoods. For an acceptable level of relocation taking place, a simplified resettlement action plan (RAP) needs to be established in line with the IFC PS 5 (2012)³⁵. • Consider potential impacts on heritage, landscape and ethnic minorities or indigenous peoples, as early as possible. As necessary, consult key stakeholders in the country including the affected persons and communities and prepare mitigation and compensation plan in line with the country regulations. Consult the CTF E&S Safeguard Specialist.

³⁵ <https://www.ifc.org/content/dam/ifc/doc/2010/2012-ifc-performance-standards-en.pdf>

A common approach across the five countries:

Each of the identified environmental and social impacts will be screened in their significance and CTF shall determine the overall E&S risk categories. Upon which, the proposals finally screened as “B/I-2” (medium) or “C/I-3” (low) risk categories shall be eligible for CTF investment. “High risk” activities under the country risk screening system shall be rigorously examined by the CTF to ensure to comply with the CTF E&S risk screening and management criteria.

Comprehensive analysis of all the major environmental and social impacts including cumulative, indirect and imposed impacts:

In addition to the types and scale of the activities mentioned above, various environmental and social impacts (such as biomass market price, negative impact on the relation of biomass production workers and biomass power plant owners, biomass market price, etc.) the presence of indigenous communities and cultural heritages, etc.) needs to be also considered in a comprehensive manner. As a standard practice, all the subproject applicants shall apply for the country A (simplified) environmental and social impact assessment and according to management planning (in line with the international standards’ mitigation hierarchy) for medium risk projects (Category B) shall be submitted to the Programme as requested by the Programme at the earliest stage possible either in draft or in final version for review and compliance check with the Programme’s E&S safeguard requirements. If deemed necessary, the applicant shall be required to complement the impact assessment and management plans as advised by the Programme.

CTF’s Review & KDB and GCF’s Validation:

Each of the proposed enterprise/activities shall be reviewed case by case on its own individual merits by the CTF Secretariat (ESGCT). If the anticipated risks and impacts are of complex nature, the CTF will convene an Expert Advisory Committee (EAC) to collectively determine the risk category of the proposed activities through the consultative process of the experts. The decision made by the CTF shall be also validated by the KDB’s ESMS.

3.3.1.9. Priority Technology 9: Mechanical-biological treatment

- **MBT Technology**

MBT systems are waste processing facilities that integrate mechanical sorting with biological treatment methods. These facilities help in sorting municipal solid waste into different streams like metal, nylon, plastic recyclables, Refuse Derived Fuel (RDF), and more. Key components are: Anaerobic digester, heat exchanger, centrifuge and composter.

- **Key Environmental and Social Impacts**

Typical environmental and social impacts are related to the construction and operation of the MBT facilities. Key impacts include noise, odour and air pollutants.

Table 32. Key Environmental and Social Impacts with General Mitigation Measures of Mechanical-biological Treatment

Item	Impacts	Mitigation Measures
Air Quality & Odour	[Construction & Operation] <ul style="list-style-type: none"> • Release to the air of direct stack emissions fugitive emissions 	<ul style="list-style-type: none"> • Design a closed vessel system with an appropriate exhaust air collection device.



	<p>associated with biological process & Emission from burning of biogas (incl. bioaerosols, particulate matter/dust, ammonia, amines, volatile organic compounds (VOCs), sulfides, odours, etc.)</p>	<ul style="list-style-type: none"> Regular emission monitoring
Water & Soil	<p>[Operation]</p> <ul style="list-style-type: none"> Leachate and runoff from storage of waste, containing organic material such as biochemical oxygen demand (BOD), phenols, nitrates, phosphorous, dissolved metals and other contaminants) 	<ul style="list-style-type: none"> The material processing or storage areas of the facility should have a leachate barrier system that forms a secure barrier between the groundwater, soil, and substrata and the composting or stored organics, as well as systems for collecting and treating leachate For anaerobic digestion, maximize recycling of wastewater to the reactor Measure total organic carbon (TOC), chemical oxygen demand (COD), nitrogen (N), phosphorus (P) and chlorine (Cl) levels in the inlet and outlet flows from an anaerobic digester. Operate an anaerobic digester under thermophilic digestion conditions, in order to increase the pathogen destruction, biogas production rate (hence higher energy recovery) and the retention time
Visual Impacts	<p>[Operation]</p> <ul style="list-style-type: none"> Visual impacts of decentralized composting, nuisance, if not appropriated located 	<ul style="list-style-type: none"> Consider visual impacts on the resident communities and their economic activities, in determining the location of the facilities. Vegetation and landscape featuring
Fire Risks	<p>[Operation]</p> <ul style="list-style-type: none"> Biogas in combination with air can form an explosive gas mixture, esp. in areas close to digesters 	<ul style="list-style-type: none"> Collect biogas for use or treatment (e.g. energy recovery or flaring); Provide a fire alarm system, including temperature sensors in the waste being treated;

• Identification of High-Risk (“Category A”) Activities for Eligibility Assessment

Indonesia regards bioenergy – renewable biomass with more than 10 MW categorized as “high risk” activities. In Laos, bioenergy – renewable biomass with more than 10 MW is categorized as “high risk” activities.

Table 33. Risk Categorisation on Bioenergy – renewable biomass by Country Safeguard System in the five host countries

Country	Priority Climate Responsive Technologies - Project/Activities	Risk Categorisation by Country Safeguard System		
		High	Medium	Low
Indonesia	Power plant construction electricity from other types (among others: PLT Solar, Wind, PLT Biomass / Peat, PLT Bayu)	> 10 MW	-	-
Laos	Biogas and biofuel technology - Coal, oil or biomass power plant project	>10 MW -	≤10 MW -	-

A common approach across the five countries:

Each of the identified environmental and social impacts will be screened in their significance and CTF shall determine the overall E&S risk categories. Upon which, the proposals finally screened as “B” (medium) or “C” (low) risk categories shall be eligible for CTF investment. “High risk” activities under the country risk screening system shall be rigorously examined by the CTF to ensure to comply with the CTF E&S risk screening and management criteria.

Comprehensive analysis of all the major environmental and social impacts including cumulative, indirect and imposed impacts:

In addition to the types and scale of the activities mentioned above, various environmental and social impacts (such as biomass market price, negative impact on the relation of biomass production workers and biomass power plant owners, biomass market price, etc.) the presence of indigenous communities and cultural heritages, etc.) needs to be also considered in a comprehensive manner. As a standard practice, all the subproject applicants shall apply for the country EIA procedures in each of the country the activities shall take place. A (simplified) environmental and social impact assessment and according to management planning (in line with the international standards’ mitigation hierarchy) for medium risk projects (Category B) shall be submitted to the Programme as requested by the Programme at the earliest stage possible either in draft or in the final version for review and compliance check with the Programme’s E&S safeguard requirements. If deemed necessary, the applicant shall be required to complement the impact assessment and management plans as advised by the Programme.

CTF’s Review & KDB’s and GCF’s Validation:

Each of the proposed enterprise/activities shall be reviewed case by case on its own individual merits by the CTF Secretariat (ESGCT). If the anticipated risks and impacts are of complex nature, the CTF will convene an Expert Advisory Committee (EAC) to collectively determine the risk category of the proposed activities through the consultative process of the experts. The decision made by the CTF shall be also validated by the KDB’s ESMS.

As a standard practice, all the subproject applicants shall apply for the country E(S)IA and ESMP procedures in each of the country the activities shall take place. Even if the country safeguard system determines the proposed project/activity’s environmental risk category to be high (“A”), the applicants

can still pursue the application for the CTF, which will, in turn, undergo a rigorous risk screening process per its own environmental and social risk screening policies and standards. A (simplified) environmental and social impact assessment according to management planning (in line with the international standards' mitigation hierarchy) for medium and low risk projects shall be submitted to the Programme as requested by the Programme at the earliest stage possible either in draft or in the final version for review and compliance check with the Programme's E&S safeguard requirements. If deemed necessary, the applicant shall be required to complement the impact assessment and management plans as advised by the Programme.

In preparation of the proposal to CTF, the JV applicant also needs to refer to:

- ESMS (F/P Annex 6): Appendix A. IFC Exclusion List
- ESMS (F/P Annex 6): Appendix B. Illustrative List of Category A Investment Acts
- ESMS (F/P Annex 6): Appendix C. E&S Risk Categorisation by Country Safeguard System (CSS)
- ESMS (F/P Annex 6): Appendix O. Indigenous Peoples Plan Framework (IPPF)
- F/P Annex 8: Gender Assessment & Gender Action Plan (GA/GAP)

For pre-application screening, during the Acceleration Programme (Component 2), the JV applicant needs to fill in and submit to the CTF E&S Safeguard supporting team:

- ESMS (F/P Annex 6): Appendix D. Initial E&S Checklist for the Fund Applicant
- ESMS (F/P Annex 6): Appendix E. Rapid Checklist on the Applicability of IFC PS on Indigenous Peoples (IPs)
- GA/GAP (F/P Annex 8): Appendix 2: Gender Profiling Form (GPF) and/or Appendix 3: Simplified Gender Analysis and Gender Action Plan (General Template)

The Applicant may also be required to present additional documents related to CTF's assessment on E&S management capacity which is part of the CTF's pre-investment committee review procedure. Based on the submitted data and other validation processes (e.g. written inquiry, face-to-face interview, or field visit, as deemed necessary), the CTF E&S and Gender Compliance Team (ESGCT) will carry out CTF E&S Risk Screening and Categorisation by producing a CTF E&S and Gender Screening Form (ESMS Appendix F. E&S and Gender Screening Form for CTF E&S Manager (ESM)/ ESGCT).

For the proposed activities that are deemed to be categorized as Medium Risk (Category B), the CTF may conduct a capacity assessment of the JV or the global entrepreneur (as part of the JV) for its environmental and social management of the proposed activities.

- ESMS (F/P Annex 6)/ Appendix G is an indicative Template CTF may consider utilising for assessment of the E&S management capacity of the JV applicant (and/or its global entrepreneur).

The ESGCT will conduct a review of the submitted E&S documents and check if the E&S risk categorisation is made in accordance with the IFC PS and Good International Industry Practices (GIIP) and KDB's ESMS.



During the review, ESGCT may communicate with the Applicant to provide supplementary documents to strengthen the E&S compliance of the proposal, and/or advise the JV candidates to reconsider the design/Components of the proposed business/project to ensure that the required risk category level (B or C) are met.

In cases where the categorisation is B and/or is not clear-cut and there is room for disagreement, ESGCT may request the Managing Partners to convene an EAC for further review, evaluation and recommendation. If the case is still undecided after EAC discussion, (e.g. due to the nascent nature of the climate technologies lacking sufficient level of cumulated database to determine the risk level, or due to the country-specific risks and high uncertainties around political or market instability and indigenous issues etc.), a more conservative results shall be taken finally: In such circumstances, if any of the experts in EAC views the activities as high risks, the activities shall be judged ineligible for CTF.

If the proposal passes the completeness check and the Programme's E&S Policy (as stipulated in this ESMS), ESGCT shall draft the CTF E&S Screening Form (Appendix F) together with the (preliminary) ESRS (Appendix G). The ESRS summarizes the key risks and impacts of the proposal with measures to mitigate the risks and impacts in the aspects of health and safety; environment, and social (including gender). It determines the E&S risk to be B or C and assesses whether the proposed ESMP and other relevant actions (such as Resettlement Plan, Cultural Heritage plan, and Gender action plan, etc.) comply with the Fund's E&S Policy (including the IFC PS, EHS Guidelines, Safeguard system of the five target countries among others). These documents, along with the JV candidate's application package, are then sent to the PIC for review.

CTF adopts the zero-tolerance policy on SEAH as its key principle. As such this ESMS has mainstreamed the SEAH consideration at all the relevant steps and procedures. At the risk screening stage, the applicant for the CTF shall prepare the 'Initial E&S Checklist for Fund Applicant' (Appendix D) which inquires the possible risk related to SEAH of the invested activities (e.g. involvement of children, young and vulnerable individuals including women, ethnic minorities, etc.) as employees, beneficiaries or delivery partners along the supply chains, etc.) This will be actively considered when the E&S Manager of the ESGCT of CTF prepare the fund's own E&S Screening form (Appendix F. 'E&S Screening Form for CTF E&S Manager (ESM)').

CTF Investment Criteria

After all, the Fund plans to execute two levels of E&S related screening – (a) at pre-JV level where global climate tech businesses that deem fit for JV creation/technology transfer will be assessed in their overall E&S management system and capacity levels³⁶ (in Component 2)(See Appendix G); and (b) at JV level where the climate innovations created in tandem are evaluated for their potential impacts as well as ESMS formulation (in Component 3 during CTF application screening and review process). JV candidates also need to commit themselves to comply with all the requirements related to E&S management of the CTF-approved activities during implementation and operation. This will be articulated in their E&S Covenant and financial agreement with the CTF. See below the E&S risk-related criteria among the CTF Investment Criteria. The Programme shall monitor, screen and avoid financing any project that may potentially induce significant adverse impacts on indigenous communities and people. Details are shown in Table 34 below.

³⁶ The Programme does not carry out the E&S management capacity assessment for the local firm candidates. Preliminary assessment of the partnering global entities, as well as the E&S management system (ESMS) for the Funded activities shall be assessed and if gaps are identified, the Programme will recommend carrying out gap filling activities through E&S capacity building supports of Component 2, or otherwise.



Table 34. CTF Investment Criteria on E&S Risks

Criteria		Description
6	E&S Safeguards (ESS)	<ul style="list-style-type: none"> • Negative screening <ul style="list-style-type: none"> - Businesses defined in IFC Exclusion List NOT eligible for investment (See Appendix A. IFC Exclusion List) - Businesses with significant impacts on indigenous peoples NOT eligible for investment, by falling under one of the categories below³⁷: <ol style="list-style-type: none"> (1) Business/enterprises with negative impacts on lands and natural resources subject to traditional ownership or customary use or occupation. (2) Businesses/enterprises that result in relocation of Indigenous People from lands and natural resources subject to traditional ownership or under customary use or occupation, or; (3) Business/enterprises that may potentially impact cultural heritage³⁸. <p>(*See Appendix E. Rapid Checklist for the Fund Applicant on the Applicability of IFC PS 7 on Indigenous Peoples)</p> • E&S risk categorisation <ul style="list-style-type: none"> - High risk businesses (Category A) NOT eligible for investment - A proposed business must be classified as Category B or C. • Post-investment commitment <ul style="list-style-type: none"> - All the supported JVs (partnerships) must comply with required duties and responsibilities on E&S compliance: e.g. E&S risk mitigation plan deployment, regular reporting.

³⁷ CTF would not invest any proposed business and activities that may require free, prior, and informed consent (FPIC) as defined by GCF IPP, esp. in Section 7.2.

³⁸ “Cultural heritage includes but is not limited to natural areas with cultural and/or spiritual value, such as sacred groves, sacred bodies of water and waterways, sacred mountains, sacred trees, sacred rocks, burial grounds and sites, as well as the non-physical expression of culture, such as traditions, language, identity, ceremonial, or spiritual aspects of the affected indigenous peoples’ lives.” (GCF IPP, Para 63)

3.3.2 Investment Due Diligence (DD)

Based on the E&S risk screening results, ESGCT of CTF shall proceed to carry out E&S due diligence. For all the Category B projects, ESGCT shall also carry out the E&S (& gender) capacity assessment of the applicant entity. (In case the applicant is a newly established entity (SPC or JV enterprises etc.), the Fund shall examine the leading entity of the consortium or JVs). For Category C projects, capacity assessment shall be carried out upon the merits of the individual projects based on the prescription by the ESGCT of the ESGCT case-by-case.

Appendix G ('E&S Management Capacity Assessment Template') below illustrates some of the key questions that are to be answered in assessing the applicant entity's E&S (& gender management capacity) in terms of Health and Safety risk management; environmental risk management, and; social (including gender and SEAH) risk management. Depending on the characteristics of the individual project/activities proposed, different weights and intensities could be imposed proportionately (i.e. when the project has a high level of health and safety risk but a low level of social risk, the Assessment shall focus more on the Section 1 rather than Section 3 of the Form, upon the Assessor's discretion.)

In line with this, once the proposed activities/projects are identified to have a high risk of generating SEAH cases in the course of implementation directly or indirectly, the following step of the Fund's E&S Due Diligence will carry out a more intensive investigation into the Applicant entity's past track records, current SEAH-related management system and capacity. Assessment may include interviews with the applicant entity's E&S, ESH, and/or safeguard officer and field inspection (of the plants and offices, etc.)

Due Diligence is a selection process for the appropriate candidate for CTF funding. At the same time, given the context of the Programme where developing country entities are encouraged for climate technology innovation and diffusion, the CTF shall rather support the entities with the gaps in capacity and system with appropriate capacity/system building consulting services (upon request), rather than using them as a ground for deselection of the fund applicants. The results of the Candidate entity's E&S and Gender Capacity Assessment shall be utilized to identify such gaps to identify measures to improve them so that they can effectively mitigate such risks in the course of the implementation of the funded project(s). Notwithstanding, depending on the seriousness of the past (criminal or civil) records related to the SEAH grievances, if any, the applicant entity may be rejected for CTF eligibility.

Based on the comprehensive review of all the data gathered thus far, ESGCT shall prepare the CTF Environmental and Social Review Summary (ESRS, See Appendix H). If necessary (when the case involves any outstanding issue for further attention and a higher level of decision), ESRS prepared by ESGCT shall be reviewed by the ESC before submission to PIC's approval and clearance.

The CTF ESRS (see APPENDIX H) includes the recommendations of the ESGCT and EAC (if applicable). If the ESGCT and EAC (if applicable) decide that the JV candidate is only partially ready, it will be noted and recommended on the ESRS that the PIC should request the JV candidate to fulfil the gaps identified, either by themselves or by receiving the acceleration package (consulting service) in Component 2.

After reviewing the proposal package and the ESRS, PIC may decide to pass the proposal and the ESRS to the IC for consideration with PIC meeting notes (see APPENDIX I) or request the proposing JV candidate to fulfil the gaps identified and come back, if any. The Fund may advise the JV candidate to make avail of the consulting support package (Component 2) to address the identified gaps/insufficiencies.

3.3.3 Investment Agreement (IA)

If the PIC decides that the JV candidate is ready to be considered by the IC, the Managing Partner, ESGCT, and the legal team of the CTF will together conduct a final round of review for the proposal's compliance to the Fund's ESMS and prepare a draft IA that includes E&S covenants.

The E&S covenants will contain legally binding requirements related to ESS, regulations, and Management Plans (where applicable) in accordance with the merit and risk category of each activity proposed by the JV candidates. If the candidate's proposal is well set in terms of the E&S management plan (including the JV's ESIA and ESMP, prepared per Appendix J and Appendix K respectively) and risk levels, a generic E&S covenant shall be prepared. In cases where the PIC determines that major gap-filling measures are required to strengthen the JV candidate's ESMP, the PIC can add special conditions as part of the E&S covenant. In the latter case, the ESGCT will draft the JV candidate's ESAP as part of the E&S Covenant in consultation with the Managing Partner and the legal team. As appropriate, the E&S covenant may also require the JV candidate to comply with any corrective/remedial actions requested by the Fund during operation, in case of a breach of the conditions of the covenant (and ESMP).

Based on the sector and nature of the business activities, specific operational plans and procedures such as the following may be required during the signing of the Covenant (including ESCP for outstanding cases referred above) or later (at least prior to the commencement of the project implementation), as applicable. While the plans listed below are part of the ESMPs, as requirement for the document submission ("E&S documents" for the CTF application) to the GCF Secretariat during the Funding proposal preparation stage (in Component 2 onwards), as had been requested via the host country's E(S)IA requirements and/or GCF Secretariat, the final version of the plan(s) (through the Investment Committee's review and approval process) shall be included as part of the E&S Covenant.

- Occupational Health and Safety Policies and Procedures
- Emergency Preparedness and Response Plans and Procedures
- Fire Life and Safety Plans
- Waste Management Policies and Procedures
- Hazardous Materials Management Policies and Procedures
- Chemical Management Policies and Procedures
- Water Management Policies and Procedures
- Integrated Pest Management System
- Human Resources Policy
- Grievance Mechanism
- Biodiversity Action Plan
- Resettlement Action Plan (RAP)
- Stakeholder Engagement Plan

- **Process Framework for Restriction of Access to Natural Resources etc.**

Any invested activities/projects that are likely to incur any SEAH incidents would not be tolerated unless strong and effective prevention measures are prepared as part of the ESMP or Gender Action Plan. To screen this, the CTF requires all the JV applicants for the CTF to prepare an Initial E&S Checklist for the Fund Applicant (Appendix D of this ESMS), which includes the potential risks of SEAH occurrence. Based on this the CTF's E&S Manager or ESGCT shall prepare its E&S and Gender Screening Form (Appendix F of this ESMS) to assess if the proposed activities may generate high risk of SEAH. For one thing, the human source policy and grievance mechanism of the implementing entity of the project/activities should mainstream the SEAH component explicitly (e.g. by designating the E&S and Gender safeguard personnel with relevant (including SEAH expertise).

In such cases, the applicant entity shall be required to submit the gender and SEAH integrated Code of Conduct for manager and the staff alike together with a SEAH commitment plan (including, among others, regular and ad hoc training and awareness-raising activities targeting those directly in touch with the children, youth and vulnerable individuals as beneficiaries, employees or deliver partners along the supply chain; and promising to reflect the SEAH component in bidding documents and TOR for consultants in selecting supplier, contractors and/or any other delivery and implementation partners of the proposed project. In addition, in case any SEAH related grievance is lodged, the senior management would need to be involved directly due to the sensitivity of the issues. Depending on the level of the potential risk the related measures and planning shall be recommended and guided by the ESGCT.

ESAP will be legally binding and included as part of the and could be linked as a condition of disbursement. JV candidates will provide the Fund with regular reports regarding their progress and compliance with the ESAP. If the JV candidate agrees on the draft IA after DD procedures, the IC will make its final investment decision and the final IA will be negotiated and signed with the JV.

3.3.4 Monitoring, Supervision and Reporting

Once the IA is signed between the CTF and the JV, a standard *ex-post* (post-investment approval) ESDD process will be activated. Depending on the level of the risks, monitoring and reporting requirements by the JVs (and associated JV executing partners) shall be prescribed. In accordance with the KDB's ESMS, Category B projects/JVs will be required to appoint an independent E&S consultant or retain qualified and experienced external experts to verify its monitoring information before reporting to the CTF.

There are four other ways the CTF can monitor and supervise the business activities of the invested JVs:

- Sitting on the Board of the JVs to oversee their business activities and check their compliance with the IA;
- Receiving periodic E&S progress reports;
- Communicating with the RSMU and NSMUs providing advisory support to the JVs; and
- Directly conducting periodic site visits for inspection (either by a member of ESGCT or by a third-party consultant hired), as necessary. (see the cases explained in the paragraphs right below).

The funded JVs with Category B business activities will also be required to submit an annual monitoring report (AMR) detailing its progress against any ESMP and ESAP, and compliance with contractual conditions, including the following content:

- Post-construction completion report indicating compliance with local regulations and receipt of operating permits/operating licenses; and
- Any required environmental monitoring data (e.g. air/water quality, wastewater, solid waste, noise).

The submitted self-monitoring report by the Funded-JVs will be reviewed by the ESGCT of the Fund. CTF will require JVs to promptly report any environmental, occupational health and safety, public health and safety, or social event incidents or accidents that occur on-site which may have a material adverse effect, attract adverse outside attention, or give rise to material potential liabilities.

If there is an alert of a potential breach of the agreed ESMP by the funded JVs and any other associated JV executing partners, or, if unexpected significant E&S impacts arise while executing the CTF-funded activities, the ESGCT shall inform this to the CTF Managing Partners.

If the Managing Partners and ESGCT of the CTF decide that the matter is material, they may decide to convene an ESRMSC to formally address the issue or complaint registered from the affected communities. The Committee shall be comprised of CTF Managing Partners and ESGCT, KDB, External Experts (if needed), local affected groups and other relevant stakeholders. The Committee shall review the case and draft out the necessary actions. After an ESRMSC meeting, the Managing Partners will convene an RMC to formally decide on the corrective actions and prepare preventive actions.

The Managing Partners will decide on the actions to be taken to address the cases raised as the umbrella supervisors of the overall E&S compliances of the Funded JVs/activities. Measures include, among others, suspension and cancellation of the IA, in the gravest cases; recommendations for corrective/remedial actions with specific time frames and JV resultant monitoring and reporting obligations. CTF may carry out field-based inspections by themselves or through external E&S safeguard audit arrangements.

CTF may consider an adaptive E&S management approach by reconsidering the current IA terms, such as up-levelling or down-levelling the E&S risks based on the accumulated information regarding the E&S M&E reports and strengthening (in case of up-levelling from Category C to Category B), or relaxing (in case of down-levelling from Category B to C) the ESMP. When the JV is recommended to strengthen the current ESMS, the Programme may provide, upon request, E&S capacity building consulting support. If the invested activities are highly likely to incur significant E&S impacts and risks to the level of Category A, the CTF can reconsider the investment in the concerned JVs/funded activities.

The overall issues, processes and actions taken will be duly documented by the Managing Partners and reported to KDB in a timely manner. KDB, as the AE of the Programme, will review the reports submitted by the Managing Partners and check if the overall procedures and decisions are in compliance with the ESMS and GCF Safeguard requirements.

Reporting should include information about the nature, impact and effects of the incident, the actions taken, and remedy plans to prevent future events. JVs shall keep the Fund informed of the progress of any remedial action.



In cases where any non-compliance is detected, the E&S safeguard focal point of KDB will communicate with the Managing Partners to rectify the situation in a timely manner. The overall process and actions taken will be duly documented by KDB and reported to GCF via the agreed monitoring and reporting channel.

CTF can exert its discretion in disclosing the information of the concerned E&S grievance case until internal or a third-party review and inspection is completed, and Fund-level decisions are made. If the information is relevant to commercial and other interests and is likely to breach the confidentiality agreement, E&S report and key information need to be disclosed to the public and key stakeholders (including the affected persons and community in the host countries) both online and offline. CTF's E&S reporting and information disclosure will be in line with KDB's Information Disclosure and Communication Agreement with the GCF.

Reporting to LPs (incl. KDB)

The E&S compliance of JVs will be reported to the Limited Partners annually. An Annual Performance Report (APR) will be prepared detailing how the Fund has implemented the ESMS throughout the year, any changes, improvements, and details of the E&S performance of the investee companies/projects, in accordance with GCF reporting requirements.

A summary of the Annual E&S Report will be posted on the CTF webpage.

3.4 Stakeholder Engagement and Information Disclosure

The Programme considers Articles 7, 9, 15 and 16 of the KDB E&S Framework and the principles of transparency, accountability, inclusiveness, and non-discrimination, in establishing and executing stakeholder engagement plans. The stakeholder engagement plan of the Programme includes the following Components:

- Stakeholder Engagement Framework (SEF)
- Information Disclosure Policy
- Grievance Redress Mechanism (GRM)

3.4.1 Stakeholder Engagement Framework (SEF)

This SEF applies to all the relevant parties to the operation of the Programme, including KDB (AE) and implementing entities of each of the four Components, as well as the participations of the programmes and activities in respective programmes of each of the four Components.

KDB, the accredited entity to GCF, will ensure the overall SEF is designed and executed based on the principles of transparency, accountability, inclusiveness, non-discrimination, and "do no harm." in line with GCF's guidelines³⁹. In executing the SEF at the Component level, as well as at invested activities (JV project/programme levels) under Component 3, the principle of meaningful engagement and consultation need to be applied. (*See the Box below.)

³⁹ Including: Sustainability Guidance Note: Designing and ensuring meaningful stakeholder engagement on GCF-financed activities (May 2022); Revised Environmental and Social Policy, Updated Gender Policy; and Indigenous Peoples Policy.

Box. What are “**Meaningful consultation and Engagement**” requirements?

Per international good practice and GCF requirements, all the activities of AE (KDB) and the executing entities of the Programme needs to design their consultation and engagement activities with the stakeholders meaningful, following the following conditions:

- **Processes are designed to be flexible, adapting and responding to national and local conditions and activity requirements;**
- **Project budgets include resources for stakeholder engagement activities, including salaries or fees for qualified staff and/or consultants with appropriate expertise to carry them out;**
- **Engagement begins early enough to identify key issues and influence related decisions;**
- **Information is presented in understandable and culturally appropriate formats and local language(s);**
- **Communication flows two ways, allowing all sides an opportunity to listen, exchange views and have their concerns addressed;**
- **Where community norms and practices do not encourage or allow active participation of women in meetings or gatherings, efforts are made to ensure their voices, needs and concerns are heard and incorporated into planning;**
- **Processes are inclusive; they take into account that women, men, and members of different ethnic, economic and social groups may have different needs and perspectives, as well as different approaches to engaging and decision-making;**
- **Engagement activities are free from coercion or manipulation;**
- **Meetings are well documented to keep track of the information disclosed, the groups and individuals who have been engaged, when and where meetings took place, key issues raised, commitments and agreements, and how stakeholder concerns have been addressed; and**
- **There is a clear and mutually agreed process for timely reporting of actions taken, with clarification regarding upcoming steps.**

(The list is from: Sustainability Guidance Note: Designing and ensuring meaningful stakeholder engagement on GCF-financed activities (May 2022)⁴⁰/ Section 3. (Page 2~ 3))

Overall SEP implementation mechanism of the Programme will be embedded within the ESMS implementation arrangement of the overall Programme: Given the complexity of the structure of the Programme, i.e. differentiated four sets of sequential and simultaneous activities with associated

40 *sustainability-guidance-stakeholder-engagement-may2022.pdf (greenclimate.fund)

partners and participants in global and country levels, the SEF structure requires economic, linear structure:

3.4.1.1. SEF for Component 1

In Component 1, co-executing entities, GGGI and KDB shall designate a stakeholder engagement focal person(s) who will coordinate with the National SMUs in each of the five countries with their own respective stakeholder engagement focal points at the country-level. Other than the executing parties, above mentioned, key stakeholders would be country-level applicants for the National Acceleration programme from the five target countries.

Key issues related to the Component 1 execution would be ensuring equitable, timely and transparent disclosure of the information on the programme with clearly articulated eligibility and selection criteria to all potential participants. Inclusiveness and access (reaching out to the marginalized and vulnerable groups who are disadvantaged to access to the programme information, including women, ethnic minorities, youth and the physically disabled, and the Indigenous People) and cultural appropriateness (e.g. providing communication channels and information leaflet in local languages, etc.) would need to be actively reflected in the SEF planning.

In the course of executing, the GGGI/KDB focal point(s), in coordination with the Regional and Country SMU focal points, shall regularly collect the feedback and grievances from the country participants, report them to the AE(KDB) on a regular basis. In turn, KDB shall report to GCF on a regular reporting channel. Opinions and feedback from the participants shall be processed internally and reflected to modify and improve the National Acceleration Programme, as appropriate, based on the standard GRM operational procedures (See Section 3.4.3 below.)

3.4.1.2. SEF for Component 2

In Component 2, NH Investment & Securities Capital Private Ltd. will designate its focal person. Stakeholders include the member entities of the Acceleration Advisory Consortium as well as the global-level applicant for the Global Acceleration Programme.

As in the case of Component 1, key issues related to the Component 2 execution would be ensuring equitable, timely and transparent disclosure of the information on the programme with clearly articulated eligibility and selection criteria to all potential participants.

In the course of executing the Global Acceleration Programme and advisory consulting, the stakeholder focal person of the executing entity shall regularly collect the feedback and grievances from the programme participants and report them to the AE (KDB) on a regular basis. In turn, KDB shall report the significant events to GCF on a regular reporting channel. Opinions and feedback collected from the participants shall be processed internally and reflected to modify and improve the Programme, as appropriate, based on the standard GRM operational procedures (See Section 3.4.3 below.)

3.4.1.3. SEF for Component 3

In Component 3, the Fund level E&S Manager within ESGCT shall be responsible for the overall stakeholder engagement function with the support of cultural and gender specialist (external), as relevant. At the CTF fund level, the key stakeholders include the funding JV applicants and JV executing entities of the funded activities (projects/programme) after the approval.

[JV level Stakeholder Engagement Plan]

As part of the ESIA/ESMP package, as appropriate (esp. for risk Category B projects with specific outstanding topical risks and concerns, i.e. JVs are required to establish and execute a Stakeholder Engagement Plan (SEP) for the approved/funded activities (programme/projects). The Programme extends stakeholder engagement to its JVs and maintains channels for its management teams, employees and people living in the host communities of the Funded activities, with a fair representation of women, Indigenous Peoples through their own representatives and other vulnerable groups (such as ethnic minority, the disabled etc.). The Fund maintains several communication channels with its LPs such as routine site visits and participation in investor meetings and provides annual report to all LPs regarding the implementation of the ESMS and the E&S performance of the JVs.

Stakeholder engagement at the JV level is an important Component of ESDD as it can identify and proactively pre-empt potential risks and conflicts related to the operation of the Programme as well as the Funded activities. For Category B projects, the SEF needs to be designed to (i) capture or identify any concerns or potential risks of stakeholders; (ii) verify and assess the affected groups; and (iii) develop mitigation measures for groups or communities.

For Indigenous Peoples, these measures have to be designed together with them, in the framework of meaningful consultations seeking FPIC (in line with Section 7.1.5 and Section 7.2 of the GCF Indigenous Peoples Policy (2018)). This will be reviewed and confirmed by the Indigenous People specialist of the Programme, as appropriate.

In the course of the CTF operation, when individual JV-level funded activities are executed and unfolded, there would be multiple SEPs shall be established and executed at JV-level simultaneously. All the principles and requirements of meaningful consultation and engagement would need to be robustly applied to the Component 2 operation through the life of the programme and the individual JVs.

While it is the JV's responsibility and execute it, the proposed SEP(s) as the funding application package will be rigorously reviewed and confirmed as part of the proposal screening and approval process. In this process, the focal person within ESGCT may require strengthening the SEPs, and the extent of technical support to improve them, to ensure the plans are in accordance with the GCF and KDB requirements. Regular monitoring and reporting of the SEP performances would need to be duly recorded and reported to the Fund, which in turn, will report to KDB (AE). Together with the reports of the other three components of the Programme (Components 1, 2 and 4) KDB will review the SEP and component-specific SEF performance and ensure compliance with the Programme-level SEF in line with the GCF requirements.

3.4.1.4. SEF for Component 4

In Component 4, GGGI, the executing entity, shall assign a focal point for overall stakeholder engagements. Major stakeholders would be the relevant ministry and government authorities and institutions of the five target countries, who participate in the capacity building programme. Key issues related to the Component 4 execution would be ensuring equitable, timely and transparent disclosure of the information on the programme with clearly articulated eligibility and selection criteria to all potential participants. Inclusiveness and access (reaching out to all the relevant entities, while empowering and engaging women and minority participants) and cultural appropriateness (e.g. providing communication channels and information leaflets in local languages etc.) would need to be actively reflected in the SEF planning.



In the course of executing Component 4, the GGGI focal point(s), in coordination with the Regional and Country SMU focal points, shall regularly collect the feedbacks and grievances from the participants, report them to the AE(KDB) on a regular basis. In turn, KDB shall report the events to GCF on a regular reporting channel. Opinions and feedbacks from the participants shall be reflected to improve the Programme to ensure the programme's relevance and effectiveness in achieving its objectives.

3.4.1.5. Contingency Plan for COVID-19 Pandemic and Other Periods of restricted access

In line with Appendix X of the GCF Sustainability Guidance Note: Designing and ensuring meaningful stakeholder engagement on GCF-financed activities (May 2022)⁴¹ KDB (AE) (and/or through its executing entities) will:

- Continually explore different approaches and alternatives for ensuring stakeholders remain engaged during all stages of project cycles, while also adhering to the specific health directives issued by national and local authorities; and,
- Continue providing information to project-affected communities regarding scheduling and anticipated re-start dates or other key decisions regarding a project's timeline.

Alternative approaches to communication, engagement and information disclosure often involve the Internet-based online platform. technical capacity and existing digital infrastructure often vary from location to location and country to country. In designing the alternative methods, the AE (KDB) and executing entities shall consult the country partners (including Country SNUs, NDA and other delivery partners) to closely understand the local conditions and circumstances (such as digital literacy (esp. considering urban-rural and gender divide, as well as the indigenous groups in remote areas) while ensuring strictly adhering the country's 'safety' ground rules and public health mandates, updating stakeholders on those mandates and the risks associated with in-person meetings in conducting the JV-level SEPs.

In case major revision of the SEF is required due to the prolongation of the COVID-19 or any other restricted access situation, in consultation with the executing entities of each Component of the Programme, KDB (AE) shall inform the need for the revision with the revised version of the SEFs (and ESMP as appropriate) to GCF for its review and approval in a timely manner.

3.4.2 Information Disclosure

For all Category B projects, the Programme shall ensure that required E&S documents (ESIA and ESMP or ESAP and any other ESDD-related reports and documents etc. as appropriate) are accessible and available online in line with GCF's Information Disclosure Policy. In addition to disclosure online, information disclosure needs to be done in locations convenient to affected people and in both English and the local language (if not English) to foster adequate understanding by the affected and potentially affected communities, stakeholders and the general public. The Programme is committed to operating in a transparent and accountable manner in all aspects of its operations in fulfilling its mandate and in strengthening public trust. Through the Information Disclosure Policy, the Programme seeks to formally set a procedure for information disclosure and embed it in its business operations and ensure public access and stakeholder participation in fulfilling its role. It will ensure the greatest degree of transparency in all its activities through the effective dissemination of information to stakeholders and the public at large.

⁴¹ <https://www.greencclimate.fund/sites/default/files/document/sustainability-guidance-stakeholder-engagement-may2022.pdf>



GCF has established the following four principles in Information Disclosure Policy to disclose information in a transparent and accountable manner:

- **Maximize access to information.** The GCF reaffirms its commitment to transparency in all of its activities and therefore seeks to maximize access to any documents and information that it produces and to information in its possession that is not on the list of exceptions as set out in Chapter V of this

Policy. Furthermore, so long as the GCF is not legally obligated to confidentiality, information on the list of exceptions will be disclosed in accordance with timelines and procedures specified for that purpose.

- **Limited exceptions.** Any exceptions to disclosure will be predicated upon the possibility, narrowly and clearly defined, that the potential harm to interests, entities or parties arising from the disclosure of information would outweigh the benefits, that the GCF is legally obligated to non-disclosure or

has received information from third parties clearly marked as confidential. The GCF may, in exceptional circumstances, decide not to disclose or delay dissemination of information that would normally be accessible if it determines that the harm that might occur by doing so will outweigh the benefits of access. The GCF may also, in exceptional circumstances, make available to the public information ordinarily excluded from disclosure when it determines that the benefit would outweigh the potential harm, except where the GCF is legally obligated to confidentiality.

- **Simple and broad access to information.** The GCF will employ all practical means to facilitate access to information, maximize access to such information, and use clear and cost-effective procedures and timelines for processing requests.
- **Explanations of decisions and right to review.** When denying access to information on request the GCF will provide an explanation for its decision. Requesters who believe they have been denied access to information in violation of this Policy will have the right to have such decision reviewed by the

Information Appeals Panel.

For all Category B projects, ESIA and ESMP/ESAP and other E&S due diligence related documents, as appropriate, will be accessible and available online and overall information disclosure of the Funded activities shall be carried out in line with GCF's Information Disclosure Policy. For Component 1 both KDB and GGGI's Disclosure Policy shall be observed. For Component 4, GGGI's Disclosure Policy will also be adhered as follows:

- Promoting transparency and accountability, in the absence of a compelling reason to consider information as proprietary, privileged, or confidential;
- Safeguarding deliberative processes and protecting confidentiality;
- Providing clear procedures for making information available; and
- Recognising requesters' right to an internal review process.

Information may be disclosed either voluntarily or upon the request of the third party. The information in the form of E&S reports will be provided through electronic project and Programme FPs, public consultation period and disclosing information shall be uploaded through electronic links to the websites in English. If the management program causes material changes in the mitigation measures or actions described in the ESAP on issues of concern to the affected communities, the updated relevant mitigation measures or actions will be communicated to them. If indigenous peoples are involved, these measures need to be decided jointly with them, in the framework of meaningful consultations (in line with Section 7.1.5 of the GCF Indigenous Peoples Policy (2018)). As necessary, the process shall duly engage the IP specialist to ensure the FPIC principles are observed. The frequency of these reports will be proportionate to the concerns of affected communities but not less than annually.

Information request shall be dealt thoroughly through the following process:

- Any person or organisation may request the disclosure of non-confidential information. Request should be directed to the Head of Communications
 - Email: *(To be updated once the Co-GP is established)*
- The requester is entitled to a preliminary response within fifteen (15) working days of receipt of the request and an estimate of the time required for a full response.
- For information requests that involve the reproduction of material, additional fee for material and labour costs may be charged, which will be communicated to the requestor and will need to be paid in advance.
- A request may be partially or wholly denied, if
 - there are limitations set out or referred to in this policy;
 - the request is deemed to be an excessive demand upon given resources; or,
 - the request appears to be frivolous
- In the event that the requestor is not satisfied with the response or if a request is denied, either in full or in part, the requestor may seek the review of the decision by addressing a letter to:
 - Director, Strategy, Policy and Communications Department *(To be updated once the Co-GP is established)*; or
 - Email: *(To be updated once the Co-GP is established)*

The director will review the handling of the request for information and decide on how to proceed. The outcome of the review will be communicated to the requestor and there will be no requirement to provide a detailed explanation of the outcome of the review.

3.4.3 Grievance Redress Mechanism (GRM)

In line with the Article 9 of KDB E&S System and GCF's Independent Redress Mechanism (IRM), GRM will be established for all Category B projects as a part of the ESMS to facilitate the resolution of concerns and grievances about the project's E&S performance.

If the proposed business/activities involve indigenous peoples, GRM needs to be designed and operated in line with Section 7.3 of the GCF Indigenous Peoples Policy (2018): The mechanism needs to be established through a meaningful consultation process with the affected or potentially affected communities of the indigenous peoples to address their concerns related to the proposed activities. Formulation of the indigenous people targeted GRM should ensure cultural appropriateness and accessibility (in language and modes of communication etc.) in consideration of customary laws, applicable laws and obligations of the host country under relevant international treaties and agreement, dispute resolution mechanisms, and just systems. The GRM aims to provide accessible multiple channels for stakeholders (incl. independent parties outside the Programme) to raise a grievance at any time about the Funded activities, including the application of this ESMS and issues related to SEAH and the business activities of the JVs.

Any individuals, exposed to the risk or adverse impacts on SEAH, shall freely submit the grievance through GRM at both programme and sub project levels. SEAH-specific complaints will be dealt in gender-responsive and survivor-centred manner and the level of severity of the complaints shall be assessed and in significant cases, a designated human rights or gender-specialized personnel. If the reporting individual is found to be a survivor of SEAH, the details remain strictly confidential, according to robust security procedures under the principle of confidentiality and secure their dignity. If SEAH-related complaints are submitted on a particular project, the investment manager (PM) will be excluded from the grievance handling process, and if necessary, CTF will hire a 3rd party or independent organisation/individual expert in verifying the complaints and grievances. The results and communication process, then, be directly reported to senior management. In the case of SEAH incidents being reported to have occurred, the programme shall ensure to provide SEAH survivors with appropriate support, including as appropriate, medical care, psychosocial support, legal support, community-driven protection measures, and reintegration.

While JVs serve as the first point of contact in the GRM, stakeholders may also contact the NSMUs, GGGI, Co-GPs, and KDB or report through the unified governance system. Through the unified governance system, grievances shall be screened, filtered and be allocated to relevant executing entities.

The Fund will make stakeholders aware of the GRM through their public website, during project start-up workshops, and during relevant project-related meetings.

JV-level Contact Information	Co-GPs Contact Information	GGGI Contact Information	KDB Contact Information
<i>(To be updated)</i>	<i>(To be updated)</i>	<i>communications @gggi.org</i>	www.kdb.co.kr

The GRM is operated free of charge and shall be culturally appropriate, and readily accessible to all in a fair and transparent manner.



The grievance may be reported through:

- In person communication (or via telephone);
- Email/SMS/text messages; or
- Grievance form submission (online).

The GRM shall not impede access to judicial nor administrative remedies. The response to each grievance is formally informed through a personal meeting, phone call, email or letter at reporter's convenience, within 30 working days of submission. In case of any material grievance, the issues are carefully reviewed at RMC and appropriate corrective actions will be taken.

If actions taken on a grievance are not resolved to the satisfaction of the complainant, a stakeholder may turn to the reported entity directly, and stakeholders may turn to court in accordance with the existing legislation of the host country.

- **Reporting.** KDB will require the executing entities, especially Co-GPs, to fulfill the activity-level grievance mechanism requirements and maintain responsibility for its own GRM. KDB will carefully supervise, monitor and review the grievances which are primarily submitted by each JVs

and screened by CTF Environmental and Social Manager (ESM) and Co-GPs. All the opened, resolved and closed issues of the project's environment and social performance shall be documented and may be disclosed to the public through website and other accessible means to country stakeholders in line with the Fund's transparency and accountability policy, and potential negative impacts of the project may be analysed based on the subject matter of grievances.

- **GRM at JV levels.** Country stakeholders and especially local communities and indigenous peoples in a country that are hosting a project or any funded activities need to be given easy-to-access, free-of-charge mechanism to lodge grievances. The primary channel should be provided at the JV level, which the CTF needs to monitor and evaluate its performance as part of the E&S safeguard compliance requirements. All JV candidates applying for the CTF need to include the GRM mechanism as part of their ESMP. The Programme may support the individual JV candidates to establish and execute an appropriate GRM to the level required by the GCF E&S safeguard policy and international good practices.

3.5 Contingency Plan

JVs and other types of implementing entities are obligated to inform the E&S and Gender safeguard focal point within the national SMU focal point and/or ESGCT of CTF directly either through regular or ad hoc E&S and gender monitoring report as soon as possible. Given the urgency of the matter, JVs and other types of implementing entities are recommended to directly communicate through telephone or E-mail in advance before submitting the ESGCT of CTF.

KDB will require and ensure that the CTF undertakes DD appropriate to the new E&S risk category of the activities and revise the ESMP to meet the requirements of their E&S safeguards, in a manner consistent with the ESS of GCF.



Additional DD and changes to the ESMPs and other safeguards documents will be disclosed in a manner pursuant to the GCF Information Disclosure Policy. ESGCT will inform the CTF Management Team and to the Board as soon as possible. CTF, in turn, will report to KDB. KDB assesses if it is deemed to be a case of a “major change” which may potentially require modification of the funded activities (including E&S risk category and its according E&S management system and gender action plans) and requires the GCF’s instructions on the necessary steps to be taken to address such events or to implement such proposed modification.

Any proposed modification which may constitute a Major Change shall be subject to the prior consent of GCF. In case the changes are material, GCF will require KDB to adjust its E&S (and other associated) management systems or gender action plans in a manner consistent with potential E&S risks and/or impacts associated with material changes of the new (adjusted) business activities and other applicable requirements stipulated in the GCF Safeguard Policies.

In case the originally B categorized project is determined to be upgraded to A KDB will advise, through ESGCT to 1) identify measures to downgrade to B risk through modification of the changed activities (e.g. in terms of design, technology adoption, scale adjustment, or active grievance addressal activities etc.) or 2) CTF shall consider suspension or cancellation of the contract to fund the activities. In the case of the latter, JV or the other types of the implementing parties of the funded activities could appeal through the CTF’s appeal process for reconsideration. ■



4 APPENDICES

APPENDIX A. IFC Exclusion List

The Programme shall not invest in all the activities in the IFC Exclusion List, as presented in the box below. In addition, the Programme will not invest in activities that are in Category A/I-1 in environmental and social risks, as determined by the CTF Secretariat.

- Production or trade in any product or activity deemed illegal under host country laws or regulations or international conventions and agreements, or subject to international bans, such as pharmaceuticals, pesticides/herbicides, ozone-depleting substances, Polychlorinated Biphenyls (PCBs), wildlife or products regulated under CITES (Convention on International Trade in Endangered Species or Wild Fauna and Flora)
- Production or trade in weapons and munitions
- Production or trade in alcoholic beverages (excluding beer and wine)
- Production or trade in tobacco
- Gambling, casinos and equivalent enterprises
- Production or trade in radioactive materials. This does not apply to the purchase of medical equipment, quality control (measurement) equipment and any equipment where IFC considers the radioactive source to be trivial and/or adequately shielded
- Production or trade in unbounded asbestos fibres. This does not apply to purchase and use of bonded asbestos cement sheeting where the asbestos content is less than 20%
- Drift net fishing in the marine environment using nets in excess of 2.5 km in length
- Production or activities involving harmful or exploitative forms of forced labour/harmful childlabour
- Commercial logging operations for use in primary tropical moist forest
- Production or trade in wood or other forestry products other than from sustainably managed forests
- Production, trade, storage, or transport of significant volumes of hazardous chemicals, or commercial scale usage of hazardous chemicals. Hazardous chemicals include gasoline, kerosene, and other petroleum products
- Production or activities that impinge on the lands owned, or claimed under adjudication, by Indigenous Peoples, without fully documented free, prior and informed consent of such peoples, through their own representatives



APPENDIX B. Illustrative List of Category A Investment Acts

Although decisions on categorisation are made on a case-by-case basis, the following list is indicative of activities that are screened as Category A and therefore be ineligible for investment.

- Large-scale industrial estates or plants
- Major Greenhouse Gas emitting projects, with Direct Greenhouse Gas Emissions of more than 100,000 (short) tons (91,000 metric tonnes) of CO₂eq per year
- Projects that manufacture, store, transport or dispose hazardous or toxic materials
- All projects that pose potentially serious occupational or health risks
- Construction of motorways, express roads, lines for long-distance railway traffic, and airports with a basic runway length of 2,100 metres or more. Construction of new roads with four or more lanes or realignment and/or widening of an existing road so as to provide four or more lanes where such new road, or realigned and/or widened section of road, would be 10 km or more in a continuous length
- Large-scale seaports and also inland waterways and ports for inland waterway traffic; trading ports, piers for loading and unloading connected to land and outside ports (excluding ferry piers)
- Waste-processing and disposal installations for the incineration, chemical treatment or landfill of hazardous, toxic or dangerous wastes
- Construction or significant expansion of dams and reservoirs not otherwise prohibited
- Groundwater abstraction activities or artificial groundwater recharge schemes in cases where the annual volume of water to be abstracted or recharged amounts to 10 million cubic metres or more
- Large-scale logging
- Large-scale power transmission
- Municipal wastewater treatment plants servicing more than 150,000 people
- Municipal solid waste-processing and disposal facilities
- Large-scale land reclamation
- Large-scale primary agriculture/plantations involving intensification or conversion of previously undisturbed land



- All projects with potentially major impacts on people or which pose serious socioeconomic risk, including Physical and Economic Displacement, adverse impacts on Indigenous Peoples and on Cultural Heritage
- Projects, not categorically prohibited, but located in or sufficiently near sensitive locations of national or regional importance which may have apparent environmental impacts on:
 - Wetlands
 - Areas of archaeological significance
 - Areas prone to erosion and/or desertification
- Medium and large-scale hydropower development (with more than 10 MW capacity)
 - Areas of importance to ethnic groups/indigenous peoples
 - Primary temperate/boreal Forests
 - Coral reefs
 - Mangrove swamps
 - Nationally designated seashore areas
 - Managed resource protected areas, protected landscape/seascape⁴²

⁴² International Union for the Conservation of Nature (IUCN) categories V and VI) as defined by IUCN's Guidelines for Protected Area Management Categories. Additionally, these projects must meet IUCN's management objectives and follow the spirit of IUCN definitions.

APPENDIX C. E&S Risk Categorisation by Country Safeguard System (CSS)

Each country has EIA regulations which provide an indicative list for E&S risk categorisation. In the list below, JV candidates need to check carefully if the proposed activities under the Technology (in Column titled “Priority Climate Responsive Technologies” for CTF consideration) matches with the listed “Project/Activities” (in the immediate right column): If the proposed activities do not match with the listed “Project/Activities”, the risk categorisation does not apply, and it is possible the proposed activities are not of high-risk group. (Please note that the list is subject to continuous updates as the CSS requirements is updated and revised over time.)

Risk categorisation by CSS is not determinant and the CTF’s own risk categorisation may differ. However, the CSS risk categorisation is a preliminary screening point which JV candidates are encouraged to carry out to minimize the risk of applying high risk category activities for CTF funding against its Investment Criteria.

Each of the identified environmental and social impacts will be screened in their significance and CTF shall determine the overall E&S risk categories. Upon which, the proposals finally screened as “B/I-2” (medium) or “C/I-3” (low) risk categories shall be eligible for CTF investment. “High risk” activities under the country risk screening system shall be rigorously examined by the CTF to ensure to comply with the CTF E&S risk screening and management criteria.

JV candidates are also advised to check APPENDIX B for further reference.

Country	Impact Type	Climate Technologies (Illustrative)	Project /Activities	Risk Categorisation by Country Safeguard System		
				High Risk	Medium Risk	Low Risk
Cambodia	Mitigation	Landfill gas (LFG) Management	Oil and gas separation and storage facilities	≥ 1,000,000 litres		
		Anaerobic digestion treatment of organic waste	Waste incineration plant	All sizes		
		Solar technologies: rooftop solar, minigrids (rural), solar cold storage,	Power plant	>50 MW	5~50 MW	<5 MW
		Streetlights	Urban Development	All sizes		
		Electric vehicle (EV) (motorbikes, cars buses, bicycles)	Urban Development Battery industry	All size All sizes		



Country	Impact Type	Climate Technologies (Illustrative)	Project /Activities	Risk Categorisation by Country Safeguard System		
				High Risk	Medium Risk	Low Risk
		EV battery swapping systems	Battery industry	All sizes		
		Energy efficient urban mass transport	Industrial zones	All sizes		
			Urbanisation development	All sizes		
			Battery industry	All sizes		
	Adaptation	Small-scale, decentralized wastewater plants	Natural treatment base and sewer system		All sizes	
			Mechanical and sewer treatment based		All sizes	
		Faecal sludge treatment plants	Waste Incineration Plant		All sizes	
		Irrigation technology	Irrigation systems		(≥ 5,000 hectares)	(1,000 - <5,000 hectares)
			Water release system		(≥ 5,000 hectares)	(1,000 - <5,000 hectares)
		Water resource Management	Irrigation systems	≥ 5,000 hectares		
		Solar powered water pumps	Water supply	≥ 10,000 users		
		Solar dryers – agro-processing in the cashew industry & casava Industry	Rice mill and cereal grains	≥ 3,000 tons/year		
			Food processing and caned	≥ 500 tons/year		
		Nature based Solutions	Hydropower	≥ 1 MW		
		Flood protection of water sources, flood proofing and structural retrofitting, Source	Dredging	≥ 50,000 m ³		
		Changes in water treatment processes to accommodate higher variable pollutant load	Water supply	≥ 10,000 users		
			Drainage systems	≥ 5,000 hectares		

Country	Impact Type	Climate Technologies (Illustrative)	Project /Activities	Risk Categorisation by Country Safeguard System		
				High Risk	Medium Risk	Low Risk
Indonesia	Mitigation	Solar Photovoltaic (PV)	Power plant construction electricity from other types (among others: PLT Solar, Wind, PLT Biomass / Peat, PLT Bayu)	> 10 MW		
		In-Vessel Composting (IVC)	Garbage a) Composting plant - Capacity	a) 500 tons/day		
		Improvement of public transport	Construction of passenger terminals and freight terminals transportation road	> 5 Ha		
			Development and/or toll road upgrades that require land acquisition (outside rumija) a) in metropolitan / big cities - length of road with land area for land acquisition - Width of the	a) 5 km with procurement land \geq 10 ha - 30 ha b) 5 km with procurement land \geq 20 ha - 30 ha c) 5 km with		
			land acquisition b) in town - length of the road with the area of land acquisition; or - area of land acquisition c) in the countryside - length of the road with the area of land acquisition; or - area of land acquisition	procurement land \geq 30 ha - 40 ha		



Country	Impact Type	Climate Technologies (Illustrative)	Project /Activities	Risk Categorisation by Country Safeguard System		
				High Risk	Medium Risk	Low Risk
			Construction and/or road improvement with widening that requires land acquisition (outside rumija) a) in metropolitan / big cities - length of road with land acquisition area; or - area of land acquisition b) in town - long way with the area of land acquisition; or - area of land acquisition c) rural - length of the road with the area of land acquisition; or area of land acquisition"	a) 5 km with procurement land ≥ 20 ha - 30 ha b) - 5 km with procurement land ≥ 30 ha - 40 ha c) - 5 km with procurement land ≥ 40 ha 50 ha		
		Blended cement (or substitute some materials with fly ash, etc)	Cement industry (made through production clinker)	All sizes		
	Adaptation	Water recycling from domestic wastewater	Domestic wastewater a) Development domestic wastewater treatment plant (IPAL)	a) - 3 ha - 2.4 tons/day b) - 500 ha - 16,000 m ³ /day		
			including its supporting facilities - Area, or - Organic load b) Development wastewater piping system, area, type - Service area, or - Waste water discharge			



Country	Impact Type	Climate Technologies (Illustrative)	Project /Activities	Risk Categorisation by Country Safeguard System		
				High Risk	Medium Risk	Low Risk
		Crop (rice) tolerance to drought and flood	Irrigation area - Rice field printing, area (per group)	≥ 500 ha		
		Technology for mariculture development	Development on protected areas	Any business or activity that is located in a protected area or that may change the purpose and/or designation of a protected area shall be required to prepare an ANDAL		
			Fishery cultivation business a) Pond cultivation advanced and intermediate level shrimp/fish with or without processing units - Wide b) Floating aquaculture business (floating net and pen system): - In freshwater area - In freshwater quantity - In seawater area - In seawater quantity	a) - ≥ 50 hab) - ≥ 2.5 ha - ≥ 500 units b) - 5 ha - ≥ 1000 units		
		Water harvesting (well & infiltration pond)	Swamp Development a) swamp reclamation for	a) ≥ 1000 ha		
			irrigation purposes			
			a) Dredging waters with capital dredging - volume	a) ≥ 500,000 m ³		



Country	Impact Type	Climate Technologies (Illustrative)	Project /Activities	Risk Categorisation by Country Safeguard System		
				High Risk	Medium Risk	Low Risk
			Taking clean water from lakes, rivers, springs, or other surface water sources a) withdrawal debit	a) ≥ 250 l/second, this is equivalent to the need for clean water for 250,000 people		
			Underground water extraction (shallow ground wells, deep ground wells)	50 litres/second (from one or more wells in < 10 ha area)		
			Beach reclamation	Construction of Coastal a) Guards and improvement of river mouths - Distance is calculated perpendicular to the beach	a) ≥ 500 m	
			Reclamation Activities for Coastal Areas and Small Islands with a) the reclamation area, b) Material volume used, or c) Reclamation length	a) > 25 ha b) $> 500,000$ m ³ c) > 50 m (perpendicular to the sea from the shoreline)		
Laos	Mitigation	Forest protection technology	Planting and cutting industrial trees plantation	> 200 ha	$- 20 < x < 200$ ha	
		Hydro power generation technology	Electricity generation by Hydropower (Hydropower plants construction) ⁴³	≥ 15 MW (installed capacity) or - reservoir volume capacity (full supply level) ≥ 200 million m ³ or - reservoir area $\geq 1,500$ ha	- 1- 15 MW (installed capacity) or - reservoir volume capacity < 2 million m ³ or - reservoir area $< 1,500$ ha	

⁴³ The CTF only invest in the small scale, hydropower project with same or less than 10 MW install capacity. In risk screening, other factors such as: flood design and climate disaster and hazard risks & economic values of assets at risk in case of dam failure, shall be also considered. For details, see: IFC Good Practice Note: Environmental, Health, and Safety Approaches for Hydropower Projects (March 2008) (esp. Annex A: General Description of Industry Activity). See also Table 14 above (on Cambodia and Laos CCS on small scale hydropower).

Country	Impact Type	Climate Technologies (Illustrative)	Project /Activities	Risk Categorisation by Country Safeguard System		
				High Risk	Medium Risk	Low Risk
		Biogas and biofuel technology	Natural gas or biogas power plant project	- >50 MW	- 5-50 MW	
			Coal, oil or biomass power plant project	- >10 MW	- ≤10 MW	
		Sustainable forest management technology	Planting and cutting industrial trees plantation	- > 200 ha	- 20 < x < 200 ha	
		Sustainable rice cultivation	Industrial crops growing	- >400 ha	- 20 - 400 ha	
		Optimal forest plantation technology	Planting and cutting industrial trees plantation	- > 200 ha	- 20 < x < 200 ha	
		Clean cookstoves	Home appliances production factory	- >10,000 units/year	- ≤10,000 units/year	
		Electric mobility technology	Automotive battery and alkaline battery factory	- >70 tons/year	- ≤70 tons/year	
		Battery management technology	Backup battery processing factory	-	- All	
		Building energy efficiency technology	Home appliances, office equipment, and electrical tools processing factory		- All	
		Semi-aerobic landfilling system	Disposal of non-hazardous waste	- >5,000 tons/year	- ≤5,000 tons/year	
			Disposal of hazardous waste	- All		
			Hazardous waste minimisation	- All		
			Other waste treatment and management	- All		
			Construction of waste incinerator and treatment factory	- All		
	Adaptation	Pest management technology	Industrial crops growing	- >400 ha	- 20 - 400 ha	



Country	Impact Type	Climate Technologies (Illustrative)	Project /Activities	Risk Categorisation by Country Safeguard System		
				High Risk	Medium Risk	Low Risk
		Livestock disease control technology	Livestock raising such as: cattle, buffalo, horse and others		- ≥ 500 heads	
		Forest protection technology	Planting and cutting	- > 200 ha	- 20 < x < 200 ha	
			industrial trees plantation			
		Flood and drought management technology	Construction of reservoirs and dams	- > 200 million m ³ or - height of dam >10 m	- 1 - 200 million m ³ or - height of dam ≤10 m	
		Sustainable forest management technology	Planting and cutting industrial trees plantation	- > 200 ha	- 20 < x < 200 ha	
		Climate resilient water supply technology	Water supply processingfactory		- All	
			Wastewater treatment plant of the city	- > 5,000 persons	- ≤5,000 persons	
			Industrial wastewater treatment plant	- All		
			Extraction and use of groundwater for consumption in industry, agriculture and the city	- > 5,000 m ³ /day	- 500 - 5,000 m ³ /day	
			Construction of reservoirs and dams	- > 200 million m ³ or - height of dam >10 m	- 1 - 200 million m ³ or - height of dam ≤10 m	
Philippines	Mitigation	Small scale RE- powered irrigation	Renewable energy projects such as ocean, solar, wind, tidal power		EIS: - ≥ 100 MW IEE (Initial Environmental Examination) Checklist: - 5 MW < x < 100MW	- ≤ 5 MW
		Energy-efficient lighting and cooling	Fuel cell	EIS: - ≥ 100 MW	IEE Checklist: - 5 MW < x < 100MW	- ≤ 5 MW
		EV	Fuel cell	EIS: - ≥ 100 MW	IEE Checklist: - 5 MW < x < 100MW	- ≤ 5 MW



Country	Impact Type	Climate Technologies (Illustrative)	Project /Activities	Risk Categorisation by Country Safeguard System		
				High Risk	Medium Risk	Low Risk
		Methane capture facility	Waste-to- energy - biogas projects		EIS: - ≥ 5 MT IEE Checklist: - $1 \text{ MT} < x < 5 \text{ MT}$	- $\leq 1 \text{ MT}$
		Methane recovery from sanitary landfills	Materials receiving and recovery facilities (for paper, plastics and other materials)	-	IEE Checklist: - with composting facilities $> 3,750 \text{ MT}$ annual rated/production rate	$\leq 3,750 \text{ MT}$ (Compost annual production rate) or no composting facilities (material segregation /Sortingonly)
	Adaptation	Artificial reefs	Fishery/aquaculture Projects using fresh or brackish water including pearl farms and similar activities	EIS: - $\geq 25 \text{ Ha}$	EIS: 5 Ha IEE Checklist: $1 \text{ MT} < x < 5 \text{ MT}$	$\leq 1 \text{ Ha}$ or seaweed farming
		RE-powered portable septage treatment	Domestic wastewater treatment facility (including septage treatment facility)		EIS: $\geq 5,000 \text{ m}^3$ EE Checklist: $30 \text{ bm}^3 < x < 5,000 \text{ bm}^3$	$\leq 30 \text{ bm}^3$
		Off-grid RE and battery storage for climate disaster vulnerable regions	Substation / switchyard		- $> 220 \text{ KV}$	$\leq 220 \text{ KV}$
		Small scale RE-powered water desalination systems	Water supply projects (without dam)		EIS: - With water source(e.g. infiltration gallery, etc.) and water treatment facilities including desalination, reverse osmosis (RO) IEE Checklist:	Level II / Level I water refilling station



Country	Impact Type	Climate Technologies (Illustrative)	Project /Activities	Risk Categorisation by Country Safeguard System		
				High Risk	Medium Risk	Low Risk
					Levels III (Distribution system only)	
		RE-powered postharvest processing	Agricultural plantation (e.g. orchards, including rubber plantation)		EIS: - ≥ 500 Ha IEE Checklist: 50 Ha < x < 500 Ha	- ≤ 50 Ha
Vietnam	Mitigation	High efficient residential lighting	Construction projects for bulb and thermos plants	Capacity: at least 1,000,000 metric tons of products/year	Capacity: 100,000 - 1,000,000 metric tons of products / year	
		Solar PV power plant	Construction projects for - wind power plants, photo-electric power plants, - hydroelectric plants	Plant area: at least 200 hectares	Plant area: from 50 hectares to under 200 hectares	
		Electric powered car	Projects for manufacturing or processing of electrical or electronic equipment and electronic Components	Electronic equipment, electronic Components capacity: at least 500,000 products per year Electrical equipment capacity: at least 500 metric tons of products peryear	Electronic equipment, electronic Components capacity: from 100,000 products per year tounder 500,000 products per year. Electrical equipment capacity: from 100 to under metric tons of products per year	



Country	Impact Type	Climate Technologies (Illustrative)	Project /Activities	Risk Categorisation by Country Safeguard System		
				High Risk	Medium Risk	Low Risk
		Wind power plants	Construction projects for - wind power plants, - photo-electric power plants, - hydroelectric plants	Plant area: at least 200 hectares	Plant area: from 50 hectares to under 200 hectares	
		Conservation and protection of existing natural forest in mountainous areas (<i>*This activity requires identification of the involvement of indigenous peoples, and if there are any indigenous groups present, consultation and obtention of FPIC are required.</i>)	Projects for use of forest land	All specialized forests, protection forests Forest areas: at least 10 hectares Other forest area: at least 50 hectares	Unknown	
			Construction projects for irrigation and water supply and drainageworks for agricultural, forestry and fishery production	Work area: at least 500 hectares	Work area: from 50 hectares to under 200 hectares	
	Adaptation	Plant genetics / breeding	Projects for plant protection product warehouses	Capacity: at least 500 metric tons	Capacity: under 500 metric tons	
			Construction projects for organic or micro-biofertilizer plants	Capacity: at least 10,000 metric tons of products per year	Capacity: from 2,000 to under 10,000 metric tons of products/year	
		Water-efficient irrigation technology	Construction projects for water reservoirs	Reservoir volume: at least 500,000 m ³	Reservoir volume: under 500,000 m ³	
			Construction projects for irrigation and water supply and drainageworks for agricultural, forestry and fishery production	Work area: at least 500 hectares	Work area: from 50 hectares to under 200 hectares	
		New construction projects for sea or river dykes	Length: at least 1,000 m	Length: Under 1,000		



Country	Impact Type	Climate Technologies (Illustrative)	Project /Activities	Risk Categorisation by Country Safeguard System		
				High Risk	Medium Risk	Low Risk
			Projects for water exploitation for business and human resumption	Capacity: (underground water) 5,000 m ³ /day (surface water) 100,000 m ³ /day	Capacity: - (underground water) 500 – 5,000 m ³ /day - (surface water) 5,000 – 100,000 m ³ /day	
			Construction projects for refined water and bottled refined water plants	Capacity: - 2,000,000 litres of water/year	Capacity: - 500,000 – 2,000,000 litres of water/year	
			Construction projects for aquaculture establishments	Water surface area: at least 10 hectares Extensive farming area: at least 50 hectares	Water surface area: at least 5 – 10 hectares Extensive farming area: at least 10 – 50 hectares	



APPENDIX D. Initial E&S Checklist for the Fund Applicant

JV candidates shall fill this Initial CTF E&S Initial Checklist Form and submit it to the CTF together with other supporting E&S documents of the proposed activities/JV enterprises, as relevant. In addition, in case the applicant has already acquired the E&S screening results of the proposed activities and projects by the host country’s authorized entities (e.g. Ministry of Environment etc.) JV candidates need to submit the screening result documents (e.g. TOR, scoping documents issued by the relevant authority of the host country) too.

<CTF Initial E&S Checklist Form for Fund Applicant>						
Applicant Information						
Name of establishment, company or business:						
Type of activity and/or project to be financed:			ISIC Code:			
			Size:			
Contact Person (E&S):			Position held:			
Telephone:		Fax:		Email:		
Location of Activity and/or project proposed for CTF financing						
Surface area (m ²):		Built Area (m ²):		Number of levels:		
Physical address of location:						
Neighbourhood, village or town:						
Previous use of land/evidence of contamination:						
Use of neighbouring land:						
Location – Type of zone (Indicate with X)						
Residential	Commercial	Mixed	Rural	Industrial	Other (Pls specify.):	
Description of the activity and/or project proposed for CTF financing						
Description of the project activities & process(es): (Annex additional sheets if necessary.)						
Country E&S Risk Categorisation						
Has the proposed activity and/or project been screened & categorized its E&S risk by the authorized entity of the country? (Indicate with X)						
YES		NO		UNKNOWN		
[If Yes to Q13] What is the Risk category determined? (Indicate with X)						
<i>*Countries may have different title for high/medium/low risk group of projects/activities. Other countries (e.g. the Philippines) the categorisation is more complicated than the three groupings. If so, pls describe in the [Other:] section.</i>						
High		Medium		Low	Other (Pls specify.):	
[If Yes to Q13] is the Risk n categorisation result document is submitted? (Indicate with X)						



YES		List the submitted doc here (Title/Issuance Date/Issuing Authority)		
		(1)		
		(2)		
		(3)		
NO		Reason for not submitting:_____		
Exclusion Criteria Check				
Does the proposed activity and/or project belong to any of the IFC Exclusion List*? (Indicate with X) * IFC Exclusion List (2007) at: https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/company-resources/ifcexclusionlist#2007	YES	(Pls specify):		Un-known
Are the proposed activity and/or project likely to have adverse impacts on indigenous peoples and communities?	YES			Un-known
Pls explain.				
Initial E&S Risk Screening				
Risk Factors	YES	NO	TBD	
Will the activities involve associated facilities and require further Due Diligence (DD) of such associated facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Please provide a justification of your answer:				
Will the activities involve transboundary impacts including those that would require further DD and notification to affected states?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Please provide a justification of your answer:				
Will the activities adversely affect working conditions and health and safety of workers or potentially employ vulnerable categories of workers including women and children?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Please provide a justification of your answer:				
Will the activities involve children, minor, young and any other vulnerable individuals as employees, beneficiaries and delivery or implementing partners along the supply chain?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Please provide a justification of your answer:				
Will the activities directly cause and indirectly become conducive to the occurrence of any sexual exploitation, abuse, harassment (SEAH)* or bullying in any of the involved parties and individuals? *Definition of SEAH (UN Definition):				



<p>➤ <u>sexual exploitation: any actual or attempted abuse of a position of vulnerability, differential power, or trust for sexual purposes. Includes profiting momentarily, socially, or politically from sexual exploitation of another. Under UN regulations it includes transactional sex, solicitation of transactional sex and exploitative relationship.</u></p> <p><u>sexual abuse: the actual or threatened physical intrusion of a sexual nature, whether by force or under unequal or coercive conditions. It should cover sexual assault (attempted rape, kissing / touching, forcing someone to perform oral sex / touching) as well as rape. Under UN regulations, all sexual activity with someone under the age of 18 is considered to be sexual abuse.</u></p> <p><u>sexual harassment: a continuum of unacceptable and unwelcome behaviours and practices of a sexual nature that may include, but are not limited to, sexual suggestions or demands, requests for sexual favours and sexual, verbal or physical conduct or gestures, that are or might reasonably be perceived as offensive or humiliating.</u></p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>Will the invested activities involve children, young and vulnerable individuals (including women, ethnic minorities etc.) as employees' beneficiaries or delivery partners along the supply chains etc.?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>Please provide a justification of your answer:</p>			
<p>Will the activities potentially generate hazardous waste and pollutants including pesticides and contaminate lands that would require further studies on management, minimisation and control, and compliance to the country and applicable international environmental quality standards?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>Please provide a justification of your answer:</p>			
<p>Will the activities involve the construction, maintenance, and rehabilitation of critical infrastructure (like dams, water impoundments, coastal and riverbank infrastructure) that would require further technical assessment and safety studies?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>Please provide a justification of your answer:</p>			
<p>Will the proposed activities potentially involve resettlement and dispossession, land acquisition, and economic displacement of persons and communities?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>Please provide a justification of your answer:</p>			
<p>Will the activities be located in or in the vicinity of protected areas and areas of ecological significance including critical habitats, key biodiversity areas and internationally recognized conservation sites?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Please provide a justification of your answer:

<p>Will the activities be located in areas that are considered to have archaeological (prehistoric), paleontological, historical, cultural, artistic, and religious values or contain features considered as critical cultural heritage?</p> <ul style="list-style-type: none"> ● If the answer is yes, in cases where cultural heritage is deemed a significant issue, a focused assessment may be necessary even if a full-scale social and environmental impact assessment is not required. Pls consult the country laws and regulations for requirements or contact the GTF Secretariat (& its E&S Safeguard Specialist.) ● In all cases, if the proposed activities involve ground-disturbing activities and/or large-scale changes in hydrological patterns, tangible cultural heritage may be encountered unexpectedly during project construction or operation. Thus a chance-find procedure (*) needs to be established as part of the ESMS. <p><i>* Chance-find procedure is a project-specific procedure that outlines the actions to be taken if previously unknown cultural heritage is encountered. The client will not disturb any chance find further until an assessment by competent professionals is made and actions consistent with the requirements of this Performance Standard are identified. For more details, see Appendix N below.</i></p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Other comments

Pls specify, if there are any other expected impacts of the proposed activity/project:



Supporting documents submitted:

Pls list the documents that are submitted together with this Form

Attachment Doc #1:

Attachment Doc #2:

Attachment Doc #3:



APPENDIX E. Rapid Checklist for the Fund Applicant on the Applicability of IFC PS 7 on Indigenous Peoples (IP)

- This checklist is part of the ESMP for the CTF operation. CTF will not invest in the activities/projects that may generate adverse impacts (*) on the indigenous groups and communities. (* CTF would not invest in any proposed business and activities that may require free, prior, and informed consent (FPIC) as defined by GCF Indigenous Peoples Policy (2019), esp. in Section 7.2.)
- The Fund applicant shall fill in this form and submit to the CTF Secretariat together with the other funding proposal packages.

Pls also refer to Appendix O, the CTF Indigenous Peoples Planning Framework (CTF IPPF) as a guidance for a Fund applicant to prepare its proposal business/enterprise for CTF financing in line with the key principles of the GCF IPP (2018) and GCF Operational Guidelines: IPP (2019). Based on the submitted content, the CTF E&S Safeguard Specialist will review to assess the applicability of the proposed project/activities for CTF financing approval to IFC PS 7 on Indigenous Peoples (IP). CTF E&S Safeguard Specialist may request the Fund applicant further information

- In filling in this form, the Fund Applicant can contact the CTF Secretariat/E&S Safeguard Specialist to:

*[*Contact info shall be presented later.]* for clarification and guidance.



“IP Checklist” for the Fund Applicant

Title of the Proposed Project:

Prepared & submitted by:

Submission Date (Year/Month/Date): _____/_____/_____

Pls answer to ALL the questions on the list.

Q 1. Would the proposed activities/project affect Indigenous Peoples (IPs, *)?

*(*For guidance to determine whether the project has IP as potentially affected group, pls see: GCF Indigenous Peoples Policy (2018) & GCF Operational Guidelines: Indigenous Peoples Policy (2019), IFC PS 7, esp. Para 5~7 & IFC PS 7 GN 6~GN 8.)*

Pls check with IP specialist to answer these.

- Yes
- No
- Don't know

If “Yes”,

- ① Name of the concerned group(s): _____
- ② Approximate population size: _____
- ③ Locations & land (& other natural resources) the group or communities are attached to: _____

If “Yes,” (Pls tick all that apply & elaborate.)

- Indigenous Peoples’ identity and dignity (*) / Pls elaborate.

(* Article 15 of the UNDRIP⁴⁴ states that “Indigenous peoples have the right to the dignity and diversity of their cultures, traditions, histories and aspirations [...].” The International Labour Organization (ILO) Convention No. 169(1989)⁴⁵ also focuses on the rights of indigenous and tribal peoples, emphasizing respect for their cultures, traditions, and institutions, and the promotion of their full participation in all matters that concern them. Thus, in all preparatory and execution of the proposed projects/activities, the applicant needs to acknowledge the concerned indigenous peoples’ unique history, identity and contribution to society and affirm and respect their rights to maintain and practice their traditional way of life. Also, the dignity of indigenous peoples also reflects a commitment to upholding their human rights of the indigenous peoples.)

- Access to indigenous traditional land and water, territory and resources / Pls elaborate.

- Environmental Impacts on indigenous traditional land, territory and resources/ Pls elaborate.

44 United Nations Declaration on the Rights of Indigenous Peoples, 2007 (61/296)

45 Indigenous and Tribal Peoples Convention, 1989 (No.169)



	<p>_____</p> <p><input type="checkbox"/> Sacred sites/ Pls elaborate.</p> <p>_____</p> <p><input type="checkbox"/> Natural resource-based livelihoods, / Pls elaborate.</p> <p>_____</p> <p><input type="checkbox"/> Food security /Pls elaborate. _____</p> <p><input type="checkbox"/> Cultural survival/ Pls elaborate.</p> <p>_____</p> <p><input type="checkbox"/> Others (e.g. Transmission, promotion and protection of indigenous peoples' knowledge and technology)/ Pls elaborate.</p> <p>_____</p> <p><input type="checkbox"/> Access to genetical resources, traditional knowledge and other intangible cultural heritage etc.)/ Pls specify:</p> <p>_____</p> <p>_____</p> <p>If "I don't know", pls check with IPs specialist. to answer this.</p>
Q 1.1. Do the activities areas of influence (AoI) have the presence of any IP groups and communities?	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know	<p>If Yes, Does the concerned IP group or communities occupy (pls tick as appropriate)</p> <p>① the entire AoI? (), or,</p> <p>② only partial AoI? ()</p> <p>If "I don't know", pls consider involving IP expert to answer this.</p>
Q1.2. Does the supply chain of the proposed activities include any IP groups and communities?	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know	<p>If Yes, pls explain. _____</p> <p>If "I don't know", pls consider involving IP expert to answer this.</p>
Q1.3. [Other than Q1.1 & Q1.2] [how] would the proposed project/activities affect negatively or positively the groups and communities of indigenous peoples?	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know	<p>If "Yes", pls elaborate. _____</p> <p>If "I don't know", pls consider involving IP expert to answer this.</p>
Q1.4. Does the concerned group identify themselves as indigenous?	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know	<p>If Yes, pls elaborate.</p> <p>_____</p> <p>If "I don't know", pls consider involving IP expert to answer this.</p>



<p>Q2. Would the proposed activities/project require that indigenous peoples are consulted and the obtention of the Free, Prior and Informed Consent (FPIC) of the affected communities of indigenous peoples?</p> <p><i>(*For meaning of FPIC, pls see: GCF IPP Section 7.2, IFC PS 7 Para 12. And GN 25./ For circumstances where FPIC isrequired, see IFC PS 7 para 13~17 & IFC PS 7 GN 24~GN 26.)</i></p> <p><i>Pls check with IP specialist to answer these.</i></p>	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know	<p>If "Yes", pls elaborate. _____</p> <p>If "I don't know", pls consider involving IP expert to answer this.</p>



APPENDIX F. E&S and Gender/SEAH Screening Form for CTF E&S Manager (ESM)/ESGCT

ESGCT of CTF will fill this Form after checking all the E&S assessment and other study documents submitted by the JV candidates. ESM may contact the JV candidates for further checks and if deemed necessary, conduct the field visits and consultation with the JV candidates and/or other stakeholders.

Screening Form filled by ESM of CTF will be submitted to CTF’s relevant committee’s review prior to the IC’s approval decision.

CTF E&S Screening Form			
Project Name:	Country:	Project ID:	Exclusion List Screening (<i>Per IFC Exclusion List / See Appendix A of this ESMS</i>): Y / N
			Provisional Risk Categorisation A / B / C
E&S Appraiser:	E&S Approval:	Date of Review:	Project Status: Proposed / Construction / Operation
Proposed Investment:			TA to be Provided: Y / N
<p>Brief Project Description:</p> <p>Summary of potential E&S, gender/SEAH Issues:</p> <p>At appraisal the key issues were identified as:</p> <ul style="list-style-type: none"> • • • • 			



Issue	Questions used to assess the potential EHS risks and determine the overall risk category	Risk H/M/L or N.A.	Risk Justification
ENVIRONMENTAL ISSUES			
Area of Influence	Does the project have a large area of influence and have all associated facilities including the Right-of-Way (ROW) for any transmission lines been assessed?		
Pollution	Potential for causing significant pollution of air, soil or water.		
Habitat loss and impact on biodiversity	Is the project expected to result in a change in land use e.g. forest to agricultural, agricultural to more intensive agricultural/industrial? Will this involve land clearance and/or the risk of water pollution? Use of or impact on particularly fragile areas such as wetlands?		
Resource use	Is the consumption of water or disposal of aqueous effluent likely to significantly impact on other users of this supply?		
Natural Resources	Is the project expected to cause any of the following? <ul style="list-style-type: none"> ✓ Land Erosion ✓ Fish stocks decline ✓ Deforestation ✓ Land reclamation 		
Supply chain	Are materials from sustainable sources?		
Contaminated land	Is there any potential risk of contamination of land from past activities on site (agricultural & industrial)? Are tanks banded? What is the standard of storage of drums? Are there obvious leaks? Paper/Plastic general disposal? Industry/Chemical Waste disposal? Organic Waste Contamination? unsafe/contaminated water? Are there any records of the grievance and dispute related to water and land contamination related to the applicant entity's previous activities/projects of similar kind (as the application)?		



SOCIAL, GENDER/SEAH ISSUES			
Substantial job losses	Are substantial job losses or economic displacement expected to arise from the project or restructuring of the investment? Or have they occurred already as a result of the project?		
Project and Associated facilities, area of influence and TLs: Resettlement	<p>Will the project’s construction or operations result (or have already resulted) in resettlement or economic displacement of people, involuntary or otherwise? If so, was there/will there be a RAP/Livelihood Restoration Plan (LRP)? Was compensation given? Has this been monitored? Are there any outstanding claims/liabilities?</p> <p>If indigenous peoples were involved, was their FPIC obtained? Did an appropriate, meaningful redress mechanism set?</p>		
Stakeholder concerns	<p>Are stakeholders (including indigenous peoples and NGOs) currently expressing any concerns about the project or any of the proposed investors/contractors? Are such concerns likely?</p> <p>Does the entity have a working GRM mechanism? Does the entity actively address the lodged grievances, striving to resolve them?</p>		
Exploitation of labour	<p>Is there a risk that the project would not be constructed/operated in line with fundamental ILO conventions/PS2 requirements? e.g. child or forced labour, discrimination, refusal to allow freedom of association and collective bargaining</p> <p>Does the entity have any past records of labour right violations in the past? Any related lawsuit ongoing or concluded with the entity being guilty in the past 5 years</p>		
Indigenous peoples	<p>Will/has the project affected, negatively or positively, indigenous peoples? Have they been properly consulted? Has their Free, Prior and Informed Consent (FPIC) been obtained? Is there Broad Community Support for the project?</p> <p>*See Appendix E for details.</p>		



Cultural Heritage	Is the project in allocation that affects or is likely to significantly affect cultural heritage?		
SEAH	<p>Is the project regarded as an investment activity that may place sizable minor, young and/or vulnerable individuals as employees, beneficiaries or delivery/implementing partners along the value chain of the proposed project/activities? Does the entity have poor performance records in SEAH in the past?</p> <p>Does the country have laws prohibiting sexual harassment / stalking generally? / Do labour laws prohibit sexual harassment in the workplace?</p> <p>Will there be an influx of male workers into the project area (as opposed to only using local labor)?</p>		



APPENDIX G. E&S Management Capacity Assessment Template

JVs and any other applicant entities whose proposed projects/activities have been categorized as B, or C with selective outstanding risk concerns on a particular matter, shall be assessed its E&S and Gender and shall be required to provide supporting documents by the ESM of the CTF for assessment. In this process, the CTF may call for an interview with the focal point of the JV candidates, visit the entity’s operation sites or request for validation by third parties, if deemed necessary.

This Template can be used for any (primarily global but also local) applicant entity for the CTF at the Global Acceleration State (Component 2 of the Programme), or any JV for applying for the CTF at the funding application stage (Component 3 of the Programme).

E&S Management Analysis (for completion by the analyst)					
Branch and Country:			Applicant Entity/JV ID:		
Name of Applicant Entity/JV:					
Category: B / C					
Indicate with an X the current situation of the activity and/or project to be financed. *IP = in process; N/A = not applicable					
Section 1. Health and Safety Risk					
Topic	Issues	Yes	IP*	No	N/A*
Consultation with workers	Is occupational health & safety included in workforce consultation?				
Inspections	Are there regular and effective health and safety inspections and compliance checks?				
Pending Prosecution	Is there any previous or pending prosecution relating to breach of health and safety by project sponsors or company?				
H&S Record	What is the current health and safety record of sponsors or companies?				
Communities	Are there any health and safety risks to local community associated with the investment?				
Training programs	Is general and specific safety training provided?				
Lifting of loads	Are mechanical lifting aids provided where necessary?				
Accident reporting and investigation	Are accidents reported? Are statistics maintained? Are investigations carried out?				
Maintenance schemes	Is there a program for preventative maintenance?				
Machinery safety: guards and	Are machinery guards fitted? Is the workplace tidy? Is lighting adequate?				



electrical					
Permit to work system	Is a “permit to work” system used to ensure that equipment is safe before maintenance is started?				
Electrical safety, overhead lines, cabinets	Is the electrical installation of a reasonable standard? Are electricians trained? (IEE standards)				
Fire and explosion hazards	Are there fire and explosion hazards such as dust (flour, sugar), LPG, fuels, and solvents? Is there an alarm system? and is firefighting equipment provided (adequate water supply, extinguishers)? Where will contaminated fire water drain to?				
Transport of people and materials	Is there a required standard for company drivers? Are there medical and competence tests?				
Toxic dust, fumes	Are hazardous chemicals/materials (e.g. solvents, dusts, asbestos, pesticides) used and are workers exposed to them?				
Personal protective equipment provision	Is protection/ventilation/extraction installed or is appropriate personal protective equipment provided?				
Noise levels	Does the noise exposure of employees exceed 85 dB(A)? If so, are earmuffs or plugs provided and worn?				
First Aid provision	Is first aid equipment provided? Are there trained First Aiders?				
Health surveillance plans	Are pre-employment and routine medicals (e.g. hearing loss, chemical exposure, lung function) carried out where necessary?				
Emergency plans and drills	Are fire/safety drills carried out? Are there emergency plans for on-site and off-site incidents?				
Section 2. Environmental Risk					
Applicable Laws	Local environmental laws, standards and regulations applicable to the investment. Have project sponsors or companies obtained relevant up-to-date environmental permits and certifications? Relevant international environmental standards? Use of EHS Guidelines?				
Risk Management	What is the process for identifying, mitigating and managing environmental risks?				



Water quality	Is the consumption of water or disposal of aqueous effluent likely to impact on other users of this supply? Source/s & quantity of water required? Treatment of effluent or discharged to public sewer?				
Environmental Track Record	Have there been any reported environmental incidents with the project sponsors or company in the last 5 years? If yes provide details.				
Biodiversity	Has the transaction identified and addressed all biodiversity impacts of its operations through an environmental impact assessment?				
Resource Conservation	Are records and targets for energy and other resource use?				
Local air quality	Is the air quality at the workplace, on the site and surrounding area satisfactory? Dust, other emissions or fumes from vehicles, plant or equipment? Effective mitigation systems are installed?				
Ozone depletion	Are Chlorofluorocarbon (CFC) used in refrigeration or air-conditioning systems? Alternatives considered?				
Hazardous substances	Are hazardous substances involved in the process? Are they managed effectively? Are PCBs present in transformer oils? Tanks banded?				
Solid waste	Waste minimisation Programme: recycling, reuse of packaging material?				
Contaminated land	Are there signs of contamination of land from past activities on site (agricultural & industrial)?				
Amenity impact	Are there noise or other nuisances?				
Section 3. Social Risk					
Low Wages	Are wages at or around the level of the minimum wage? Likely to fall below the level sufficient to meet basic needs?				
Communities Development	Does the investment contribute to any community development Programmes through financial donations or in other ways? What impacts may the company's activity have on local communities, indigenous peoples and other stakeholders?				
Policy	Effective Human Resources policy in place?				
Contracts	Are proper labour contracts in place for staff?				



Consultative Workplace Structures	Is there an effective grievance mechanism?(Particular care required in countries with legislation restricts trade unions.)				
Child labour	Children under 18 employed? If so, for whatkind of work and how old are they?				
Discrimination	Does the company discriminate on the basis ofgender, race, colour, disability, political opinion, religion or social origin?				
Forced labour	Is any of the work extracted under threat of force or penalty e.g. does the employer holdworkers' identity documents?				
Retrenchment	Are job losses expected to arise from the investment (e.g. privatisation, restructuring)?				
Access to facilities or services	Standard of existing or proposed facilities orservices – housing, education, health, food, water?				
Non-Local Work Force	Will the business (or sub-contractors) import a nonlocal workforce requiring accommodationand access to facilities for a period of more than 3 months?				
SEAH	<p>Does the project have a Code of Conduct prohibiting SEAH by workers? Does the project plan to train all project workers on the Code of Conduct, SEAH and what is prohibited behaviour?</p> <p>Are recruitment procedures in place, with interview panels staffed by at least two people?</p> <p>Does the project have a GRM for community members to raise SEAH-related complaints and concerns and is it confidential and survivor-centred, with multiple reporting channels?</p> <p>Are there written procedures for dealing with SEAH complaints or concerns and a dedicated and trained female staff member to deal with these (if no specialist is available)?</p> <p>Has the community been informed about potential SEAH risks for the project and how to prevent them and use the GRM?</p> <p>Will separate facilities for men and women be provided at all work sites?</p>				
Resettlement/ economic displacement	Are people being moved from or excluded from the site of the investment, particularly on an involuntary basis? If this involves indigenous peoples, have they been consulted? Have they given their FPIC to be resettled and has a redress mechanism been set?				



Value Chain	Has an assessment been undertaken to understand exposure of the operation and value chain (supply chain, distribution) to climate hazards?				
Indigenous Peoples <i>(* For definition and identification of Indigenous Peoples, see Para 14 and 15 of the GCF Indigenous Peoples Policy (2018).)</i>	Would the proposed enterprises/businesses/activities affect indigenous peoples positively?				
	Would the proposed enterprises/businesses/activities affect indigenous peoples negatively?				
Cultural property	Does the investment affect a religious, ancestral or indigenous site, or natural resources ascribed by local people with cultural/sacred significance?				
Name and signature of analyst or consultant:					



APPENDIX H. CTF Environmental and Social Review Summary (ESRS)

Based on the submitted E&S documents by the JV candidates, CTF shall prepare ESRS of the applicant project/activities. ESM and EAC will produce ESRS for the Preliminary and main IC’s Funding decision making. The document also covers gender and SEAH assessment summary.

ESRS Project Number: _____

Country:Project:

Environmental Category **B / C**

Date:

A. Project Description

B. E&S Categorisation

C. Applicable Standards

While all Performance Standards are applicable to this investment, based on current information the investment will have impacts that must be managed in a manner consistent with the following Performance Standards:

- *PS1: Assessment and Management of E&S Risks and Impacts*
- *PS2: Labour and Working Conditions (incl. SEAH)*
- *PS3: Resource Efficiency and Pollution Prevention*
- *PS4: Community Health, Safety & Security (inc. SEAH)*
- *PS5: Land Acquisition and Involuntary Resettlement*
- *PS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources*
- *PS7: Indigenous Peoples*
- *PS8: Cultural Heritage*

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D. Key Documents and Scope of E&S Review

An ESDD site visit was conducted by an environmental/social/gender/SEAH specialist (Name) in (Date). The site visit included visits to the project facilities and associated facilities and project-affected persons. Meetings were conducted with representatives of ##, representatives of Indigenous Peoples and affected communities.

In addition to the DD site visit, the following documents were reviewed by ESM (Name):

- ESIA
- Feasibility Study Report
- Gendre Assessment and Gendre Action Plan
- SEAH Assessment and SEAH Action Plan (as applicable)
- Others: _____

These documents adequately assess the environmental/social/gender/SEAH risks and impacts of XX Project and provide a soundbasis for the proper mitigation of the environmental/social/gender/SEAH risks and impacts posed by this Project.

E. Key Issues and Mitigation

- PS1: Assessment and Management of E&S Risks and Impacts

- *Social and Environmental & Social/ Gender and SEAH Assessment:*
- *Management Program:*
- *Monitoring and Reporting:*
- *Organisational Capacity:*
- *Others:*

- PS2: Labour and Working Conditions

- *HR Policy and Procedures:*
- *Occupational health and safety:*
- *Worker training:*
- *Gendre and SEAH conditions (country/society/community/project design levels)*
- *Others:*

- PS3: Resource Efficiency and Pollution Prevention

- *Construction Phase:*
- *During operation:*
- *Others:*



<ul style="list-style-type: none"> • PS4: Community Health, Safety & Security
<ul style="list-style-type: none"> - <i>Construction and Operation:</i> - <i>Security Arrangements:</i> • <i>Gender and SEAH conditions (country/society/community/project design levels)</i> - <i>Others:</i>
<p>PS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources</p>
<ul style="list-style-type: none"> - <i>Environmental Permitting Process and Community Engagement:</i> - <i>Others:</i>
<ul style="list-style-type: none"> • PS7: Indigenous Peoples
<ul style="list-style-type: none"> - <i>Adverse Impacts on Indigenous Peoples: (Land, water and natural resources subject to traditional ownership or under customary use/IP's relocation/cultural heritages etc.):</i> - <i>Need for formal free, prior, informed consent (FPIC) acquirement (host country's legal requirements & requirements of the GCF Indigenous Peoples Policy (2018) etc.):</i> - <i>Application of the Indigenous-led Technology:</i> - <i>Consultation, Participation and inclusion of indigenous people in the design of the proposed business/activities :</i> - <i>Others (identity, dignity, cultural, historical, spiritual and economic values, lifestyles etc.):</i>
<ul style="list-style-type: none"> • PS8: Cultural Heritages
<ul style="list-style-type: none"> - <i>Screening results & country regulations:</i> - <i>Chance-find procedures:</i> - <i>Others:</i>



APPENDIX I. CTF Preliminary Investment Committee (PIC) Meeting Template (E&S, Gender/SEAH Part)

Once the Overall-program wide-PIC Meeting Template is designed and confirmed, the contents below shall be added as a sub-section to the Template to review and consider the E&S part before making investment-related decisions without omission.

Final Investment Decision Meeting Form			
Project Name	Country	Project ID:	Negative Selection (IP): Cleared/ Not cleared
			Exclusion List Screening: Cleared/Not cleared
E&S Appraiser:	E&S Approval: Y / N IF YES: With conditionalities - > Fill in the Section below: “Conditionalities for ESMP”)	Date of ESRS submission;	Project Status: Proposed / Construction / Operation
Proposed Investment:			TA to be Provided: Y/ N
SECTION 1. GENERAL DESCRIPTION			
1.1. Brief Project Description: <ul style="list-style-type: none"> • • • 			
1.2. ESIA/IEE/ESMP/GA & GAP (incl. SEAH) Prepared and in compliance with IFC PSs?			
1.3. ESMP Prepared and agreed by the Programme’s ESM, and investees? Contractor/ operator?			
1.4. All relevant licenses and permits in place (including environmental permits, ESIA approval by the relevant authority of the host country)?			
1.5. Summary of potential E&S and genderSEAH Issues (taken from the ESRS – attached to this document):During investment appraisal, the key issues were identified as:			
<ul style="list-style-type: none"> • 			

1.6. Has an ESAP for the project been prepared (& attached)?

1.7. If so, has it been agreed and signed-off by the contractor / operator and other relevant delivery/implementing partners along the value chain?

1.8. Has E&S Specialist (CTF internal or external) confirmed that E&S risks can be managed in accordance with the Programme's E&S Policy and relevant standards, as stipulated in the CTF ESMS?

1.9. Has Gender/SEAH specialist (CTF internal or external) confirmed that any gender and SEAH related risks can be managed in accordance with the CTF Gender Policy and relevant standards, as stipulated in the CTF ESMS?



SECTION 2. CONDITIONALITIES FOR ESAP

2.1. If the Committee agreed to approve with some conditionalities on E&S, gender/SEAH management, list them below:

2.2. Suggest other recommendations.

APPENDIX J. Indicative Outline of ESIA for Category B Projects of CTF

- Executive Summary
- Legal and Institutional Framework
- Project Description
- Baseline Data
- E&S (incl. SEAH) Risks and Impacts
- Mitigation measures
- Analysis of Alternatives
- Key measures and Actions for the E&S commitment plans (incl. SEAH)
(For more details, see WB ESF ESS 1- Annex 1. D. Indicative Outline of ESIA/
<https://www.worldbank.org/en/projects-operations/environmental-and-social-framework/brief/environmental-and-social-standards>)
- (For more details on SEAH risk assessment and mitigation planning, See: GCF Sexual Exploitation, Abuse and Harassment (SEAH) risk assessment guideline (2023)/
<https://www.greenclimate.fund/sites/default/files/document/gcf-seah-risk-assessment-tool.pdf>)



APPENDIX K. Indicative Outline of Environmental and Social Management Plan (ESMP) for Category B Projects of CTF

- Mitigation measures and actions
- Monitoring
- Capacity Development and Training
- Implementation Schedule and Cost Estimates
- Integration of ESMP with Project

(For more details, see WB ESF ESS 1- Annex 1. E. Indicative Outline of ESMP/
<https://www.worldbank.org/en/projects-operations/environmental-and-social-framework/brief/environmental-and-social-standards>)

- All the components of the ESMP above shall also reflect, as appropriate SEAH mitigation, and monitoring plans. For more details, pls refer to:
 - (1) GCF 2023. Sexual Exploitation, Abuse and Harassment (SEAH) risk assessment guideline, and:
 - (2) IFC 2020. Addressing Gender-Based Violence Harassment
 - (3) World Bank. 2020. Addressing Sexual Exploitation and Abuse and Sexual Harassment (SEA/SH) in Investment Project Financing Involving Major Civil Works (Second edition). Washington, DC).
 - (4) ADB, 2022. Good Practice Note on Addressing Sexual Exploitation, Abuse, and Harassment in ADB-Financed Projects with Civil Works (sddirect.org.uk)

APPENDIX L. Minimum Elements of a Resettlement Plan (RP) for Category B Projects of CTF

- The project Components or activities that give rise to displacement, explaining why the selected land must be acquired for use within the timeframe of the project
- The zone of impact of such Components or activities
- The scope and scale of land acquisition and impacts on structures and other fixed assets
- Any project-imposed restrictions on use of, or access to, land or natural resources (For the project that requires FPIC in this process, would not be eligible for the Programme (per CTF Investment Criteria, thus not applicable.)
- Alternative considered to avoid, minimise displacement and why those were rejected; and
- The mechanisms established to minimize displacement, to the extent possible, during project implementation.

To check the applicability of each of the above-listed items, pls check with IP specialist.



APPENDIX M. Environmental and Social Commitment Plan (ESCP): Outline

ESCP is a formal agreement document between the CTF and the JV (or any other CTF) Applicant containing the material measures and actions required for the CTF Applicants (and the associated parties therewith) to meet the environmental and social conditions during the implementation of the funded activities (or any further timeframes beyond). This is a legal agreement as part of the CTF fund (contractual) agreement package.

CTF Secretariat will conduct E&S due diligence in the course of the agreed time frame of the implementation of the approved fun activities/subprojects. The Applicant (and executing entity) of the CTF funded activities is obliged to report the status of implementation of the ESCP as part of its monitoring and reporting.

The draft ESCP shall be disclosed as early as possible to the CTF Applicants during the appraisal stage of the Fund application package before finalization. The Applicant shall be given the consultation opportunities with the CTF Secretariat regarding the timeline and more concrete measures to address the proposed conditions and requirements. In case the Applicant's actions are found to be ineffective, the CTF has a right to exert its own measures to correct or remedy the circumstances.

The ESCP shall also include the provision on the process for the adaptive management of the proposed project changes (e.g. changes in the design of a project) and unforeseen circumstances. A project will not be considered complete until the measures and actions set out in the legal agreement (including the ESCP) have been implemented.

The content of the ESCP shall include the following:

- An accurate summary of the material measures and actions (with timing and monitoring) to address the potential environmental and social risks and impacts of the project in accordance with the mitigation hierarchy.
- Funding and implementation mechanism with organizational structure (with specific roles and responsibilities of excuting parties) to be made available for completion of a measure or action
- A process that allow for adaptive management of proposed project changes or unforeseen circumstances.

Depending on the nature of the project, the ESCP can also include:

- Training and capacity building activities
- Self- and third-party monitoring plan
- Additional plans (that are already existent or to be prepared (e.g., an ESMP, a resettlement plan, a hazardous waste plan) which set out detailed project requirements, with each plan's key features

APPENDIX N. Chance-Find Procedure

Chance-find procedure is a project-specific procedure that outlines the actions to be taken if previously unknown cultural heritage is encountered. If the proposed activities involve ground disturbing activities and/or large-scale changes in hydrological patterns, tangible cultural heritage may be encountered unexpectedly during project construction or operation. Thus, a chance-find procedure needs to be established as part of the ESMS.

The client will not disturb any chance find further until an assessment by competent professionals is made and actions consistent with the requirements of this Performance Standard are identified.

The applicant shall check the laws and regulations of the host country for the land clearance as well as the environmental permit, which requires the clearance of the proposed land from being or in a certain designated distance from any culturally, historically and naturally significant, critical and conservation areas. (※ See the table far below for the five target countries' national heritage authorities and the relevant laws.)

In addition, the CTF adopts the GCF Safeguard policy which requires the observance of the IFC Performance Standard 8 on Cultural Heritage⁴⁶. Following is the general guidelines for establishing a Chance-find procedure from the IFC PS 8 Guidance Note (Annex B on Procedure Guidance)⁴⁷.

In principle the CTF shall not invest in any proposed activities which incur significant impacts on cultural heritage. The Applicant is encouraged to contact the CTF Secretariat and its E&S Safeguard Specialist for any clarification and further guidance.

Box. Key Consideration for Cultural Heritage Management & Chance-Find Procedure Establishment & Implementation>

1. **Include initial assessment of the potential cultural heritage impacts as early as possible.** – In FS and country E&S Screening and ESIA process, initial screening needs to be included with a standard chance-find procedures per the country's laws and regulations as part of its ESMS.
2. Indicate any potential trigger for significant impact on cultural heritage, as indicated by the country system: In case any significant potential impacts on cultural heritage is identified, and thus the national heritage authority requires a stand-alone expert cultural impact assessment, the Applicant shall inform this to the CTF Secretariat by including the relevant information in the application submission forms (incl. APPENDIX D. Initial E&S Checklist for the Fund Applicant and E&S document (ESIA or IEE or cultural impact assessment report, as relevant)). In this process, the Applicant need to closely consult the national heritage authority and ensure the compliance with the country's requirements, involving expert.
3. Preservation of the cultural heritage site through relocation of the project is preferred in general.: Unlike most other environmental resources, direct impact to heritage is typically localized to the area of project construction activity, making a project's area

⁴⁶ <https://www.ifc.org/content/dam/ifc/doc/2010/2012-ifc-performance-standards-en.pdf>

⁴⁷ <https://www.ifc.org/content/dam/ifc/doc/2010/2012-ifc-performance-standards-guidance-note-en.pdf>

of influence more geographically limited than for other resources such as critical habitat, a natural water supply, or endangered species. Thus, it is often possible to avoid impacts to heritage by minor project design changes. Because cultural heritage is non-renewable, its protection is best accomplished by “preservation-in-place.”

<Table. National Heritage Authority and Relevant Laws of the Five Host Countries>

Country	National Heritage Authority	Laws & Regulations
Cambodia	Ministry of Culture and Fine Arts (MCFA)	<ul style="list-style-type: none"> - Resolution on the Protection of cultural heritage (1992) - Royal Decree Establishing the Supreme Council on National Culture (1995) - Law on Protection of Cultural Heritage (1996) - Article 8 of Law on Customs (2007)⁴⁸ - Bilateral agreements, prohibiting illegal destruction, modification, and unauthorized trades, with following countries: (1) Ecole française d'Extrême-Orient (1956), (2) Thailand (2000), and (3) the United States of America (2008)
Indonesia	Ministry of Education, Culture, Research, and Technology (Kemendikbudristek) Cultural Heritage Preservation Agency (Badan Palestinian Cagar Budaya - BPCB)	<ul style="list-style-type: none"> - Act No. 5 of 1992 on Heritage Objects (1992) - Compilation of law and regulation of the Republic of Indonesia concerning items of cultural property (2003) - Ministerial Regulation of No. 48 of 2009 on Guidelines for Management of Underwater Heritage Culture and Tourism (2009) - Law of the Republic of Indonesia Number 11 of 2010 Concerning Cultural Conservation (2010)
Lao PDR	Ministry of Information and Culture (MIC)	<ul style="list-style-type: none"> - Decree on the Conservation of National Cultural, Historical and Natural Heritage (1997) - Decree of President on Promulgation of the Law on National Heritage (2005)
Vietnam	Ministry of Culture and Information Ministry of Culture, Sports and Tourism (MOCST) National Council for Cultural Heritage	<ul style="list-style-type: none"> - Law on Cultural Heritage (2001) - Decree 92/2002 on Detailed Regulations to Implement Some Articles of the Law on Cultural Heritage (2002)

⁴⁸ The Law on Customs, promulgated by the Minister of Economy and Finance, designates specific goods as specially designated items and imposes extra regulations on their transportation, movement, storage, and ownership to combat smuggling and fraud. Article 8 notably prohibits the import and export of certain goods for specific purposes as follows: "[...] The protection of health and life of persons, animals or plants; The protection of national treasures of artistic, historic or archaeological value; The conservation of natural resources; [...] and the fulfilment of obligations under the Charter of the United Nations." Council for the Development of Cambodia (CDC), "Trade and Custom," *CDC Official Website*, <https://cdc.gov.kh/laws-and-regulations/trade-and-custom/>.



Philippines	National Commission for Culture and the Arts (NCCA)	<ul style="list-style-type: none">- Presidential Decree No. 374 amending certain sections of Republic Act No.4846 (1974)- National Museum Act of 1998 (1998)- National Cultural Heritage Act of 2009 (2009)⁴⁹
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⁴⁹ The LAWPHiL Project, "Philippine Laws and Jurisprudence Databank," ARELLANO LAW AROUNDATION, https://lawphil.net/statutes/repacts/ra2010/ra_10066_2010.html.



APPENDIX O. CTF Indigenous Peoples Planning Framework (IPPF)

Indigenous Peoples Plan Framework (IPPF)



GAIA CONSULT INC.
(주)가이아컨설팅

June 2024

1. Background & Objectives

The purpose of this IPPF is to provide the guiding principles, standards and requirements related to the indigenous peoples (IP) issues in the CTF-financed JV and other types of the enterprises/businesses/ activities, in accordance with the Indigenous Peoples Policy (2018) and its Operational Guidelines (2019) of the Green Climate Fund (GCF), a co-financier of the Fund, as well as other relevant international safeguards (such as IFC PS 7 and Guidance Note 7 etc.).

The objectives of the GCF IPP not only underscore the need to avoid the funded activities have an adverse impact on Indigenous Peoples, but also aim to ensure Indigenous Peoples living in the project's areas of influence benefit from the funded activities and recognize their contribution to achieving transformative climate action, including through their knowledge.

In line with this, the Programme has integrated the IP components as part of the N-CEAP Investment Criteria for Local Entrepreneurs (Component 1 of the Programme) and the CTF Investment Criteria (Component 3 of the Programme).

First, the CTF would not invest in any proposed business and activities that may require free, prior, and informed consent (FPIC).

This IPPF aims to assist the developers and CTF applicants to be fully aware of the CTF Investment criteria related to the indigenous peoples (*See Table 1 and Table 2 below).

Applying the IPPF in the business/JV enterprise development from the conceptual and designing stage is strongly recommended. This will eventually enhance the chance for the business proposal to be approved and funded by the CTF, while maximising sustainability co-benefits through the execution of the enterprises and funded activities.

Table 1. N-CEAP Investment Criteria for Local Entrepreneurs related to Indigenous Peoples Issues⁵⁰ (Component 1 of the Programme)

No.	Criteria	Description
	Eligibility Criteria – If not Relevant or Satisfied, to be Screened Out.	
6	E&S Safeguards (ESS)	<ul style="list-style-type: none"> • Initial Negative Screening on E&S Risk - Local entrepreneurs who consider a business defined in IFC Exclusion List and/or a business with adverse impacts on indigenous peoples are NOT eligible.

⁵⁰ The presented content is only part of the N-ECEAP's entire Investment Criteria. For the whole content, see the Funding Proposal.

**Table 2. CTF's Investment Criteria related to the Indigenous Peoples Issues ⁵¹
(Component 3 of the Programme)**

No.	Criteria	Description
Eligibility Criteria – If not Relevant or Satisfied, to be Screened Out.		
6	E&S Safeguards (ESS)	<ul style="list-style-type: none"> • Negative screening [...] - Businesses with adverse impacts on indigenous peoples are NOT eligible for investment, by falling under one of the categories below⁵²: <ol style="list-style-type: none"> (1) Business/enterprises with negative impacts on lands and natural resources subject to traditional ownership or customary use or occupation, including loss of access to assets or resources, or restrictions on land use by Indigenous Peoples. (2) Business/enterprises that result in relocation of Indigenous Peoples from lands and natural resources subject to traditional ownership or under customary use or occupation, or; (3) Business/enterprises that may potentially impact cultural heritage and where the commercial use of the cultural heritage of Indigenous Peoples would need FPIC, as per the GCF Indigenous Peoples Policy).⁵³
Selection Criteria – Scoring Priority (Applicants are encouraged to strengthen their proposal to meet the selection criteria via acceleration)		
8	Co-benefits & Sustainability	<ul style="list-style-type: none"> • Applicants are encouraged to fully deliver the following co-benefits: - Promoting “indigenous-led businesses” to ensure indigenous climate technology and knowledge are fully tapped for the climate technology innovation in the five countries (* <i>Further Indigenous component is also included in Criteria #10 below.</i>)

⁵¹ The presented content is only part of the CTF's entire Investment Criteria. For the whole content, see the Funding Proposal.

⁵² These are three circumstances where the FPIC is required. See Section 7.2 of the GCF IPP (2018).

⁵³ “Cultural heritage includes but is not limited to natural areas with cultural and/or spiritual value, such as sacred groves, sacred bodies of water and waterways, sacred mountains, sacred trees, sacred rocks, burial grounds and sites, as well as the non-physical expression of culture, such as traditions, language, identity, ceremonial, or spiritual aspects of the affected indigenous peoples' lives.” (GCF IPP, Para 63)



10	Indigenous-Led Enterprises	<p>[Prioritisation of Indigenous-led businesses] CTF will prioritise the proposed enterprises and activities meeting the following conditions:</p> <ul style="list-style-type: none"> - Application/combination of Indigenous climate technology (*) for climate tech RD&AB, and/or Commercial benefits of the deployment of the indigenous climate technology are shared with the technology-owning indigenous communities⁵⁴. <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><i>*Indigenous climate technologies refer to traditional practices and knowledge systems that have been developed by indigenous communities over generations to adapt to and mitigate the impacts of climate change. (*For more details, see Box 1 below.)</i></p> </div> <p>[Enterprise dimension]</p> <p>All the CTF investment JVs/activities are encouraged to integrate indigenous-led technology RD&B components, to the extent feasible. If the nexus to indigenous peoples is confirmed, the JVs/activities may need to develop an indigenous peoples plan (IPP), as a stand-alone plan or as an integrated part of the environmental and social management plan (ESMP) of the proposed activities.</p> <p>The CTF will support, as appropriate: monitoring & any other due diligence as appropriate (incl. response/remedial/corrective measures in case of occurrence of unintended adverse impacts per Para 19 of the GCF IPP Guidelines (2019).</p>
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The Programme promotes the development, application, and integration of the indigenous-led climate technologies in the Climate technology RD&B. However, the IPPF notes that the notion of indigenous technology is not fully established and often not recognized by the Intellectual Property Right (IPR) regimes. Notwithstanding, indigenous climate technologies are increasingly being recognized by governments and international organisations as important tools for climate adaptation and mitigation.

⁵⁴ A (mere) expression of the objective of benefiting indigenous peoples in the proposal would not be sufficient unless the aimed objective(s) are concretely materialized in the design of the proposed enterprises/businesses.

[Box 1] Technologies and knowledge of indigenous peoples

The knowledge of Indigenous Peoples can be defined as the skills, know-how, innovations and practices that are passed on from generation to generation in a traditional context and that form part of the traditional lifestyles of Indigenous Peoples and communities (WIPO 2004). The knowledge of indigenous peoples can also be viewed as:

... local knowledge that is unique to a culture or society. This knowledge is passed from generation to generation, usually by word of mouth and cultural rituals, and has been the basis for agriculture, food preparation, health care, education, conservation and the wide range of other activities that sustain societies in many parts of the world. (UNFCCC 2017)

Similarly, in a more climate-related context, the UNFCCC describes the knowledge of indigenous peoples as generally referring to:

... knowledge systems embedded in the cultural traditions of regional, indigenous, or local communities. Traditional knowledge includes types of knowledge about traditional technologies of subsistence, such as tools and techniques for agriculture, ecological knowledge, the climate knowledge, traditional health care and others. (UNFCCC 2018a)

Other definitions developed by indigenous peoples themselves have placed greater emphasis on the biological, cultural, physical, spiritual and sometimes religious aspects of their knowledge and its transmission. They describe such knowledge as a systematic way of thinking, with insights based on evidence acquired through direct experiences and multigenerational observations, lessons and skills. Such knowledge is described as still developing in a living process (ICC 2021) and is considered crucial for subsistence and survival. The non-formal scientific status of the knowledge of indigenous peoples, and the manner in which it is communicated and transmitted, has attracted very little documentation or scientific research (Enda Energie 2017).

The term technologies in this guide is defined as a piece of equipment, technique, practical knowledge or skills to perform a particular activity. It can refer to either hardware (tangible components), software (know-how, experience and practices), or orgware (institutional frameworks or organisation). When it comes to the specific case of indigenous technologies, it can refer to the technological knowledge, skills and resources that are transmitted or handed down from past indigenous peoples to present ones to meet their needs. As such, indigenous peoples' technologies are used by the indigenous inhabitants of a country or region and constitute an important part of their cultural heritage (Gumbo, M. 2014).

(Except from the Global Technology Needs Assessment (TNA) Guidebook: "Indigenous Peoples and Climate Technologies: Acknowledging indigenous peoples' technologies and identifying linkages with Technology Needs Assessments" (2021)⁵⁵

⁵⁵ <https://tech-action.unepccc.org/publications/indigenous-peoples-and-climate-technologies/>

2. Policies

2.1. Criteria for the Identification of Indigenous Peoples

This IPPF adopts the same criteria used by the GCF IPP to refer to Indigenous Peoples as defined in <Box 2> below.

[Box 2] Definition of the Indigenous Peoples

*“the term indigenous peoples is used in a generic sense to refer to a **distinct social and cultural group** possessing the following characteristics in varying degrees:*

*(a) **Self-identification** as members of a distinct indigenous social and cultural group and recognition of this identity by others;*

*(b) **Collective attachment**⁵⁶ to geographically distinct habitats, ancestral territories, or areas of seasonal use or occupation as well as to the natural resources in these areas;*

*(c) **Customary cultural, economic, social, or political systems** that are distinct or separate from those of the mainstream society or culture; and*

*(d) **A distinct language or dialect**, often different from the official language or languages of the country or region in which they reside. This includes a language or dialect that has existed but does not exist now due to impacts that have made it difficult for a community or group to maintain a distinct language or dialect.*

*15. [GCF will] take into account **commonly accepted and applied criteria for identifying Indigenous Peoples**, respecting self-identification as indigenous or tribal as a fundamental criterion for determining the application of this Policy.*

*16. In some countries, such groups are referred to as indigenous peoples. In other countries, they may be referred to by other terms, such as “**Indigenous Peoples and local communities**”, “**local communities**”, [...] “**indigenous ethnic minorities**”, [...] “**ethnic groups**”, “**aboriginals**”, “**hill tribes**”, “**vulnerable and marginalized groups**”, “**minority nationalities**”, “**scheduled tribes**”, “**first nations**”, “**tribal groups**”, “**pastoralists**”, “**hunter-gatherers**”, “**nomadic groups**” or “**forest dwellers**”. Regardless of which terminology is used, the requirements of this Policy will apply to all such groups.*

*17. This Policy applies whenever Indigenous Peoples are present in, have, or had a **collective attachment or right to areas where GCF-financed activities will be implemented**. This includes indigenous peoples who, during the lifetime of members of the community or group, have lost collective attachment to distinct habitats or ancestral territories in the project area because of forced severance, conflict, government resettlement programs, dispossession of their land, natural disasters, or incorporation of such territories into an urban area.*

(Source: GCF IPP Para 14~16)

⁵⁶ For more details, see GCF IPP Operational Guidelines (2019) II. Article 9.

Note whether a state (the central government or by law) officially recognizes a certain group as Indigenous Peoples is NOT relevant to determine whether the group is Indigenous People or not. Nor is it a determinant factor whether a certain group is explicitly called “indigenous” or not, as many groups are called by different names, such as “forest people”, “ethnic minority groups” etc. Rather, a fundamental criterion for identifying Indigenous Peoples relies on their self-identification as indigenous or tribal.

For this, the Fund applicant is expected to fill in and submit the Checklist (Annex E of the ESMS for the proposed Programme). Based on this, the CTF’s IP expert (outsourced or internal) shall investigate the applicable national laws and regulations (reflecting the host country obligation under international law), archival research, ethnographic research as well as participatory appraisal approaches with the group⁵⁷.

2.2. Status of the Indigenous Peoples

GCF IPP (Mar 2018)⁵⁸ recognizes that indigenous peoples often have identities and aspirations that are distinct from mainstream groups in national societies and often among the most economically marginalized and vulnerable segments of the population. Thus, they often suffer limited capacity to defend their rights to, and interest in, and territories and natural and cultural resources. This in turn may have a negative impact on their ability to participate in and benefit from development initiatives and climate change actions. Often the benefits of climate actions are delivered to them neither in an equal nor culturally appropriate manner. Indigenous peoples are often not equally consulted about the design or implementation of activities that would profoundly affect their lives or communities⁵⁹.

All five target countries have people who can be regarded as indigenous peoples. Thus, there is potential for a CTF-funded activities/enterprises may have positive or negative impacts on the Indigenous Peoples in all the target countries.

2.3. Potential for the Indigenous Peoples’ Contribution to Climate Change Actions

Potential for the Indigenous Peoples to contribute to tackling climate change-related challenges lies in their traditional knowledge systems, livelihoods, sustainable resource management systems and practices. To tap into the reservoir of the indigenous knowledge and technologies, engagement of the Indigenous People should be made in a manner that is accessible, rights-based, gender-responsive, culturally appropriate, and inclusive⁶⁰.

GCF IPP aims to promote and respect indigenous peoples’ rights to own, use, develop and control the lands, territories, and resources that they possess by reason of traditional ownership or other traditional occupation or use, as well as those that they have otherwise acquired⁶¹. When an invested activities/enterprises (negatively) affect the indigenous peoples, meaningful consultation⁶², as understood in the GCF Indigenous Peoples Policy should be carried out.

57 GCF IPP Operational Guidelines (2019) II. Article 6. The final applicability of IPP to a specific funded project/activities under CTF shall be determined by GCF.

58 <https://www.greenclimate.fund/document/indigenous-peoples-policy>

59 Selectively quoted from the GCF IPP Para 3.

60 Selectively quoted from the GCF IPP Para 11(a).

61 Selectively quoted from the GCF IPP Para 11(g).

62 GCF IPP explains: “**Meaningful consultation**” refers to a two-way process, that: (a) begins early in the project planning process to gather initial views on the project proposal and inform project design; (b) encourages stakeholder feedback, particularly as a way of informing project design and engagement by stakeholders in the identification and mitigation of environmental and social risks and impacts; (c) continues on an ongoing basis, as risks and impacts arise; (d) is based on the prior disclosure and dissemination of

2.4. Key Principles

IPPF adopts the GCF IPP's guiding principles. For more details, see Para 22 (a)~(h).

2.5. Standards & Requirements

The CTF is co-financed by GCF and KDB. GCF has its own IPP (2018)⁶³ and the Operational Guidelines (2019)⁶⁴. GCF adopted the IFC performance standards as the GCF interim ESS standards until the development of GCF standards. As such the GCF's IPP Operational Guidelines (2019) adopted the IFC performance standard on indigenous peoples (PS 7) and the corresponding guidance on the requirements of the performance standards. These include, among others, reference materials, and on good practices included in the "International Finance Corporation's Guidance Notes: Performance Standards on Environmental and Social Sustainability", especially for PS 7⁶⁵.

KDB, as the GCF's accredited entity, is obligated to comply with the GCF IPP and its Operational Guidelines. As such this IPPF has been developed to ensure the CTF operation is in line with the GCF IPP and its Operational Guidelines as well as related KDB policies and requirements.

Per GCF IPP Section 6.2., KDB as the accredited entity to GCF and a co-financier of the CTF, will ensure FPIC and this IPPF are implemented and properly monitored and reported in all the CTF-financed projects and activities as needed. This KDB will also ensure the CTF-funded activities are compliant with all the applicable laws, including the laws, regulations and standards of the five target countries of the CTF. (*For more details of the five target countries' related laws and regulations, see Chapter 3 of this IPPF below.)

KDB, as GCF's accredited entity and co-financier of the CTF, all the executing entities of the proposed Programme, governments and Indigenous Peoples, should establish ongoing relationship throughout the life of the project. For this, the institutional framework for meaningful consultation as understood in the GCF Indigenous Peoples Policy, need to be established.

relevant, transparent, objective, meaningful and easily accessible information in a timeframe that enables meaningful consultations with stakeholders in a culturally appropriate format, in relevant local language(s) and is understandable to stakeholders; (e) considers and responds to feedback; (f) supports active and inclusive engagement with project affected parties; (g) is free of external manipulation, interference, coercion, discrimination, and intimidation; and (h) is documented and disclosed." (Source: GCF IPP Para 11(m)). Also see GCF IPP Para 51~53: Section 7.1.5 Meaningful consultation tailored to indigenous peoples.

63 <https://www.greenclimate.fund/sites/default/files/document/ip-policy.pdf>

64 <https://www.greenclimate.fund/document/operational-guidelines-indigenous-peoples-policy>

65 International Finance Corporation. 2012. Guidance Note 7 Indigenous Peoples. Available at: https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/publications/publications_policy_gn-2012

3. Legal & Institutional Framework on IP issues in the five target countries

All five countries either had legal, policy frameworks or regulations on Indigenous Peoples. The Philippines officially recognizes the rights of indigenous peoples and provides procedural requirements for the official FPIC process, through the Indigenous Peoples Rights Act (1992) and the National Commission on Indigenous Peoples (NCIP) as a central implementing body. Other countries also recognize and have legal provisions to protect the rights and livelihood of the indigenous peoples through various legal and administrative or policy arrangements. Indonesia and the Philippines ratified the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) and the other countries' associated international treaties and conventions.

Following are key laws and regulations of the five target countries as well as international conventions and treaties the five target countries signed or ratified, in relation to the official recognition and protection of the rights of the indigenous peoples.

3.1. Cambodia

The Cambodian Constitution (1993) ensures all citizens of the country are equally treated without discrimination. The Land Law (2001) recognizes the collective right of Indigenous Peoples to own and use immovable property, particularly land. The law defines an indigenous community as a group of people who share social, cultural, economic, and ethnic ties and practice traditional lifestyles, including collective use of lands they cultivate. The law specifies that the lands of Indigenous Peoples are those where they have established their residences and engage in traditional agriculture, including areas reserved for shifting cultivation. The measurement and demarcation of these lands will be determined based on factual situations as asserted by the communities and in agreement with their neighbours. The ownership of immovable properties described in the law is granted by the State to Indigenous Peoples as collective property, which includes all the rights and protections of ownership as enjoyed by private owners. This recognition of collective ownership rights for Indigenous Peoples represents an important step in promoting their rights and protecting their traditional ways of life. National Policy on the Development of Indigenous People (2009) also recognize Indigenous Peoples' rights to traditional lands, culture, and traditions and outlines policies pertaining to Indigenous Peoples in various sectors such as education, health, environment, land, agriculture, water resources, infrastructure, justice, tourism, industry, mines, and energy.

Cambodia ratified: the UN Declaration on the Rights of Indigenous People/ International Convention on the Elimination of all Forms of Racial Discrimination (ICERD)/ UN Convention on the Rights of the Child (Article 28-Right to Education)/ UNESCO Convention on the Protection and Promotion of the Diversity of Cultural Expressions.

3.2. Indonesia

Article 18(B) of Indonesia's Constitution (2014) acknowledges the rights of Masyarakat Hukum Adat (meaning Traditional Law Society). The Agrarian Law No. 5 (1960) also recognizes land rights over customary territories (hak ulayat) and customary law ("adat law, adat means "customary") as long as there is no conflict with national interest. Similarly, Article 6 of the Law No. 39 (1999) on Human Rights acknowledges the existence and rights of Masyarakat Hukum Adat. The Law No. 6 (2014) on Villages allows communities to establish adat villages with their own institutional structures and authority, but lacks guiding regulations and institutional mandates to make such provisions operational. This law grants a desa adat (customary village) the authority

to conduct adat-based public administration. Furthermore, Law No. 23 (2014) on Local Government recognizes the existence of adat institutions and provides them with rights to "empowerment." This law also recognizes adat law as an additional rule for purposes such as village elections and makes it the basis for conducting local development or measuring social cohesiveness. Lastly, Law No. 11 (2010) on Cultural Heritage recognizes Masyarakat Adat as owners of their cultural heritage and grants them authority to manage it. The law requires observation and data collection on cultural heritage sites that may be affected by project activities. Forestry Law No.41 (1999) divides forests into different legal categories and provides criteria for the recognition of Hutan Adat rights.

Indonesia ratified: The United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP)/ Convention on Biological Diversity (CBD)/ International Labour Organisation (ILO) Convention No. 169/ Convention on the Elimination of All Forms of Racial Discrimination (CERD)/ United Nations Framework Convention on Climate Change (UNFCCC).

3.3. Laos

Article 4 of the Lao Constitution (1991) elucidates that "the State pursues the policy of promoting unity and equality among all ethnic groups", forbidding any acts of discrimination and division by race or ethnicity. In addition, Article 8 of the Lao Constitution outlines the principles of the legal system based on socialist law, designed to protect citizens' rights and interests, ensure social justice, and equal application of the said law. Article 5 of the Electricity Law, while not explicitly mentioning customary rights or Indigenous Peoples, is relevant legislation in that the development of hydropower projects, a major focus of the law, can have significant impacts on the customary rights and traditional livelihoods of Indigenous Peoples in Laos. Indigenous peoples in Laos often depend on rivers and forests for their livelihoods and cultural practices, and the construction of hydropower dams can cause displacement, loss of access to traditional lands, and environmental degradation. The Land Law is provoked by these plights of events on provisions on land use, land requisition for a public purpose, and land ownership including customary rights. The 1992 Resolution of the Party Central Organisation Concerning Ethnic Minority Affairs in the New Era and 2012 LFNC Guidelines on Consultation with Ethnic Groups are some of the measures adopted so as to prevent the development of hydropower projects without adequate consultation and participation of affected indigenous communities that will result in violations of their rights to land, natural resources, and cultural heritage. Other relevant legislations and regulations in Laos also have provisions that require consultation and participation of affected communities in the development of various projects, as can be viewed in the Compensation and Resettlement Decree No. 84/ GOL (2016).

Laos ratified: The International Covenant on Civil and Political Rights/ Convention on the Rights of Persons with Disabilities/ International Covenant on Economic, Social and Cultural Rights/ International Convention on the Elimination of all Forms of Racial Discrimination (ICERD)/ IFC PS7: Avoidance of Adverse Impacts and Participation and Consent.

3.4. Philippines

Article 2, Section 22 of the 1987 Philippine Constitution recognizes and promotes the rights of indigenous cultural communities within the framework of national unity and development. The section states that "The State recognizes and promotes the rights of indigenous cultural

communities within the framework of national unity and development." Article 14, Section 2(4) of the said Constitution also illuminated that the State shall encourage non-formal, informal, and indigenous learning systems that will respond positively to community needs. This is supported by the National Indigenous Peoples Education Policy Framework, which ensures the provision of universal access of all IPs to quality education services towards functional literacy for all, in addition to providing adequate and culturally appropriate learning resources and environment to IP learners. The Indigenous Peoples Rights Act of 1997 (IPRA), also known as Republic Act No. 8371, is a significant law that aims to address the past injustices committed against Indigenous Cultural Communities (ICCs)/IPs. Its purpose is to uphold their rights and improve their welfare by implementing constitutional mandates and international norms. IPRA identifies four fundamental rights, including the right to ancestral domains and lands, the right to self-governance and empowerment, the right to social justice and human rights, and the right to cultural integrity. According to SEC 2(f), the State recognizes its responsibility to ensure that ICCs/IPs have maximum participation in education, health, and other services that directly affect their communities. The implementing rules and regulations contain specific details, conditions, requirements, and safeguards for plans, programs, and projects that may impact Indigenous peoples.

Philippines ratified: United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP)/ Convention on Biological Diversity (CBD)/ International Labour Organisation (ILO) Convention No. 169/ Convention on the Elimination of All Forms of Racial Discrimination (CERD)/ United Nations Framework Convention on Climate Change (UNFCCC).

3.5. Vietnam

Vietnam is home to 53 ethnic minority groups, which contribute to the country's complex ethnolinguistic landscape. While the Vietnamese government commonly uses the term "ethnic minorities" instead of "indigenous peoples," it prioritizes the concept of "unity in diversity." The Vietnamese Constitution (2001) reflects this focus by recognising equity among all ethnic groups as a top priority, with a commitment to ethnic solidarity in the country's revolutionary cause. The government has implemented policies to support cultural and ethnic diversity, aimed at ensuring equal development, strengthening solidarity, promoting mutual support among ethnic groups, improving material and spiritual lives, reducing poverty, broadening people's knowledge, and reducing socioeconomic disparities between all ethnic groups in Vietnam. The government has introduced more than 100 legal documents since the 1980s to incorporate ethnic minorities into the national development process, including Program 134 (Decision No. 134/2004/QD-TTg of Prime Minister) and Program 135 policies (Decision No. 135/1998/QD-TTg of Prime Minister) that support productive land, residential land, housing, and domestic water for poor ethnic minority households and promote socio-economic development in mountainous and remote areas. The Amended Constitution (2013) ratified by the National Assembly reinforces the government's commitment to equity, solidarity, respect, and mutual assistance among all nationalities, while also recognising the right of every ethnic community to use its language and writing system, preserve its national identity, and promote its traditions and culture. Additionally, the government provides priority policies for education and healthcare development in mountainous areas, ethnic community regions, and particularly difficult areas.

Vietnam has not signed or ratified any international agreements specifically focused on Indigenous Peoples. However, Vietnam has signed and ratified several international human rights instruments that include provisions for the protection of the rights of ethnic minorities, which may include Indigenous Peoples.

These agreements include Convention on the Elimination of All Forms of Racial Discrimination (CERD)/ International Covenant on Civil and Political Rights (ICCPR)/ International Covenant on Economic, Social and Cultural Rights (ICESCR)/ Convention on the Rights of the Child (CRC)/ Convention on Biological Diversity (CBD).

4. Climate Technology and Indigenous Peoples in the Five NOL Countries

The notion of indigenous technology is not fully established and often not recognized by the Intellectual Property Rights (IPR) regimes. Notwithstanding, indigenous climate technologies are increasingly being recognized by governments and international organisations as important tools for climate adaptation and mitigation. “Indigenous Technology” is often interchanged with other similar terms such as “appropriate technology”, “community-based technology” etc.

4.1. Indigenous component in Technology Need Assessment (TNA) in the five target countries

Given the dearth of available data and studies conducted on the nexus of the indigenous peoples and climate technology, this Framework reviewed the five target countries’ Technology Need Assessment (TNA). Key findings are as follows:

- None of the five countries in the assessment mention the term “indigenous” or “indigenous technology” verbatim but rather focus on the engagement of local communities in technology adaptation and mitigation. Those measures listed below may be relevant to the application of the IPP in the context of the CTF-funded activities.
- Association of the traditional methods and the need for engagement of the local communities are mentioned largely converge in a few climate adaptation sectors: Water supply, Forest Protection, and Disaster management. Some examples are below:
 - Forest management & biodiversity conservation (Indonesia/Laos)
 - Agriculture (Cambodia/ Indonesia/ Vietnam)
 - Deep well extraction in dry seasons (Vietnam)
 - Household Water Treatment and Safe Storage (HWTS) (Vietnam)

Only a few sectors are mentioned in relation to indigenous technologies, and they are mostly convergent across the countries. This indicates:

- Study on indigenous climate technology and its full potential is a new area that requires further exploration and investment for study and data collection. and;
- Most Indigenous People in the five target countries reside in forests or in agricultural areas.

4.2. CTF Priority Investment Area and Indigenous Climate Technology

In relation to the Technology needs identified as promising CTF-financing areas per country, the following table summarizes the relevance of/implication on the Indigenous Peoples according to the CTF finance respective technologies:

Table 3. Climate Technology Need with Relevance to Indigenous Peoples in the Five Target Countries

Country	Climate Technology Needs		IP Relevance
	Technology Needs	Activities to Address Vulnerability	
Cambodia	Climate-resilient agriculture technologies to address extreme weather events	Adaptation activities to improve agricultural (rice) productivity with tolerant crop technologies, including small-scale irrigation to reduce water and heat stress on crops	Fundamental rights to keep and sustain the customary ownership and tenure of the IP's farming lands are reported to be often threatened ⁶⁶ . When a proposed tech transfer activities/cooperation partner with an IP agricultural group(s) and communities, securing tenureship of the community for the farming land needs to be guaranteed. As appropriate, adopt the IP's traditional climate adaptation methods/technology.
	Water resource management technology Infrastructure retrofit technology to address the shifting climate	Analytic and/or retrofit activities to strengthen climate resilience of water supply and treatment system against floods (frequency gradually increasing)	In IP areas for project implementation, consideration and adoption, as desirable and feasible, of the indigenous/appropriate technology is required.
Indonesia	Health biomonitoring technologies for tracking and trend monitoring infectious diseases exacerbated by rising temperatures	Adaptation activities to apply and implement the contextual fit biomonitoring programme after building capacity for	In the mid of COVID-19 Pandemic spread, The national Indigenous Peoples' organisation, Aliansi Masyarakat Adat Nusantara (AMAN), has taken strong leadership to tackle the pandemic spread to IP communities ⁶⁷ . It

66 <https://www.iwgia.org/en/cambodia/4648-iw-2022-cambodia.html>

67 "While the Government of Indonesia lacked seriousness in preventing the spread of the coronavirus, AMAN's Secretary General Rukka Sombolinggi showed strong leadership in the face of the public health disaster. And emergency response task force called "Gugus Tugas AMANKan COVID-19" was formed.[13] This task force included an extensive network of COVID-19 response teams



Country	Climate Technology Needs		IP Relevance
	Technology Needs	Activities to Address Vulnerability	
	and extreme weather events	the public health officials and engineers (e.g., GPS)	is worth considering collaboration with AMAN for targeting the IP communities whose majority are residing in customary forest areas as major beneficiaries of the biomonitoring programme.
	Water harvesting technology (well & infiltration pond) Water recycling tech from domestic wastewater	Application of infiltration well to drain direct surface runoff while it is raining Provision of an alternative water source on a household and communal scale via water recycling projects	As appropriate, explore together with Indigenous Peoples the possibility of promoting the IP's traditional water conservation/wastewater treatment/irrigation methods and technology.
	Technologies for crop tolerance to extreme weather events	Adaptation activities associated with small-scale irrigation to reduce water and heat stress on crops	
Laos	Technology for crop tolerance with insurance schemes Technology relevant to livestock disease control and pest management	Activities enabling farmers to have access to adequate information to cope with crop loss and market failures Adoption of livestock disease prevention and control technologies to enhance resilience and	As appropriate, explore together with indigenous peoples the possibility of promoting adopt the IP's traditional methods/technology.

operating in areas populated by Indigenous Peoples throughout the archipelago. As of today, there are 108 teams in operation.”
(https://iwgias.org/en/indonesia/4224-iw-2021-indonesia.html#_ftn13)

Country	Climate Technology Needs		IP Relevance
	Technology Needs	Activities to Address Vulnerability	
		cope with future outbreak	
	Sustainable forest management and protection (conservation) technologies	Activities to manage and protect forests in a sustainable manner, including land monitoring Planting of pest-tolerant tree species to enhance recovery of degraded forests.	Forest ecosystem conservation could potentially conflict with the IP communities' customary rights and livelihoods. Careful design is required from the screening process to avoid this conflict and ensure the communities' sustainable livelihoods.
	Wastewater treatment technology Water resources management technology	Decentralized wastewater treatment to eliminate disease-inducing pollutants	Indigenous groups in Laos are much more vulnerable to waterborne diseases due to lack of access to sufficient, safe and clean water ⁶⁸ . Targeting IPs esp. Hmong-Ew-Hmien language group would improve the livelihood of these most vulnerable ethnic groups in the country.
Philippines	Off-grid RE and battery storage for health facilities in climate disaster-vulnerable areas	Establishment of solar PV-powered health facilities with backup battery storage in order to operate even in the aftermath of extreme weather events; also,	IP communities often reside in deep forests under the country's IP protection mechanism (e.g. Indigenous Peoples Protection Act (IPRA) and its implementation rules and regulations (IRRs) as NCIP as a safeguarding government agency. Enforcement of the

68 "Indigenous people lag behind the majority Lao-Tai on all economic levels. They have more limited access to healthcare, lower rates of education, and less access to clean water and sanitation. The proportion of Indigenous people relying on unimproved or surface water ranges from 20% to 32.5% compared to just 8.5% of Lao-Tai, and while only 13.9% of Lao-Tai practise open defecation, this rises to between 30.3% and 46.3% among Indigenous people." (https://iwgja.org/en/laos/4652-iw-2022-laos.html#_edn3 /원 출처: United Nations. OHCHR. "Statement by Professor Philip Alston, United Nations Special Rapporteur on extreme poverty and human rights on his visit to Lao PDR, 18-28 March 2019." Lao, Vientiane, 28 March 2019. <https://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=24417&LangID=E>)



Country	Climate Technology Needs		IP Relevance
	Technology Needs	Activities to Address Vulnerability	
		net metering facilities to reduce emissions	IPRA varies across the region and the capacity of the NCIP also varies and often limited.
	RE-powered mobile water treatment and desalination technologies	Provision of portable water operations to disaster-hit islands without access to locally-sourced drinking water system	Renewable energy development (esp. off-grid power generation through solar etc.) and RE-powered water supply and treatment facilities shall be highly relevant to the IP communities in remote, un(der) connected locations.
	Technologies for crop tolerance to extreme weather events	Adaptation activities associated with small-scale irrigation to reduce water and heat stress on crops	IP communities often constitute lower-income small-scale (subsistence) farmers without proper irrigation systems. They are more vulnerable to extreme weather conditions such as droughts.



Country	Climate Technology Needs		IP Relevance
	Technology Needs	Activities to Address Vulnerability	
Vietnam	<p>Climate-smart agriculture (CSA) technologies</p> <p>Inter-reservoir operation skills for water-efficient irrigation operation</p>	<p>Activities enabling the transition towards resource-efficient management of land, water, soil nutrients, and genetic resources to maintain or enhance agricultural yields in warmer and dryer climate seasons, e.g., small-scale irrigation</p>	<p>Land tenure and allocation of forest land are significant challenges faced by Indigenous Peoples in Vietnam. The policies, laws, and regulations related to land and forest tenure vary across different provinces, creating uncertainty and insecurity for many Indigenous Peoples in Vietnam face challenges related to land tenure and forest management, which vary across different provinces. This results in an unequal distribution of land, creating insecurity for many communities. For instance, in 2015, only a small percentage of forest land was allocated to households and communities for management, with some communities experiencing low-quality forests that were difficult to generate income from.</p> <p>Among the Indigenous Peoples in Vietnam, the Khmer Krome in the Mekong Delta region are particularly vulnerable to climate change risks. This is due to their dependence on agriculture, limited access to resources such as land and water, and their geographic location in low-lying coastal areas. Additionally, social and economic marginalisation can exacerbate the impacts of climate change on these communities. To address these vulnerabilities, a comprehensive approach is needed that improves access to resources and services, builds community resilience, and develops strategies for adapting to the impacts of climate change.</p>

If the Indigenous Knowledge for commercial purposes involves third parties, the commercial benefits would need to be explicitly shared with the technology-owning indigenous communities by design of the proposed activities/businesses. Otherwise, the project/programme would require FPIC and may not be eligible for the CTF Investment criteria.



5. Implementation Process

5.1. Step 1: Screening if Indigenous Peoples are affected, in a positive or negative way, by the proposed activities/projects:

5.2.1. Negative Screening Conditions for CTF Funding: Does the proposal trigger the CTF’s IP Negative Screening Conditions?

All the CTF Applicants need to be cognizant of the IP-related Investment Criteria of the Fund: Any one of the negative screening conditions, in the CTF Investment Criteria: E&S Safeguards (ESS) (in Table 2 above) constitutes a case that is potentially affecting Indigenous Peoples negatively (called hereafter “IP Negative Screening Conditions”).

To assess whether the application triggers these Negative Screening Conditions, all the CTF Applicants are required to fill in the Rapid Checklist Form as shown below:

<ESMS Appendix E>

<u>“IP Checklist” for the Fund Applicant</u>	
Title of the Proposed Project: _____	
Prepared & submitted by: _____	
Submission Date (Year/Month/Date): _____/_____/_____	
<i>Pls answer ALL the questions on the list.</i>	
Q 1. Would the proposed activities/project affect Indigenous Peoples (IPs, *)?	
<i>(*For guidance to determine whether the project has IP as a potentially affected group, pls see: GCF Indigenous Peoples Policy (2018) & GCF Operational Guidelines: Indigenous Peoples Policy (2019), IFC PS 7, esp. Para 5~7 & IFC PS 7 GN 6~GN 8.)</i>	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know	If “Yes”, ① Name of the concerned people(s): _____ ② Approximate population size: _____ ③ Locations & land (& other natural resources) the people or communities are attached to: ____ If “Yes,” (Pls tick all that apply & elaborate.) <input type="checkbox"/> Indigenous Peoples’ identity and dignity* (* Article 15 of the UNDRIP ⁶⁹ states that “Indigenous peoples have the right to the dignity and diversity of their cultures, traditions, histories and aspirations [...]” The International Labour Organization (ILO) Convention No. 169(1989) ⁷⁰ also focuses on the rights of indigenous and tribal peoples, emphasizing respect for their cultures, traditions, and institutions, and the promotion of their full participation in all matters that concern them. Thus in all preparatory and execution of the proposed projects/activities, the applicant needs to acknowledge the concerned indigenous peoples’ unique history, identity and contribution

69 United Nations Declaration on the Rights of Indigenous Peoples, 2007 (61/296)
 70 Indigenous and Tribal Peoples Convention, 1989 (No.169)



	<p>to society and affirm and respect their rights to maintain and practice their traditional way of life. Also, the dignity of indigenous peoples also reflects a commitment to upholding their human rights of the indigenous peoples.)</p> <p>/ Pls elaborate.</p> <p>_____</p> <p><input type="checkbox"/> Access to indigenous traditional land and water, territory and resources / Pls elaborate.</p> <p>_____</p> <p><input type="checkbox"/> Environmental Impacts on indigenous traditional land, territory and resources/ Pls elaborate.</p> <p>_____</p> <p><input type="checkbox"/> Sacred sites/ Pls elaborate.</p> <p>_____</p> <p><input type="checkbox"/> Natural resource-based livelihoods, / Pls elaborate.</p> <p>_____</p> <p><input type="checkbox"/> Food security /Pls elaborate. _____</p> <p><input type="checkbox"/> Cultural survival/ Pls elaborate.</p> <p>_____</p> <p><input type="checkbox"/> Others (e.g. Transmission, promotion and protection of indigenous peoples’ knowledge and technology)/ Pls elaborate.</p> <p>_____</p> <p><input type="checkbox"/> Access to genetical resources, traditional knowledge and other intangible cultural heritage, etc.)/ Pls specify:</p> <p>_____</p> <p>_____</p> <p>If “I don’t know”, pls consider involving IP expert to answer this.</p>
<p>Q 1.1. Do the activities areas of influence (AoI) have the presence of any IP groups and communities?</p>	
<p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p><input type="checkbox"/> Don’t know</p>	<p>If Yes, Does the concerned IP people or communities occupy (pls tick as appropriate)</p> <p>① the entire AoI? (), or,</p> <p>② only partial AoI? ()</p> <p>If “I don’t know”, pls consider involving IP expert to answer this.</p>
<p>Q1.2. Does the supply chain of the proposed activities include any IP groups and communities?</p>	
<p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p><input type="checkbox"/> Don’t know</p>	<p>If Yes, pls explain. _____</p> <p>If “I don’t know”, pls consider involving IP expert to answer this.</p>
<p>Q1.3. [Other than Q1.1 & Q1.2] [how] would the proposed project/activities affect negatively or positively the groups and communities of Indigenous Peoples? (Pls consult the potentially affected indigenous peoples and the host local governments(s) and other key stakeholders as appropriate.)</p>	
<p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p><input type="checkbox"/> Don’t know</p>	<p>If “Yes”, pls elaborate. _____</p> <p>If “I don’t know”, pls consider involving IP expert to answer this.</p>



Q1.4. Dos the concerned people identify themselves as indigenous?	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know	If Yes, pls elaborate. _____ If "I don't know", pls consider involving IP expert to answer this.

The CTF Applicant is required to fill this form to the best of their understanding and knowledge and also encouraged to involve IP expert if they are not sure of the answers. For those who participate in Component 2 of the proposed Programme, CTF E&S safeguard specialists (IP expert, out-sourced or internal) shall assist fill the Form upon the Applicant’s request. At this stage, by preparing this Rapid Checklist, CTF Applicants shall understand whether their proposed JV enterprises/activities for CTF funding are potentially to affect indigenous peoples.

Based on the answers provided in the Rapid Checklist Form (ESMS Appendix E above), CTF E&S Safeguard Specialists (IP expert(s)) shall determine whether a proposed enterprises/activities/business shall trigger the IP negative screening criteria. If so, the Applicant shall be advised to either give up CTF funding pursuance or, upon request, revise the designs and components of the proposed enterprises in a way not to trigger the IP Negative Screening Conditions.

5.2. Step 2: Scoping & IPP preparation IPP is a plan that outlines the actions to avoid, minimize and/or compensate for adverse impacts in a culturally appropriate manner. At the same time, IPP could be utilized as an action plan to further strengthen the positive impact sharing with the indigenous peoples. It is developed in collaboration with the potentially affected indigenous peoples.

Not all the proposed activities shall require IPP preparation. Following are cases where an IPP, either as an integrated part of the ESMP or as a standalone plan, would be required:

5.2.1. Ex-Poste Occurrence of Adverse Impacts on the Indigenous Peoples

The CTF’s investment criteria clearly stipulate that any proposed activities/enterprises that are likely to affect negatively indigenous peoples in the host country will not be approved. Even after passing the CTF’s IP Negative Screening Criteria (as presented in Table 2 above), however, it is still possible that during the implementation of the CTF-approved and funded activities and projects, there may occur unanticipated negative impacts on the indigenous communities.

If such event of unanticipated negative impacts on Indigenous Peoples occurs the CTF shall request the executing entities of the CTF financed enterprises/projects/activities to conduct a close examination and report the situation to the CTF. Upon review of it (this may include CTF’s direct field inspection and validation processes), the CTF shall determine whether the concerned enterprises/projects need to suspend their operation and if the CTF shall terminate financing it. Otherwise, the CTF E&S Safeguard specialist (IP expert(s)), in the framework of a meaningful consultation process, shall determine whether/to what extent the enterprises/projects shall deploy avoidance/mitigation/off-setting(compensation) measures (in this mitigation hierarchy order) to address the identified negative impacts within the existent ESMP framework or, establish a standalone IPP, to which the CTF shall also identify and integrate measures to strengthen the sustainable development benefits.



The extent and rigor of the mitigative/remedial/corrective plan shall be required in proportion to the level of significance/severity of the identified impacts and risks on the Indigenous People.

For the management of the ex-poste negative impacts on the Indigenous Peoples, the IPP shall provide a monitoring and evaluation framework to identify any potential, unanticipated negative impacts on the Indigenous Peoples during the implementation of the CTF-supported activities/enterprises.

5.2.2. Promotion of “Indigenous-led Enterprises”

At the same time, CTF also promotes the sustainability co-benefits through the CTF funding: Thus, the CTF Investment Criteria #8 stipulates that the fund applicants are encouraged to fully promote “indigenous-led enterprises” to ensure that indigenous climate technology and knowledge are fully tapped for the climate technology innovation in the five target countries. Here the “Indigenous-led enterprises” refer to the proposed activities/enterprises/projects that meet one of the following conditions:

Table 4. Prioritization of Indigenous-led Enterprises

<p>Prioritisation of Indigenous-led Enterprises:</p> <p><i>CTF will prioritise the proposed enterprises and activities meeting the following conditions:</i></p>	
#1	<p>Application/combination of Indigenous technology for climate tech RD&B with explicit design consideration of including the technology-owning communities as the beneficiary of the commercial benefits(*), and/or</p> <p>(*Third party’s benefiting from the Programme would require FPIC process.)</p>
#2	<p>Proposed business plan/design explicitly include participatory and inclusive approach with/of indigenous peoples (as target beneficiaries or partners etc.)⁷¹.</p>
#3	<p>As a result, the proposed businesses (should) include at least one key performance indicator (KPI) related to the one of the conditions (#1 and #2).</p>

Once determined that the proposed project/enterprises require IPP, the Applicant shall be advised to be cognizant of this IPPF and prepare the IPP accordingly. As appropriate, the CTF E&S Safeguard Specialist (IP expert(s)) provides a TOR for IPP for preparation. The Applicant shall prepare the IPP accordingly and submit it either as part of the Funding Proposal package or, later in case the proposal is approved with the condition of IPP development in a specific timeline requested.

GCF IPP Operational Guidelines require the IPP prepared in a flexible and pragmatic manner and its levels of detail vary depending on the specific project and the nature of the effects to be addressed. For optimisation of the positive impacts (benefits) to the Indigenous Peoples, depending on the type of the “indigenous-led enterprises”, following components would be required for IPP:

If a CTF-approved enterprises/activities explicitly aims to adopt/integrate/apply indigenous climate technologies, IPP shall include a background study on the indigenous climate technologies

71. A (mere) expression of the objective of benefiting indigenous peoples in the proposal would not be sufficient unless the aimed objective(s) are concretely materialized in the design of the proposed enterprises/businesses.

as well as potential intellectual property right (IPR) issues as well as concrete methods to adopt/adapt/apply/integrate such technologies in the proposed enterprises with potential benefits of such integration.

If a CTF-approved enterprises/activities explicitly target the indigenous people(s) as beneficiaries, the IPP shall include: Types of benefits and modalities of delivery of such benefits to specific target communities with a concrete time frame, ideally based on a theory of change (TOC) approaches (with a simplified diagram.). If the sole beneficiary group of the enterprises/activities are indigenous peoples, the element of the IPP will be included in the overall design and the ESMP and the preparation of a standalone is not necessary⁷².

If a CTF-approved enterprises/activities explicitly engage indigenous communities as active partners of the enterprises/activities, the IPP shall include: Concrete type of engagement/participation (e.g. co-ownership, partnership arrangements, benefit-sharing scheme, inclusion as board members for major decisions for the enterprises, etc.).The Plan should also clearly demonstrate that the final participation and engagement plans (as well as the selection of the the representatives of the concerned indigenous communities, as appropriate) were made on sufficient consultation and communication process with the concerned indigenous communities in a culturally sensitive, transparent and inclusive manner. The proposed enterprises and its IPP need to ensure the ownership of the the indigenous communities.

In the process of the IPP development, the target Indigenous Peoples need to be actively consulted as to the cultural appropriateness of the proposed services or facilities. IPP shall also duly identify and address any economic, social or capacity constraints (including those related to gender, the elder, youth and persons with disabilities) that may limit opportunities to benefit from, or participate in, the concerned enterprises/activities⁷³.

In addition, all the IPPs should also include, among others:

- Baseline information (from independent and participatory environmental and social risks and impacts assessment processes);
- Key findings and analyses of impacts, risks and opportunities;
- Measures to avoid, minimise and mitigate negative impacts, and enhance positive impacts and opportunities;
- Grievance redress mechanisms
- Cost, budget, timetable, organisational responsibilities
- Benefit sharing plans
- Community-based natural resource management
- Required laws and regulations related to the host country

72 GCF IPP (2018) Section 7.1.1.

73 GCF IPP (2018) Section 7.1.1.

- Key (government and non-government) stakeholder analysis, summary of the past consultation results (during ESIA process, etc.), the FPIC (as applicable) and future engagement plans, as necessary
- Monitoring, evaluation and reporting
- Identification of the vulnerable groups within the Indigenous People communities (e.g. indigenous women, poor and more marginalized groups) and special considerations

(For details of the above-listed components, see GCF IPP Operational Guidelines (2019) Section III. Para 26.)

5.3. Step 3: IPP Implementation

Once approved, with the IPP duly established, the project executing entity needs to implement the IPP either as an integrated part of ESMP or as a standalone mechanism.

Following are key requirements per GCF IPP and Operational Guidelines applicable to the proposed Programme and CTF.

5.3.1. Meaningful Consultation

Meaningful consultation requirements apply to all the CTF-approved projects. In relation to indigenous peoples, however, designs and arrangements of the meaningful consultation requires tailoring to meet the specific conditions and needs of the indigenous peoples.

For details see: Section 7.1.5. of the GCF IPP (2018) and GCF IPP Operational Guidelines III. Requirements 3.2. Meaningful Consultation.

The executing entity of the CTF financed projects/enterprises/activities could seek for technical guidance and consulting from the CTF Secretariat.

5.3.2. Free, Prior, Informed Consent (FPIC)

There is no universally accepted definition of FPIC. This IPPF adopts the GCF's following definitions.

Box 3. What is FPIC?

“Free, prior and informed consent will be an iterative process, requiring indigenous peoples’ consent before a proposal for GCF financing is considered by the Board, on the basis of their own independent deliberations and decision making process, based on adequate information to be provided in a timely manner, in a culturally appropriate manner, in a local language that is understood by them, and through a process of transparent and inclusive consultations, including with women and youth, and free of coercion or intimidation. Free, prior and informed consent does not require unanimity and may be achieved even when individuals or groups within or among affected indigenous peoples explicitly disagree.”

CTF Investment Criteria #6 Negative Screening Conditions is comprised of the three circumstances where the FPIC is required per GCF IPP (2018), namely: when the proposed enterprises/business/projects:



- Generates impacts on lands and natural resources subject to traditional ownership or customary use or occupation;
- Incur in relocation of Indigenous People from lands and natural resources subject to traditional ownership or under customary use or occupation, and/or;
- may potentially impact cultural heritage and the commercial use of which requires FPIC.⁷⁴

Thus, in principle, the FPIC requirement is not relevant to this IPPF and IPP for any CTF-approved enterprises/projects/activities.

5.3.3. Information Disclosure

Before finalising an IPP, a draft should be disclosed in a culturally appropriate manner to the Indigenous Peoples affected by the project in the most appropriate language – oral communication methods may be conducted to communicate the proposed plans to affected communities. While operating the programme, CTF shall follow the following four principles of the Information Disclosure Policy of GCF and ensure the greatest degree of transparency in all its activities through the effective dissemination of information to stakeholders and the public at large.

- Maximise access to information;
- Limited exceptions;
- Simple and broad access to information; and
- Explanations of decisions and right to review

5.3.4. Grievance Redress Mechanism

GRM is required for all the CTF-approved projects. If indigenous peoples constitute only part of the key local stakeholders, as beneficiary or otherwise affected groups, a separate GRM tailored to the needs and characteristics of the indigenous peoples is required.

The mechanism for stakeholders, including indigenous people, shall be developed early on before the disputes occur, and facilitate the resolution of grievances promptly through an accessible, fair, transparent, and constructive process. It will be culturally appropriate and readily accessible, at no cost to the affected communities, and without retribution to the individuals, groups, or communities that raised issues or concerns.

⁷⁴ “Cultural heritage includes but is not limited to natural areas with cultural and/or spiritual value, such as sacred groves, sacred bodies of water and waterways, sacred mountains, sacred trees, sacred rocks, burial grounds and sites, as well as the non-physical expression of culture, such as traditions, language, identity, ceremonial, or spiritual aspects of the affected indigenous peoples’ lives.” (GCF IPP, Para 63)



The following actions are to be taken in preserving the accessibility and transparency of the mechanism:

- keep complainants' identities confidential and protect them from the fear of retaliation;
- provide GRM in local language to avoid language barriers/limitations;
- upload a log in a publicly available website to inform relevant stakeholders; and
- publicly advertised procedures to identify the means for submitting grievances and setting out the length of time users can expect to wait for acknowledgment, response, and resolution of their grievances – preliminary response within fifteen (15) working days, formal response (e.g. personal meeting, phone call, email or letter) within thirty (30) working days.

For details see: Section 7.3. of the GCF IPP (2018) and GCF IPP Operational Guidelines III. Requirements 3.4. Meaningful Consultation.

The executing entity of the CTF financed projects/enterprises/activities could seek for technical guidance and consulting from the CTF Secretariat.

5.3.5. Monitoring & Reporting

CTF will monitor the IPP performance throughout the project implementation and operation and, if necessary, provide IP expert consulting and capacity-building support to meet the required level of performance by GCF IPP and CTF IPPF. IP component shall be integrated into the regular E&S monitoring report form, and the CTF applicant could request for additional consulting support for IPP execution at any time throughout the period. ■