TRADE AND DEVELOPMENT BANK GROUP
GROUPE DE LA BANQUE DE COMMERCE ET DE DÉVELOPPEMENT

GUIDANCE NOTE FOR E&S RISK MANAGEMENT FOR DISTRIBUTED RENEWABLE ENERGY AND CLEAN COOKING PROJECTS

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SPECIAL ANNEX TO THE ESMS
GUIDANCE NOTE FOR E&S RISK MANAGEMENT FOR DEBT AND GRANT FINANCING TO DISTRIBUTED RENEWABLE ENERGY AND CLEAN COOKING PROJECTS [1]

Version 2, November 2025
(Addendum to the Off-Grid E&S Risk Management Procedure, Jun 2020)

[1] This document draws from ECREEE's ESRM Sector Guide on Off Grid Standalone Solar for Financial Service Providers

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1 INTRODUCTION

This addendum is prepared by TDB for its debt and grant financing to Distributed Renewable Energy ("DRE") and Clean Cooking companies. All staff involved in debt and grant financing to DRE and Clean Cooking companies, including local small and medium enterprises (SMEs) in off-grid solar and improved cook stove (ICS), should apply this guideline to assess the potential E&S risks and impacts associated with providing debt and grant financing.

This addendum highlights the E&S risks and impacts specific to DRE and clean cooking projects.

2 SCOPE AND APPLICABILITY

This guideline applies only to debt and grant financing for DRE and Clean Cooking projects. These include solar lanterns, solar home systems (SHS), small solar mini grids, and standalone solar systems for irrigation, poultry, vending, solar powered sewing machines and other commercial and productive uses of electricity. The typical clients for debt and grant financing to DRE and clean cooking technologies could include: (i) DRE and Clean Cooking distributors supplying products and services to households and commercial establishments; (ii) energy service companies providing service of electrification to public & private institutions and other clients; and (iii) manufacturers of DRE and Clean Cooking products.

3 USE OF THIS ADDENDUM

This addendum must be read and used in conjunction with the main environment & social management system (ESMS) of TDB.
The addendum does not duplicate or add to the processes already defined in the main ESMS. It only highlights the key issues relevant to DRE and clean cooking projects such as project categorization, E&S issues to focus on during due diligence, and specific tools for DRE and clean cooking projects. Where needed, reference is made to the main ESMS with relevant sections highlighted.

All requirements of reporting to TBD's lenders, TDB's own E&S capacity and TDB's external communication will remain driven by the main ESMS. These issues are not covered here in this addendum.

4 KEY APPLICABLE E&S REQUIREMENTS

Considering the risks involved and the nature of companies to be financed by TDB for DRE and ICS, the applicable E&S requirements are determined to include:

E&S exclusion list; and
National E&S regulatory requirements.

In addition to the above compliance requirements, all companies being financed by TDB are required to have the following within 6 months of closing the financing, and the absence of any of the following will be considered an event of default:

Formal E&S Policy and procedures documented as an ESMS

Policy, procedure and records on occupational health and safety

Human Resource policy (including code of conduct for workers and grievance mechanism for workers)
Waste management policy and procedures

Stakeholder engagement plan and grievance mechanism

5 E&S RISK MANAGEMENT PROCESS

TDB has adopted an E&S policy (section 3.1.3 of ESMS) that defines its commitment to managing E&S risks in its operations. To this effect, TDB implements an ESMS for identification, assessment, management, and on-going monitoring of identified E&S risks associated with its financing operations. Section 4 of the ESMS defines the process to be followed for E&S risk management. The key steps in the process include:

Step 1: Identifying fatal flaws and initial E&S categorization at deal origination stage;

Step 2: Environment & social due diligence (ESDD) & final categorization at project appraisal and assessment stage

Step 3: Legal documentation; and

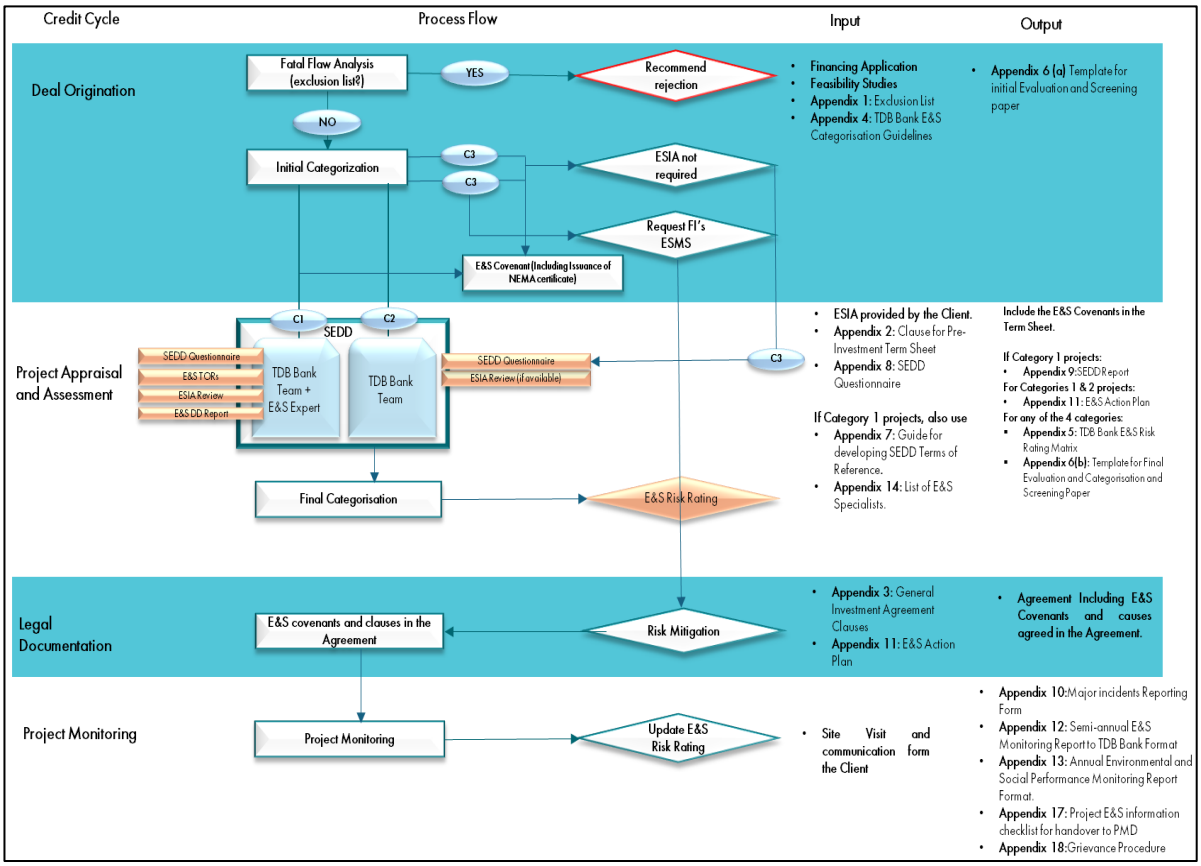
Step 4: Project monitoring.

The process flow diagram for implementation of TDB's ESMS is presented in the diagram below.

5.1 E&S SCREENING

This refers to step 1 of the ESMS process and has to be completed as soon as the deal has been originated and initially assessed. In this step, the focus is on identifying any major no-go's/ fatal flaws in the proposed project. In the event of any no-go, the project may be dropped from further screening. If no fatal flaws are identified, an initial E&S categorization may be assigned to the project. **Annex 4** provides the Initial E&S screening tool.

5.2 RISK CATEGORIZATION



DRE and ICS projects/ companies inherently carry less E&S risks than larger infrastructure projects. Most risks (highlighted in the section above) are limited and are mostly site-specific, largely reversible, and readily addressed through mitigation measures. As a result, most DRE and ICS projects will be categorized as category 2. TDB will use category 2-A (low risk) and category 2-B (medium/ high risk) categories for DRE and ICS. These are explained in the table below.

Table 1. E&S risk categorization when assessing DRE and clean cooking businesses

Risk categorization	Description/Criteria
Category 2-A (low risk)	Businesses with minimal or no adverse E&S impact will be required to have in place only minimum ESMS core components to address key risks and mitigation measures as stated in section 3.3 (b)
Category 2-B (medium/ high risk)	Businesses that require – in addition to the above – an ESAP with specific measures and/or E&S covenants in legal/ loan agreements, as well as close monitoring, due to the severity of their potential adverse E&S impacts as a result of the size and/or characteristics of the DRE or clean cooking business, and/or identified situations, such as occupational accidents or labor incidents that have not been adequately addressed, fair working conditions and terms of employment, or installers without applying safe installation measures

Annex 3 provides the E&S categorization memorandum template.

5.3 E&S DUE DILIGENCE

Step 2 refers to E&S due diligence of the project. E&S due diligence involves identification and assessment of E&S risks & impacts and to review the mitigation and management plans proposed by the project with a view to determine their effectiveness in achieving the outcomes compliant with the applicable E&S requirements.

As part of this step, the ESMS officer or any other staff tasked with the responsibility of ESDD should undertake the following steps, including offering additional support and guidance to local SMEs to help them meet E&S standards.:

Review the initial E&S screening form

Review the E&S information provided by the company such as E&S policy, HR policy, E&S assessments, regulatory compliances, E&S monitoring reports, etc.

Undertake site visit to review the E&S conditions

Annex 5 provides a tool for undertaking E&S due diligence. At the end of E&S due diligence, the E&S category should be confirmed, and an E&S Action Plan (ESAP) should be drawn up with clear timeline and deliverable. A format of ESDD report is provided in **Annex 6** and the ESAP format is provided in **Annex 7**.

5.4 LEGAL DOCUMENTATION

Following the ESDD, the ESMS officer should recommend the conditions and covenants for inclusion in the transaction documentation to ensure that identified E&S risks are adequately managed. Sample clauses are provided in **Appendix 2 & 3 of TDB's ESMS**. In addition to the ones mentioned in the TDB ESMS, the following should be included for DRE and clean cooking projects:

The client will ensure that it will not dump E-waste in public places and will follow international best practices for disposal of E-waste.

5.5 MONITORING AND SUPERVISION

TDB will monitor the E&S performance of all its DRE and ICS projects/ companies. The monitoring will focus on: (i) implementation of the ESAP; (ii) compliance with E&S requirements including E&S covenants in legal documentation; and (iii) E&S performance in terms of OHS incidents, waste management, HR policies, involuntary resettlement and indigenous peoples, grievances mechanism. To this effect, the client will provide an incident report (in case of an incident as defined in TDB's ESMS (section 5.1.1) and annual E&S monitoring report (Annex 8) along with supporting documentation. TDB might conduct site visits as part of its monitoring & supervision.

6 ANNEXES

6.1 ANNEX 1: EXCLUSION LIST

TDB will not finance directly or any project, infrastructure or trade finance activity involving:
Production or trade in military arms, weapons and ammunitions.

1. Production or trade in any product or activity deemed or legislated as in a member state deemed or legislated as illegal (i) in that state, or (ii) under regulations or international conventions and agreements of general application, or subject to international banks, including but not limited to certain pharmaceuticals, pesticides/herbicides, ozone depleting substances and Polychlorinated Biphenyls (PCBs).
2. Areas gazetted by host countries through national or international legislation and deemed to have a high biodiversity and/or cultural value, or any other activities that leads to substantial destruction of the environment.
3. Production or use of or trade in hazardous materials such as radioactive materials. This does not apply to the purchase of medical equipment, quality control (measurement) equipment and any equipment where TDB considers the radioactive source to be trivial and/or adequately shielded.
4. Production or trade in wildlife or wildlife products regulated under CITES
5. Gambling, casinos and equivalent enterprises.
6. Production or trade in alcoholic beverages (excluding beer and wine)
7. Production and trade in tobacco.
8. Production or trade in unbonded asbestos fibers. This does not apply to purchase and use of bonded asbestos cement sheeting where asbestos content is less than 20%.
9. 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.
10. Production or activities involving harmful or exploitative forms of forced labour/harmful child labour.
11. Commercial logging operations for use in primary tropical moist forest.
12. Production or trade in wood or other forestry products other than from sustainably managed forests.
13. Production or activities that impinge on the lands owned, or claimed under adjudication, by Indigenous Peoples, without full documented consent of such peoples.
14. Production, trade, storage, or transport of significant volumes of hazardous chemicals, or commercial scale usage of hazardous chemicals. Hazardours chemicals include gasoline, kerosene, and other petroleum products.
15. Prostitution and/or Pornography.
16. Projects involved in the conversion or degradation of Critical Forest Areas.
17. Projects Impacting upon World Heritage sites.
18. Projects Impacting upon UN listed protected areas and natural parks.
19. Unsustainable fishing methods (e.g. Blasting and drift net fishing in marine environment using nets in excess of 2.5 KMs in length)
20. A reasonableness test will be applied when the activities of the project company would have a significant development impact, but circumstances of the country require adjustment to the Exclusion List.

7 WORLD BANK ASCENT EXCLUSION CRITERIA

The following activities shall be excluded from financing, funding, or support from World Bank's Accelerating Sustainable & Clean Energy Access Transformation (ASCENT) - Regional Energy Access Financing (REAF):

1. Blacklisted Companies Not Eligible: Companies and PFIs which are debarred/blacklisted by Multilateral/Donor funding agencies and or the relevant national governments will not be considered for participation.
2. Companies involved in production or activities involving forced labor, child labor, cross-border trade in waste and waste products, unless compliant to the Basel Convention and the underlying regulations.
3. Any activity having significant adverse impacts on critical cultural heritage.
4. Critical cultural heritage consists of one or both of the following types of cultural heritage: (i) the internationally recognized heritage of communities who use, or have used, within living memory the cultural heritage for long-standing cultural purposes; or (ii) legally protected cultural heritage areas, including those proposed by host governments for such designation.
5. Any activity that leads to conversion of natural and critical habitats/ecologically sensitive areas and/or having adverse impact on critical habitats and/or legally protected and internationally recognized areas of high biodiversity value (Exclusively defined as UNESCO Natural World Heritage Sites, UNESCO Man and the Biosphere Reserves, Key Biodiversity Areas, and wetlands designated under the Convention on Wetlands of International Importance [the Ramsar Convention]).
6. Critical habitats are areas with high biodiversity value, including: (i) habitat of significant importance to critically endangered and/or endangered species; (ii) habitat of significant importance to endemic and/or restricted-range species; (iii) habitat supporting globally significant concentrations of migratory species and/or congregatory species; (iv) highly threatened and/or unique ecosystems; and/or (v) areas associated with key evolutionary processes.
7. Legally protected areas are those that meet the IUCN definition: "A clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values." This includes areas proposed by governments for such designation.
8. Any activity having direct adverse impact on ecosystem services or that generates huge volumes of hazardous waste that may result in adverse health and safety risks to risks to workers and the project host communities.
9. For the purposes of this list, ecosystem services are limited to provisioning and regulating services: (i) provisioning services, which are the products people obtain from ecosystems; (ii) regulating services, which are the benefits people obtain from the regulation of ecosystem processes, where the activity's direct impacts on priority ecosystem services may result in adverse health and safety risks and impacts to affected communities.
10. Any activity where a biodiversity offset is proposed as the mitigation measure.
11. Biodiversity offsets are measurable conservation outcomes resulting from actions designed to compensate for significant residual adverse biodiversity impacts arising from project development and persisting after appropriate avoidance, minimization and restoration measures have been taken.
12. Any Sub-Project located in an area or territory that is disputed.
13. Any Sub-Project which includes the use or potential pollution of international waterways shall be excluded from the Sub-Projects.
14. Any Sub-Project involving systems larger than 20MW or requiring high-voltage transmission lines.

15. Any Sub-Project involving construction or maintenance of a dam, or high-voltage transmission infrastructure, or other high-risk investments.
16. Any subproject or activity for which land acquisition and resettlement concerns are unresolved, and the land required for the proposed Distributed Renewable Energy (DRE) subproject is not unencumbered.
17. Production or activities that impinge on the lands owned or claimed under adjudication by indigenous peoples and that require free prior and informed consent (FPIC) of Indigenous peoples. For all subprojects that impact Indigenous People (IP), TDB and PFIs will assess risks and impacts associated with all subprojects financed under the Facility. Should a project financed activity be located in areas where IPs are present, TDB will share with the Bank for review and concurrence, any instruments prepared to ensure the inclusion and access to project benefits by IPs.

Fossil Fuel Restrictions:

The REAF program will only support diesel back-up where its role is marginal and meets the following conditions: (i) renewable-energy generation units are well maintained, and fossil-fuel generation is used only when the amount of renewable energy generated and stored cannot fully meet demand and (ii) fossil fuel generation is less costly than installing sufficient battery storage to meet the same demand.
REAF will not be used to support coal, oil and gas in line with WBG corporate commitments. However, LPG cookstoves are eligible. Mini grids that have renewable energy as a primary power source and a fossil fuel backup are also eligible.

Note: the criteria set out in the sections above can be adjusted on a per-country basis according to each country's unique characteristics, as long as the country-specific criteria comply with the legal and financing agreements between TDB and IDA, the ESMS, and the ESAP as set out in thes POM.

7.1 ANNEX 2: EXAMPLES OF OHS KEY AREAS FOR DRE AND CLEAN COOKING

OHS identified areas for DRE and clean cooking[2]	Description
General Facility Design and Operation	Fire Precautions • Provision of manual firefighting equipment that is easily accessible and simple to use • First Aid • The employer should ensure that qualified first aid can be provided at all times. Appropriately equipped first-aid stations should be easily accessible throughout the place of work. • Remote sites should have written emergency procedures in place for dealing with cases of trauma or serious illness up to the point at which patient care can be transferred to an appropriate medical facility.
Communication and Training	OHS Training • A basic occupational training program and specialty courses should be provided, as needed, to ensure that workers are oriented to the specific hazards of individual work assignments. Training should generally be provided to management, supervisors, workers, and occasional visitors to areas of risks and hazards. • Training should adequately cover: • Knowledge of materials, equipment, and tools • Known hazards in the operations and how they are controlled • Potential risks to health • Precautions to prevent exposure • Hygiene requirements • Wearing and use of protective equipment and clothing • Appropriate response to operation extremes, incidents and accidents
Physical Hazards	Welding • Welding creates an extremely bright and intense light that may seriously injure a worker's eyesight. Measures include provision of proper eye protection such as welder goggles and/or a full-face eye shield for all personnel involved in, or assisting, welding operations. • Ergonomics, Repetitive Motion, Manual Handling • Use of mechanical assists to eliminate or reduce exertions required to lift materials, hold tools and work objects, and requiring multi-person lifts if weights exceed thresholds. • Working at heights • Fall prevention and protection measures should be implemented whenever a worker is exposed to the hazard of falling more than two meters. Fall prevention may include: • Proper use of ladders and scaffolds by trained employees • Use of fall prevention devices • Appropriate training in use, serviceability, and integrity of the necessary PPE • Inclusion of rescue and/or recovery plans, and equipment to respond to workers after an arrested fall

[2] Based on IFC, EHS Guidelines, General EHS Guidelines: Occupational Health and Safety

Personal Protective Equipment (PPE)	Personal Protective Equipment (PPE) provides additional protection to workers exposed to workplace hazards in conjunction with other facility controls and safety systems. • Identification and provision of appropriate PPE that offers adequate protection to the worker • Proper maintenance of PPE, including cleaning when dirty and replacement when damaged or worn out. Proper use of PPE should be part of the recurrent training programs for employees • Selection of PPE should be based on the hazard and risk ranking described earlier in this section, and selected according to criteria on performance and testing established
Monitoring	**Occupational health and safety monitoring programs** should verify the effectiveness of prevention and control strategies. The selected indicators should be representative of the most significant occupational, health, and safety hazards, and the implementation of prevention and control strategies. The occupational health and safety monitoring program should include: • Safety inspection, testing and calibration • Surveillance of the working environment • Surveillance of workers health • Training **Accidents and Diseases monitoring** The employer should establish procedures and systems for reporting and recording: • Occupational accidents and diseases • Dangerous occurrences and incidents All reported occupational accidents, occupational diseases, dangerous occurrences, and incidents together with near misses should be investigated with the assistance of a person knowledgeable/competent in occupational safety. The investigation should: • Establish what happened • Determine the cause of what happened • Identify measures necessary to prevent a recurrence

Source: ECREEE's ESRM Sector Guide on Off Grid Standalone Solar for Financial Service Providers

7.2 ANNEX 3; SUMMARY OF POTENTIAL E&S RISKS AND IMPACTS AND POSSIBLE MITIGATION MEASURES

Type of risk	Description	Mitigation measures
Waste management (electronic waste, chemical pollution)	Used panels, used batteries and units (both lead acid and lithium ion) are hazardous waste[3] Improper recycling of lead acid batteries causes wide-scale lead pollution/poisoning, including air, soil, and water contamination; lead entry into the food chain resulting in diseases and fatalities Management of used batteries will be a significant risk Additional waste issues are related to plastic material, polystyrene residues, aluminum, copper, steel	Encourage incorporating the cost of the responsible management of waste into the business budgeting and financial prospections. Responsibly choose a waste management partner Encourage common (regional or country) frameworks for recycling of batteries and need to be promoted Engagement with industry, regulators, and NGOs to explore practical regional and country waste management solutions Proper management waste systems and channel Establishment of a reparation network and replacement parts channel Communication and educational campaigns for end users and communities Internal training on waste management processes Promote reuse, recycling or energy recovery plastic treatment Reuse, recycling or energy recovery in an equipped unit for polystyrene treatment Promote recycling Implementation of voluntary management systems such as ISO 14001[4]
Worker/ occupational health and safety	Slips and trips, falls Manual handling issues Hazards of musculoskeletal disorders Injuries, lack of protective equipment etc.	Solar equipment needs to be installed safely Workers shall wear protective gear and be trained in safe practices Assessment of workplace hazards. Consult and involve workers in the workplace risk assessment as well as in the choice of prevention measures Internal training on type of risks and suppression measures (safe working procedures) Supply appropriate Personal Protective Equipment (PPE) and train on its use and ensure that is properly maintained Maintain a fully stocked and accessible first aid kit
Labor issues	Child or forced labor	No child or forced labor can be employed by companies

[3] When recycled:

- Used lead-acid batteries are broken open, acids are drained into the soil and the lead plates are removed
- Some of the lead are recycled (melted into other forms) while others are shipped abroad
- Most lead-acid recycling plants operate under conditions which are hazardous to human health and the environment

If disposed of in landfills or other places:

- Wide-scale lead pollution/poisoning
- Soil and fresh water contamination
- Lead entry into the food chain resulting in diseases and fatalities

[4] ISO 14000 is a family of standards related to environmental management to help companies, organisations, etc. to minimise how their operations negatively affect the environment. ISO 14001 defines criteria for an Environmental Management System. The company, organisation, etc. sets its own targets and performance measures, and the procedures to meet the goals and monitoring and evaluating the situation.

	Improper grievance redress for workers Unfair terms of employment	Develop and implement a proper grievance redress mechanism DRE and clean cooking companies to have HR policies that articulate clear and fair terms of employment and provide for no discrimination and equal opportunity Proper training and record on the system or working procedure Fair employment practices can lead to better business and better workers Employing women
Land and related issues (installation)	If the installations need some on-the-ground space (as opposed to rooftops), ensure the areas are suitable for installation Key risks may be related to voluntary land donation in case of public / community buildings	Photovoltaic installations on the ground must take into account the protection of existing agricultural and forestry areas Prioritize "degraded sites" (brownfield sites) Avoid areas subject to natural hazards
Consumer / user health hand safety	Safe installation and use of panels and batteries	Ensure safe installation Promote consumer education about proper and safe practices for use of equipment Proper isolation of equipment Proper signalization of the solar power system E-waste generation and management raising awareness
Water consumption and resource efficiency	Solar irrigation: Water scarcity; social conflicts between community users	Measures for resource efficiency Communication campaigns and raising awareness on sustainable water management (especially for productive end users)
Gender-related risks	Women are disproportionately affected by lack of reliable access to energy Gender-based violence Underserved female-headed households Social tension and decrease social cohesion	Women employment with DRE or clean cooking businesses is part of fair labor practices Gender-sensitive stakeholder engagement Promote active participation of women entrepreneurs, women's organizations, civil society and non-governmental organizations working on gender and energy issues Increase information and awareness of women that will allow them to enter into renewable energy market Ensure that women entrepreneurs in the energy sector will have equal access to finance Capacity building and internal training on code of coduct; SEA to be reported and dealt with as per the law Taking action for women to be seen and engaged as valuable partners along the entire

		value chain: design, marketing, sales, and after-sale services Promote education approaches to reinforce social inclusion Stakeholder engagement measures to identify and take into consideration possible social tensions and conflicts within communities
Supply chain	Awareness raising on E&S risks (e.g. child labor) in supply chains of DRE and clean cooking equipment	Awareness of CFIs, DRE and clean cooking companies of supply chain E&S risks

Source: ECREEE's ESRM Sector Guide on Off Grid Standalone Solar for Financial Service Providers

7.3 ANNEX 4: E&S SCREENING TOOL FOR IDENTIFYING RED FLAGS

(This will be filled by the E&S team of TDB on the basis of discussion with the deal team, web search and discussion with the promoter.

Section A. Company details			
Company name:			
Company type:			
Year of establishment			
Short description of the company core business:			
Company Address: (Name of the company / Street, Avenue, etc. name and number / Village / City / State/ Country/ Postal Code)			
Contact person for E&S issues: (Name and title / Phone /E-mail)			
Name and title of the person filling the questionnaire			
Website *(if any)*:			
Section B. Business activities (DRE and clean cooking sectors)			
Total number of employees (both direct and indirect):			
Total number and value of business transactions over the last year in the DRE and clean cooking sectors):			
Type of DRE or clean cooking systems	Number	Value (specify currency)	
Solar Home Systems			
Stand-alone Solar Systems – Pico PV products			
Solar Irrigation Power Systems			
Other (specify)			
Section C. Environmental and Social Risk Management			
What kind of environmental and social risks does the company currently have to manage?			
Is the company involved in any of the activities list on the exclusion in Annex 1 of the ESMS? If yes, which one?		Yes	No
Other E&S issues:			
Are there any court & criminal cases, legal actions, employee grievances or public controversies involving working conditions, payment of wages, occupational health & safety? Please provide details if the answer is yes.		☐	☐
Are there any court cases, legal actions, community grievances or public controversies involving waste disposal? Please provide details if the answer is yes.		☐	☐
Any community grievances and public controversies around land-related issues (applicable to installations on ground.)		☐	☐
Are there any court cases, legal actions, community grievances or public controversies involving water usage? Please provide details if the answer is yes.		☐	☐
E&S issues in supply chains (e.g. reputational risks due to well-known poor labor conditions of panel or other equipment manufacturers?)		☐	☐
Is there any negative media publication? Please provide details if the answer is yes.			
Is there any negative campaign or agitation against the company or any of its projects (existing or proposed project) by NGO? Please provide details if the answer is yes.			
Has the company paid excess charges or fines/penalties for non-compliance with HSE regulations and standards in the last two years? (please attach copies of most recent inspection report)		☐	☐
Is the company exposed to potentially significant HSE liabilities, such as those arising from land / groundwater contamination, related to the company's past or ongoing operations? If yes, specify magnitude		☐	☐

Has the company had any significant accidents or incidents in the last two years (e.g. oil spills, fires) involving deaths or multiple serious injuries and/or significant environmental damage?		
Other E&S issues		
E&S Summary based on initial screening		

FATAL FLAWS ANALYSIS

Topic	Point of Attention	Yes	No
Exclusion List	Does the project belong to the Exclusion List		
Excessive E&S risks	The potential E&S impacts cannot be mitigated reasonably		
Reputational risk	poses a risk of significant reputational risk in national or local media		
Past non-conformance	The project has a history of serious negligent and non-conformance with E&S regulatory requirements, legal actions and known community grievances & public controversies		
Recommendation	Consider the project (All the above response are "No")	Reject the project (at least one of the above responses if "Yes")	

INITIAL E&S CATEGORIZATION

Social and Environmental Category, Risks and Mitigations	
Recommended Social and Environmental Categorisation	
Social and Environmental Categorisation Rationale	
Initial determination of E&S impacts	
Recommended Mitigations:	

Signature of PIF or TF Officer: Date:

Signature of E&S Champion: Date

7.4 ANNEX 5;E&S DUE DILIGENCE AND SITE VISIT CHECKLIST

The annex offers general questions and tips for ESDD and site visits. It's important to remember that not all questions will apply to every SME. Additionally, depending on the specific operations of an SME, there may be other environmental and social issues that need to be considered.

Section A. Company details	
Company name:	
Company type:	
Project ID	

Section B. Environmental and Social Due Diligence & Site Visit Checklist

	Visual observation	Documentary evidence
E&S Policy & organizational capacity		
Does the company have an Environmental and / or Social Policy? (If yes, please attach any documents that can serve as evidence of such policy)		Review and policy documents
Does the company conduct any E&S monitoring visits?		Monitoring reports
What is the organizational arrangement for managing EHSS issues/risks?		
Names of the officers responsible for EHSS management,		organizational chart with names of the responsible officers
Training		
Is the EHSS team adequately qualified?		Training records
Is there a requirement for training for staff in EHSS matters?		Training calendar
Regulatory compliance		
Is the company in possession of all required HSE permits and approvals (please attach copies)		Review all environmental clearances
Does the company have a regulatory register to understand the applicable social and environmental legislations?		See the register Are relevant legislations listed? Does it contain international conventions as well?
Does the company have a compliance register as well?		
Is the company required to report to any of the govt department?		Copies of reports submitted to various government departments on E&S aspects Any correspondence with the regulatory authorities.
Working Conditions and Management of Worker Relationship		
Do you have a Human Resource (HR) Policy for your employees?		Review the HR policy Does it contain all clauses of employment, retrenchment, benefits and disciplinary actions? Is the policy readable, understandable and accessible to all? Is it kept at some common place as well? Review the grievance mechanism and grievance records
Does the policy include clear terms and conditions of employment and worker's rights related to hours of work, wages, overtime, compensation, benefits, etc.		

	Visual observation	Documentary evidence
What policy, if not HR, governs the requirements of employment, like roles, responsibilities, working hours, wages etc.?		
Are employees aware of the policy?		
Is there a grievance mechanism for employees? How often has it been used in last 1 year and what are the most common grievances?		
How many staff are employed or are anticipated to be employed by the client (number, gender breakup and organogram)?		
How are the general and specific working conditions, leaves, wage rates, working hours etc. communicated to the employees? Is it through the appointment letter? Any other medium?	HR policy on display at any notice board? Shift hours, wage rates etc. displayed?	See a sample appointment letter
Do you have a policy on non-discrimination? Is there any work which is given to a particular workforce only? What is that?	Visual inspection of facilities provided	
How do you monitor the minimum age restriction? What documents do you refer for ensuring it? What is the policy on child labor or minimum working age?		Look at HR files of 12 or more employees and workers
Occupational Health and Safety		
Do you have a workplace safety policy? Are the employees insured? What benefits does that cover? Does the company have qualified internal designated coordinators, officers, or other staff responsible to oversee OHS issues? What are the occupational hazards of working at this site/facility? How do you manage these hazards? What all safety equipment and PPEs are provided? Do you have SOPs commensurate with Health and Safety Risks of the project(e.g. working at height, hot-work, excavation and trenching, etc.? How do you ensure your contractor follow these SOPs and safety policy? Does the company conduct regular OHS training for its workers and employees?		Copy of safety policy Proof of work force insurance List of hazardous chemicals List of PPEs provided
Any accidents at the site? Any loss of life in recent past? Ever? Serious injuries? What were the reasons? Does the company have a clear, documented workplace incident and accident tracking system?		Latest accident or incident reports
Does the company have a Code of Conduct for workers? *If yes, attach copy* Does the company provide internal training on Gender Based Violence?		
Does the company have a monitoring system for workplace conditions and safety (e.g. regular internal audits, field visits by company OHS staff/ coordinators etc.?)		
Supply Chain		
How do you ensure that no child labor or forced labor is engaged in your supply chain?		Review the suppliers audit report, if available
Waste management		
Does the company have any policy or process for collecting used batteries (both lead acid and lithium ion), as well as used units and equipment from customers?		Review the policy Review buy back arrangements

	Visual observation	Documentary evidence
Does the company have any policy or process for collecting, sorting, recycling and disposal of used lead acid and lithium-ion batteries (or, units containing such batteries) or any other used material resulting from solar systems installation process and subsequent use? Does the company have any buy-back agreements with equipment manufacturers as part of its waste management approach? Does the company systematically collect use batteries and/ or units from its consumers? Does the company inform end users on the e-waste issue and provide them with information on proper e-waste management? Does the company inform end users on other environmental issues? i.e. overexploitation of water resources*? Only in consideration in case of solar water pumping installation activities		Review records of waste generated and their disposal methods Review contracts for management of waste
Environmental pollution		
Water consumption (litre/year); is there any treatment of raw water? Do you monitor water consumption and analyze the data to find ways to consume less? Wastewater treatment: where does this take place? On-site or at a central/municipal-run Waste Water Treatment Plant (WWTP); what are the monitoring parameters you are required to provide/measure; Please provide details of the wastewater treatment process and point of discharge of treated effluent. Hazardous materials (HM): Do you use or generate HM in your operations? If so, what types (e.g. explosive, corrosive, flammable, etc.)? Describe management of hazardous materials on site to ensure proper handling/disposal. Please list all sources of air emission – ball mill/spray drier/boilers/incinerator, etc. please provide information on their size. Do you monitor the air emissions from stacks? Please list all stacks together with fuel used and also details on air pollution control device provided. Copy of environmental monitoring reports – ambient air quality, stack emissions, noise levels, treated wastewater quality, workplace air quality etc. Cooling agents: specify which products are used, how these are managed and the safety measures you have in place to protect workers; Describe efforts and technical interventions to minimize fire risks at facilities. Which fire code (national and/or international) will building and premise design and construction conform to (e.g. U.S. NFPA, NBC)? Describe planned initiatives on energy and water efficiency (e.g. energy savings from using prefabricated housing units, solar systems, etc), and on material re-use/recycling. What are expected water/energy usage levels (cbm/kWh) during construction and during operation?		
Emergency preparedness		
Do you have an Emergency Preparedness Plan? Does the Plan have provision for mock drills, trainings etc.?	Emergency Preparedness Plan	See the plan
General housekeeping		

	Visual observation	Documentary evidence
Evidence of liquid and solid wastes in the workplace High levels of noise (intermittent or continuous) Strong smells/irritants Access, fire risk		
Community engagement		
What grievance mechanism is being used by community? Is there any other channel of logging the grievances? How long does it take to resolve the grievance? Please tell a typical example from registering to closing of the grievance and communicating the closure to the grievant. What kind of grievances are more common and why?		Review the Grievance recording system What kinds of grievance are more common? Is there any record of closing the grievance or communicating the redressal of grievance back to the grievant?

7.5 ANNEX 6: ESDD REPORT OUTLINE

Using the information collected as part of the previous Annex, the E&S champion should prepare an ESDD report as per the following outline.

1. Project Description: (including the site and environmental and social setting, surrounding land uses).
2. Environmental and Social Categorization Rationale: specify the Category of the investment according to the guidelines in Appendix 4 and give the basis for the rationale.
3. Client Social and Environmental Management Systems: (the processes by which the Client manages environmental and social performance, including community engagement activities). This includes the ways in which that Management is organized in the Client. This section should also cover compliance with national regulatory requirements.
4. Environmental aspects: This section should explain the sources of air pollution, water pollution, solid and hazardous wastes, noise, chemical hazards and emergency management, resource conservation and energy efficiency measures
5. Resource utilization: Water, Construction material, Other
6. Sensitive receptors: Local human settlements, local ecologically sensitive areas and protection and conservation of biodiversity, sites of cultural importance
7. Social Issues: Land acquisition, impact on local livelihood, displacement of communities, stakeholder engagement and consultation
8. Labor relations: Description of existing HR policies, OHS, labor complaints.
9. Other project specific issues
10. Recommended corrective actions: (for performance gaps, recommend corrective actions corresponding schedules, indicate priorities, and advise as to how to incorporate these into the Investment Agreement as either Conditions Precedent or Management Actions). An Environmental and Social Action Plan (ESAP) should be compiled with actions identified, following the template available in Appendix 11 of the ESMS
11. Summary and recommendations
12. Financing covenants/conditions

7.6 ANNEX 7: ENVIRONMENTAL AND SOCIAL ACTION PLAN TEMPLATE

Client:					
Client Contact Details:					
Date:		Date of next review:			
Aspect	Description of the action	Responsible Person	Date to be completed by	Status	Level of Compliance
Social and Environmental Management Systems					
Labor and Working Conditions					
E-waste management					
Occupational health and safety					
End user's health and safety					
Stakeholder engagement & grievance mechanism					
Land-related issues (DRE business to verify that end users have adequate mitigation measures in place)					
Other issues					

7.7 ANNEX 8: ENVIRONMENTAL AND SOCIAL MONITORING REPORT

All projects are required to submit this report on an annual basis.

Please provide responses to the questions below. Please provide responses to only those parts that are relevant to your operations. Please include additional sheets or attachments as required to provide details on questions that have been answered Yes.

Project name:			
Location:			
Completed by (name):			
Position and contact details:			

Report Covering Period:	
From:	To:

Information on Potential Environmental and Social Risks

Please list all new and existing E&S risks (please add rows as needed):

E&S issues at approval	Current E&S status/any changes since last report
• Have the conditions precedent been met?	
Are you in compliance with the regulatory requirements?	
Appropriate action is taken on complaints, orders, directives, claims, citations or notices from any authority under any applicable law or local requirements	
on-going stakeholder engagement is performed and that a grievance mechanism for effected communities is maintained and that all grievances are dealt with accordingly.	

Social & Environmental Management System (ESMS) Information

Policies & Processes	Yes/No	
Have there been any updates to the Environmental and Social Policies adopted by your organization?		If yes, please provide a copy of the updated policies, including date when it was issued and reasons for the same.
Please describe any activities for the last six months for staff training and other internal communication (including number of staff trained).		
State any difficulties and/or constraints related to the implementation of E&S procedures.		
Please describe how you ensure that you are operating in compliance with national laws and regulations.		
Do you review the E&S performance at your facility and all your installations?		If yes, please describe the process including any environmental and social considerations if applicable.
Over the past six months have you continued to be in compliance with the relevant environmental, health and safety regulations?		If yes, please describe the process.
Monitoring	Yes/No	
Please provide details of any accidents/litigation/complaints/regulatory/ notices and fines: Any incidents of non-compliance with Applicable Requirements. Covenants/conditionality imposed upon you as a result of any non-compliance		
Reporting	Yes/No	
Is there an internal process to report on E&S issues to senior management?		If yes, please explain process, reporting format and frequency.
In the past 12 months have you prepared any environmental and social reports apart from the ones submited to TDB.		If yes, please provide copies of these reports.
Do you have a process to inform TDB of any material change to the business?		
Have you informed TDB of any emergency incidents events during this period?		If yes, please give the date of report.
E-waste management		
Total e-waste generated during the reporting period? (for each caetgorty of waste such a broken panels, batteries, etc.) (use an additional sheet to include the information)		
How was this waste disposed off (include quantity agaisnt each disposal method)		
Any community and/ or regulatory complaint related to management of waste?		
Other issues	Yes/No	
Non-compliance with national legislation and regulations		
Complaints from regulatory agencies, interest groups, or local communities		
Work-related fatalities or serious work-related injuries		

E-waste management		
Total e-waste generated during the reporting period? (for each caetgorty of waste such a broken panels, batteries, etc.) (use an additional sheet to include the information)		
How was this waste disposed off (include quantity agaisnt each disposal method)		
Any community and/ or regulatory complaint related to management of waste?		
Other issues	Yes/No	
Any legal action		
Allegations or indications of corrupt practices		
Fines, penalties or increased permit charges		
Negative attention on the part of the media or NGOs (non-governmental organizations)		

Other material environmental and social issues affecting your operations during the reporting period		
Cost savings through process efficiency, waste minimization or other schemes, energy savings, ISO certification		
Reduction of polluting emissions into the environment		
Increased diversity/gender balance in workforce and management		
Higher HIV/AIDS awareness in the workplace/community		
Facilitation of financing for less empowered groups		
Citations or awards		
Positive media or NGO attention		

Section 3: Environmental and Social Monitoring Data

This section is valid for clients involved in manufacturing of DRE or clean cooking products

(a) Ambient Air Quality

Sample Frequency (e.g. quarterly)	Ambient Air Quality Parameter	National Regulatory Limits and units	Actual Performance (Annual average)
	Particulate Matter (PM_{10})		
	Annual arithmetic mean		
	Maximum 24-hour average		
	(List other relevant parameters)		

Single Point Air Quality Monitoring

Sample Frequency (eg. quarterly)	Required Laboratory Analysis for Collected Samples	National Regulatory Limits and units	Actual Performance (Annual average)
Monitoring Location (please specify)			
	Particulate matter (PM_{10})		
	(List other relevant parameters)		

(b) Ambient Noise

Sample Frequency (e.g. quarterly)	Ambient Noise Paramètres (specify location)	National Regulatory Limits and units	Actual Performance (Annual average)
	Residential, institutional, educational receptors, Daytime (07:00-22:00 hours)		
	Residential, institutional, educational receptors, Nighttime (22:00-07:00 hours)		
	Industrial, commercial receptors Daytime (07:00-22:00 hours)		
	Industrial, commercial receptors, Nighttime (22:00-07:00 hours)		

(c) Wastewater discharge

- ❑ Please describe the water course(s) which the effluent is discharged into (e.g. river, municipal system, sea).
- ❑ If the effluent is treated prior to discharge from the site please describe the level of treatment provided.
- ❑ If the effluent is discharged into a municipal system please confirm the level of treatment provided and where the municipal system discharges to.

Sample Frequency (e.g. quarterly)	Required Laboratory Analysis for Collected Samples	National Regulatory Limits and Units	Actual Performance
	pH		
	Biochemical oxygen demand (BOD_5)		
	Chemical oxygen demand (COD)		
	Oil and grease		
	Total suspended solids (TSS)		
	Total coliform bacteria, Most Probable Number (MPN) or plate count (PC)		
	Ambient temperature of receiving waters at edge of zone where mixing with effluent takes place (if not defined, 100 meters from discharge point).		
	Heavy Metals, Total		
	(list other parameters)		

(d) Waste and Hazardous Materials Generated (please provide info for all facilities):

Hazardous and Non-hazardous Waste Type	Annual Quantity and Units	Method of Storage and Handling	Method of Recycling, Reuse or Disposal

Section 4: Health and Safety Monitoring Data

Occupational Health and Safety

7.8 INCIDENT STATISTICS REPORTING

Type of incident	Total no. of incidents	Date of each incident	Cause	Corrective actions
Fatality				
Lost time incidents[5]				
Total number of lost workdays[6] resulting from incidents				
	Total man-hours worked this reporting period	Incidence this reporting period:		Incidence last reporting period
Total man-hours worked (total hours worked by all employees) during the reporting period and Incidence calculation.				

Note: Incidence = total lost workdays/total hours worked

EHSS training details:

Training topic	Date of training	No. of people trained

Employee Workplace Monitoring

Sample Collection and Analysis Frequency	Required Workplace Monitoring Parameter	National Regulatory Limits and Units	Actual Performance in (Annual average)
	Particulate (Inert or Nuisance Dust)		
	(Other Parameters)		
	Temperature		
	Workplace Noise		
	(Other Parameters)		

[5] Incapacity to work for at least one full workday beyond the day on which the accident or illness occurred.

[6] Lost workdays are the number of workdays (consecutive or not) beyond the date of injury or onset of illness that the employee was away from work or limited to restricted work activity because of an occupational injury or illness.

Fire Safety Monitoring

Fire Safety Verification Activities	Date(s) Performed	Observed Deficiencies	Corrective Actions and Schedule For Implementation
Fire Drills			
Inspection and certification of fire detection and suppression electrical and mechanical systems.			
Portable fire extinguisher inspection, refilling/recharging			

8 ANNEX 9: ADDITIONAL RESOURCES FOR DRE AND CLEAN COOKING PROJECTS

8.1 A. SAMPLE OCCUPATIONAL HEALTH AND SAFETY GUIDELINES FOR DRE AND CLEAN COOKING COMPANIES

Occupational Health and Safety guidelines for DRE and clean cooking companies

You should adapt the checklist to your particular sector or workplace and to the characteristics of the workforce as specific workers' groups may have specific needs. Some extra items may need to be covered, or some points omitted as irrelevant.

For practical and analytical reasons, a checklist presents problems/hazards separately, but in workplaces they may be intertwined. Therefore, you have to take into account the interactions between the different problems or risk factors identified.

DRE or clean cooking company will provide a safe and healthy work environment, taking into account inherent risks in its particular sector and specific classes of hazards in the work areas, and specific threats to women. It will take steps to prevent accidents, injury, and disease arising from, associated with, or occurring in the course of work by minimizing, as far as reasonably practicable, the causes of hazards. OHS Guideline will also include steps, as relevant, for SEA/SH and HIV/AIDS prevention.

Issues to be addressed:

Are managers and workers aware of the potential risks related to solar power installations and committed to their prevention?
Has the organization adopted a practical participative approach (worker involvement) to problem-solving?
Have appropriately trained staff undertaken comprehensive risk assessments?
Are all reported cases of accidents and incidents being managed?
How is the effectiveness of the measures taken to prevent risks caused by solar power installations across their life cycle being evaluated and monitored?
Checklist for the prevention of Occupational Health and Safety Risks
For example:
Does the hazard exist at the workplace?
Are the hazards eliminated, and where not possible controlled to minimise negative influences on the safety and health of all people involved?
Answering 'NO' to one of the following questions indicates a need for improvements to be made in the workplace.

	QUESTIONS	Yes	No
	1. Installation, maintenance, decommissioning		
	Work organization, psychosocial risks		
1.1	Is information on the solar system, the electrical installation and the building that is required to perform the work safely available to the workers?	☐	☐
1.2	Is training provided on safe working procedures?	☐	☐
1.3	Is there sufficient cooperation, communication and exchange of information among the different actors involved (for example building owner and the workers) in order to allow the safe performance of the work?	☐	☐

1.4	Are workers involved in the workplace risk assessment?	☐	☐
1.5.	Is appropriate PPE supplied according to the OHS risks identified and staff is trained in its use and maintenance?	☐	☐
	Working at height, slips and trips, falls		
1.6	Can work at height in general, and in particular on slanting roofs be avoided?	☐	☐
1.7	When ladders are used to reach the place of work at height, has the appropriate ladder been chosen and is it used safely?	☐	☐
1.8	When roof work is necessary, has the condition of the roof been assessed to ensure that the roof is dry and free from slipping and tripping hazards such as moss, vent pipes, equipment lying around, etc.?	☐	☐
1.9	In the case of skylights or holes/cavities, are they safeguarded?	☐	☐
	Electricity-related risks (PV), burns/scalds		
1.10	Are only qualified persons allowed to work on electrical equipment?	☐	☐
1.11	Are workers aware that low voltages can cause surprise shocks and thereby falls?	☐	☐
1.12	Are workers aware that small amounts of sunlight can produce a voltage potential in the PV system and shock or arc-flash hazards?	☐	☐
1.13	Are workers provided with suitable PPE when risk reduction measures at source are not sufficient?	☐	☐
1.14	Are workers accompanied by at least one colleague when working on electrical systems, thereby eliminating lone working?	☐	☐
	Hazards of musculoskeletal disorders		
1.15	Is work arranged so that manual handling operations, such as lifting and carrying are avoided and, where not possible, reduced to the minimum?	☐	☐

8.2 B. REQUIREMENTS FOR HR POLICY FOR DRE AND CLEAN COOKING COMPANIES

HR Policy Requirements

DRE or clean cooking company will have in place an HR policy that expresses its commitments, at a minimum to:

(1) comply with all relevant national labor laws and regulations;
(2) promote the fair treatment, non-discrimination, and equal opportunity for workers;
(3) establish, maintain, and improve the worker-management relationship;
(4) allow workers' organizations and collective bargaining;
(5) have in place a grievance mechanism for workers;
(6) explicit commitment not to employ forced labor or child labor, including not hiring workers below minimum age, as defined by national law and not employ children in hazardous work.
(7) include a code of conduct for workers that provides for rules of appropriate behavior, including prevention of sexual exploitation and abuse and sexual harassment and plan for training on and disseminating the code of conduct;
(8) maximize women's employment by hiring women employees;

DRE or clean cooking company will adopt and implement human resources policies and procedures appropriate to its size and workforce that set out its approach to managing workers consistent with the requirements of national law. It will provide workers with documented information that is clear and understandable, regarding their rights under national labor and employment law and any applicable collective agreements, including their rights related to hours of work, wages, overtime, compensation, and benefits upon beginning the working relationship and when any material changes occur. It will provide and inform workers of an internal grievance process to raise their workplace concerns.

Code of Conduct for Workers on SEA/SH: Core Principles

The following core principles should be at the center of the Code of Conduct adopted by the contractor, and apply to all its employees without exception:

DRE and clean cooking companies are obliged to create and maintain an environment which prevents gender-based violence and promotes the implementation of the code of conduct. Managers at all levels have particular responsibilities to support and develop systems which maintain this environment.
All codes of conduct to for the prevention and mitigation of SEA/SH should contain clauses that state that:

Sexual Exploitation and Abuse and Sexual harassment constitute an act of gross misconduct, providing grounds for sanctions, penalties and/or termination of employment – there will be zero tolerance for any gender-based violence case on the work site and in its surroundings.

Sexual interactions by employees at any level with individuals under the age of 18, , are prohibited. Mistaken belief regarding the age of the individual is not acceptable as a defense.

Exchange of money, employment, goods, or services for sex, including sexual favours or other forms of humiliating, degrading or exploitative behaviour, are prohibited.

Sexual interactions between contractors' employees at any level and members of the communities surrounding the workplace that are not agreed to with full consent by all parties involved in the sexual act are prohibited. This includes relationships involving the withholding, promise or actual provision of a benefit (monetary and non-monetary) to community members in exchange for sex – such sexual activity is considered ''non-consensual'' within the scope of this Code.

All managers and employees should receive a clear written statement of the company's requirements with regard to preventing gender-based violence, and a mandatory training course should be provided for all employees before they commence work on site which ensures that they are familiar with these principles.

The manager will ensure that the principles regarding gender-based violence are displayed prominently at the work site in places where they will be seen be all employees.

The contractor also commits to raising awareness on the code of conduct and its associated grievance mechanisms within the project affected communities.

The code of conduct will outline procedures for community and staff members to lodge a complaint to the grievance and accountability mechanism to be established, should the code of conduct be violated.

DRE and clean cooking companies should also develop a Gender-Based Violence Action Plan, which shall include the following items:

Operating Procedures related to the prevention and mitigation of Sexual exploitation and abuse and sexual harassment (SEA and SH). On the work site, as well as to the management of SEA/SH cases, including details of the internal reporting & sanctioning mechanisms that DRE and clean cooking companies will put in place and reporting mechanisms for the community in which DRE or clean cooking companies are working.

An awareness-raising strategy should aim at sensitizing DRE and clean cooking company employees on the provisions of the code. The strategy will also highlight how the affected communities will be made aware of the code of conduct and the grievance and complaint mechanism that they can use should the code be violated. The strategy shall be accompanied by a timeline, indicating the various sensitization activities through which the strategy will be implemented and also the related (expected) delivery dates.

A monitoring strategy, aimed at measuring the knowledge and level of awareness possessed by DRE and clean cooking company employees on the topics covered by the awareness-raising strategy, and indicating the instruments (e.g. perception surveys, random interviews with employees etc.) intended to be used for that purpose.

Support measures to be made available for employees who are victims of GBV, including provisions for time off (to allow reporting at competent authorities, seeking of health/psychological assistance etc.), financial support (where and if applicable) etc.

Support systems should be identified for referral of community members that experience violence at the hands of a DRE or clean cooking company employee, if such a case should arise

8.3 C. GUIDANCE ON USED BATTERY COLLECTION AND RECYCLING

Introduction

Many countries and communities are already struggling with contaminated sites and soil pollution from unregulated car battery recovery and recycling. Unsound end-of-life management and recycling can cause severe and even fatal lead poisoning of people working in the battery recycling sector. Batteries used in solar systems can be of two main types – lead acid and lithium ion. Both present different challenges with disposal and recycling.

The health of people living around small and industrial-scale lead smelters, in particular children, are severely impacted for life. A recent report by the Lead Recycling Africa Project and Oeko-Institute revealed that already every year more than 1.2 million tons of used lead-acid batteries and 800,000 tons of lead require sound management in Africa.

Environmentally, when disposed alongside household trash, batteries end up in landfills/waste dumps. As the battery casing corrodes, chemicals leach into the ground water from where they contaminate the water bodies. Acid and lead particulates also contaminate the soil and become airborne when dry. Health-wise, cadmium and nickel are known human carcinogens, lead has been linked to birth defects and to neurological and developmental damage, and mercury is also highly toxic, especially in vapor form. Excessive levels of lead can affect a child's growth, cause brain damage, harm kidneys, impair hearing and induce behavioural problems, and in adults, lead can cause memory loss and lower the ability to concentrate as well as harm the reproductive system.

In terms of lithium-ion batteries, the recycling value is generally considered to be low. Therefore, the emphasis would be on encouraging safe collection of used units and proper disposal. Recycling of lithium-ion batteries is possible but, according to research and practice, makes little economic sense. Lithium-ion batteries can be recycled, but only at specified locations. Projects are currently underway in Europe, the United States and Japan to develop effective and feasible recycling technologies with a complete life cycle analysis of recycling.

Guiding principles for recycling and disposal policy of a DRE company

If DRE or clean cooking company has an existing battery collection and/or recycling policy, this should be submitted with the loan application. It is preferred that batteries are recycled to potentially reuse some of its components, where economically and technically feasible. This would be equally applicable for expired batteries and the batteries that will be replaced within the warranty period due to manufacturing fault or reasons outlined in warranty conditions.

The company shall systematically collect used battery units and engage with communities on the importance of recycling, if such program is in place. The suggested options that can be considered are:

A. Collection of Batteries by DRE and clean cooking companies: DRE or clean cooking company representatives will make arrangement to collect the battery units from the consumer and store it in the local offices. DRE or clean cooking company will take necessary measures to ensure safe storage of the batteries. It may be feasible for DRE or clean cooking company to send the warranty expired batteries to a central location.

B. Potential battery disposal / recycling options can be as follows:

- Buy-back arrangements with manufacturers: DRE or clean cooking company can put in place buy-back arrangements with the battery manufacturers and ensure safe transportation of the batteries to the manufacturer. SHS company and manufacturers can mutually decide on cost sharing of collection and transportation of expired batteries, for example sign a Memorandum of Understanding signed between them;

- Recycling at own facilities: Larger DRE or clean cooking companies may consider establishing their own recycling facilities;

- Recycling at centralized locations in the country: If recycling facilities for either lead acid or lithium-ion batteries exist, DRE or clean cooking companies must use those that are inspected the government and are considered safe and complainant with national regulations and World Bank standards;

- Disposal: Lead acid batteries are hazardous waste. Lithium ion batteries may also qualify as household hazardous waste.[7] DRE or clean cooking company will ensure that the batteries are disposed in a particular designated area ensuring environmental and occupational health and safety in line with World Bank E&S standards and Environmental, Health, and Safety Guidelines of the World Bank Group. DRE or clean cooking company will also comply with the government regulations, if any, regarding disposal of any of the components used in the battery units.

[7] In some countries, they are classified as non-hazardous waste.

8.4 D. SAMPLE STAKEHOLDER ENGAGEMENT PLAN AND GRIEVANCE MECHANISM FOR DRE AND CLEAN COOKING BUSINESSES

Sample Content of a Stakeholder Engagement Plan

A good **Stakeholder Engagement Plan** should:

- Describe regulatory, lender, company, and/or other requirements for consultation and disclosure.
- Identify and prioritize key stakeholder groups, focusing on Affected Communities.
- Provide a strategy and timetable for sharing information and consulting with each of these groups.
- Describe resources and responsibilities for implementing stakeholder engagement activities.
- Describe how stakeholder engagement activities will be incorporated into a company's management system.

The scope and level of detail of the plan should be scaled to fit the nature and needs of the project (DRE or clean cooking businesses). A sample outline of a Stakeholder Management Plan can be as follows:

Introduction

Briefly describe the project, including design elements and potential social and environmental issues. Where possible, include maps of the project site and surrounding area.

Regulations and Requirements

Summarize any legal, regulatory, lender, or company requirements pertaining to stakeholder engagement applicable to the DRE or clean cooking business operations (if any).

Summary of any Previous Stakeholder Engagement Activities (if applicable)

If the company has undertaken any activities to date, including information disclosure and/or consultation, provide the following details:

Type of information disclosed, in what forms, and how it was disseminated

The locations and dates of any meetings undertaken to date

Individuals, groups, and/or organizations that have been consulted

Key issues discussed and key concerns raised

Company response to issues raised, including any commitments or follow-up actions

Process undertaken for documenting these activities and reporting back to stakeholders

Project Stakeholders

List the key stakeholder groups who will be informed and consulted about the project. These should include persons or groups who:

are directly and/or indirectly affected by the DRE or clean cooking business have "interests" in the project that determine them as stakeholders have the potential to influence project outcomes or company operations

Stakeholder Engagement Program

Summarize the purpose and goals of the program

Briefly describe what information will be disclosed, in what formats, and the types of methods that will be used to communicate this information to each of group

Briefly describe the methods that will be used to consult with each of group

Describe how the views of women and other relevant sub-groups will be taken into account during the process

Describe any other engagement activities that will be undertaken

Management Functions (This is applicable to Energy Service Companies that may be involved in a Public Institution Projects**)**

How will stakeholder engagement activities be integrated into the company's environmental and social management system and with other core business functions?

Who will have management oversight for the program?

What are the plans for hiring, training, and deploying staff to undertake stakeholder engagement work?

What will be the reporting lines between community liaison staff and senior management?

How will the company's stakeholder engagement strategy be communicated internally?

What management tools will be used to document, track, and manage the process?

For projects or company operations involving contractors, how will the interaction between contractors and local stakeholders be managed to ensure good relations?

Monitoring and Reporting (This is applicable to Energy Service Companies that may be involved in a Public Institution Projects**)**

Describe any plans to involve project stakeholders (including affected communities) or third-party monitors in the monitoring of project impacts and mitigation programs. Describe how and when the results of stakeholder engagement activities will be reported back to affected stakeholders as well as broader stakeholder groups?

Timetable

Provide a schedule outlining dates and locations when various stakeholder engagement activities, including consultation, disclosure, and partnerships will take place and the date by which such activities will be incorporated into the company's management system.

Resources and Responsibilities

Who within the company will be responsible for carrying out these activities? What budget has been allocated toward these activities? Indicate what staff and resources will be devoted to managing and implementing the Stakeholder Engagement Program. Integration of the community liaison function with other core business functions is also important, as is management involvement and oversight.

Grievance Mechanism

Describe the process by which people affected by the business can bring their grievances to the company for consideration and redress. Who will receive public/users grievances, how and by whom will they be resolved, and how will the response be communicated back to the complainant?
Sample Grievance Mechanism

DRE or clean cooking business especially Energy Service Companies providing services to Government and Public Institutions will set up a project-specific grievance mechanism (GM) for people to report concerns or complaints, if they feel unfairly treated or are affected by any of the activities.

For companies involved in the distribution of SHS equipment and for productive uses, will have to indicate in their transactions with users, the issues of warranty, what contact numbers to call in case they have challenges with the system or payments.

The mechanism will amongst other things: (a)provide information about project implementation; (b) provide a forum for resolving grievances and disputes at the lowest level;(c) resolve disputes relatively quickly before they escalate to an unmanageable level;(d) facilitate effective communication between the project and affected persons; (e) win the trust and confidence of project beneficiaries and stakeholders and create productive relationships between the parties. The mechanism is envisaged to be at multiple levels and will address such complaints, including logging, tracking, and resolving grievances promptly during and after the implementation of the Project.
The company will have dedicated person to be responsible for setting up and maintaining the GM that allows general public in the project area and affected communities or individuals to file complaints and to receive responses in a timely manner. The system will also record and consolidate complaints and their follow-up. This system will be designed for handling complaints perceived to be generated by the project or its personnel. It may also include disagreements about compensation and other related matters.

The GM will be communicated to all stakeholders in the course of its community engagement activities and will make public available a record documenting the responses to all grievances received. The GM will remain available throughout the project cycle. It is expected to address concerns promptly an effectively, in a transparent manner that is culturally appropriate and readily accessible to all project affected parties, at no cost and without retribution. It also allows for anonymous complains to be raise and addressed.

The GM should include the following elements. More details see Table below.

Different ways in which users can submit their grievances, which may include submission in person, by phone, text message, mail, email or via a website;

A lot where grievances are registered in writing and maintained as a database;

Publicly advertised procedures, setting out the length of time users can expect to wait for acknowledgement, response, and resolution of their grievances;

Transparency about the grievance procedure, governing structure and decision makers; and
An appeals process (including the national judiciary) to which unsatisfied grievances may be referred when resolution of grievance has not been achieved.

A separate process for dealing with local complaints about sexual exploitation and abuse and gender-based violence that is sensitive towards and protects the confidentiality of the complainant. Information should also be provided to victims about local services to provide medical and social support.

Grievance Management Process

Process	Description	Time Frame	Other Information
Identification of grievance	Face to face; telephone; letter; mail; e-mail; website; recorded during public/ community interaction; others The grievance can also be passed through other parties, such as the chief office because the public are more conversant with this office.	1 Day	Email address; hotline number
Grievance assessed and logged	Significance assessed and grievance recorded or logged (i.e. in a log book) It will be prudent to have a grievance record book where the grievances are recorded for follow up. Grievances concerning sexual exploitation and abuse/gender-based violence should be treated as confidential. Only the nature of the complaint and the processing outcome should be recorded.	3-6 Days	Significance criteria: Level 1 –one off event; Level 2 – complaint is widespread or repeated; Level 3- any complaint (one off or repeated) that indicates breach of law/ policy
Grievance is acknowledged	Acknowledgement of grievance through appropriate medium	3 Days	
Development of response	Grievance assigned to appropriate party for resolution Response development with input from management/ relevant stakeholders	4-8 Days	
Response signed off	Redress action approved at appropriate	8-15 Days	
Implementation /communication of response	Redress action implemented and update of progress on resolution communicated to complainant	5-9 Days	

If complainants are not satisfied with the grievance process, even after arbitration, the affected persons will still have the right to present their complaint through the court system.