



# ROGEP: Environmental and Social Risk Management (ESRM)

## SYSTEM DESIGN

---

ESRM PUBLIC CONSULTATION

ACCRA

JUNE 27, 2018

# Objectives



CONSULT ON THE APPROACH AND OBTAIN STAKEHOLDER FEEDBACK ON THE ESRM DESIGN FOR ROGEP

# Terminology

---

CFIs – Commercial Financial Institutions

E&S - Environmental and Social

ESRM – Environmental and Social Risk Management

ESMS – Environmental and Social Management System

ROGEP – Regional Electrification Off Grid Project

# 1. E&S Risks in Off-Grid Solar

---

**Waste management:** Used panels, used batteries and units (both lead acid and lithium ion) >> hazardous waste

---

**Worker health and safety:** Injuries, protective equipment

---

**Labor issues:** No child or forced labor, proper grievance redress, fair terms of employment

---

**Gender and vulnerable groups risks:** Gender-based violence, underserved female-headed households, exclusion of poorest groups and people with disabilities

---

**Supply chain:** Products free of key E&S risks (e.g. child labor)

---

**Consumer / user health and safety:** Ensure safe installation

---

**Water consumption:** installation and panel washing. Measures for resource efficiency

---

**Land issues:** (1) Small land acquisition (if on the ground) - may be related to pressure to sell or donate in case of public / community buildings; (2) Small-scale land management and use for installation of panels

---

Solar Companies

End Users

# Waste Management

## If Solar Panels Are So Clean, Why Do They Produce So Much Toxic Waste?

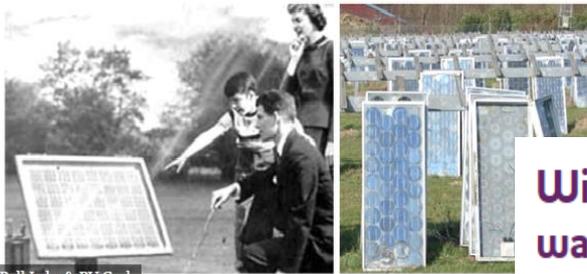


**Michael Shellenberger**, CONTRIBUTOR

*I write about energy and the environment* [FULL BIO](#) ✓

Opinions expressed by Forbes Contributors are their own.

- Biggest waste streams from solar projects are batteries, solar panels and other hazardous wastes
- In most places in Africa, management of used batteries will be a significant risk



### Will solar PV create a wave of toxic battery waste in rural Africa?

13 December 2016

Promoting solar photovoltaic (PV) off-grid solutions for poor rural areas without access to electricity is a good thing. The benefits of lighting and electricity for education and health, and clean energy as an enabler for income-generating activities cannot be emphasised enough. Therefore, the Sustainable Development Goal 7 'Affordable and Clean Energy' promotes renewables such as solar PV and mini grids as one of the quickest ways to scale up rural electrification rates in developing countries and to end energy poverty.

# Waste Management: Batteries



## When *recycled*:

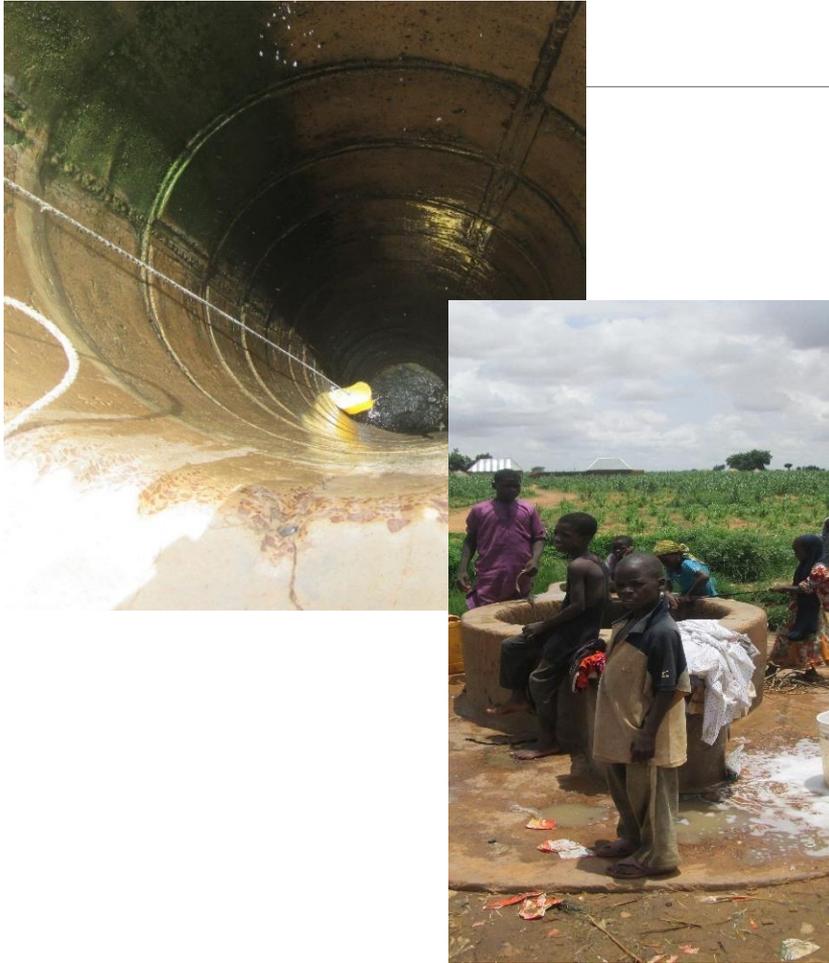
- Used lead-acid batteries are broken open, acids are drained into the soil and the lead plates are removed
- Some of the lead are recycled (melted into other forms) while others are shipped abroad
- Most lead-acid recycling plants operate under conditions which are hazardous to human health and the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

# Water Use and Quality



- Water needed for washing of solar panels
- Users are not aware of proper techniques and frequency
- Productive uses of energy can create additional stress on water resources
- Issue may become significant in water-constrained areas

## Potential Consequences

- Depletion of water resources beyond self-sustaining thresholds
- Conflict with other stakeholders who also depend on same sources of water supply
- Low quality water may also erode panels

# Occupational Health and Safety, Labor



- Solar equipment needs to be installed safely
- Workers shall wear protective gear and be trained in safe practices
- No child or forced labor can be employed by companies
- Fair employment practices can lead to better business and better workers
- Employing women

# Gender Considerations



- Women are disproportionately affected by lack of reliable access to energy
- Women have lower prospects for income generating activities
- Women have limited access to finance
- Women employment with solar businesses is part of fair labor practices
- Gender Based Violence

# Risk of Excluding Vulnerable Groups



- Excluding poorest groups in communities may create social tensions
- Lack of income opportunities can decrease social cohesion



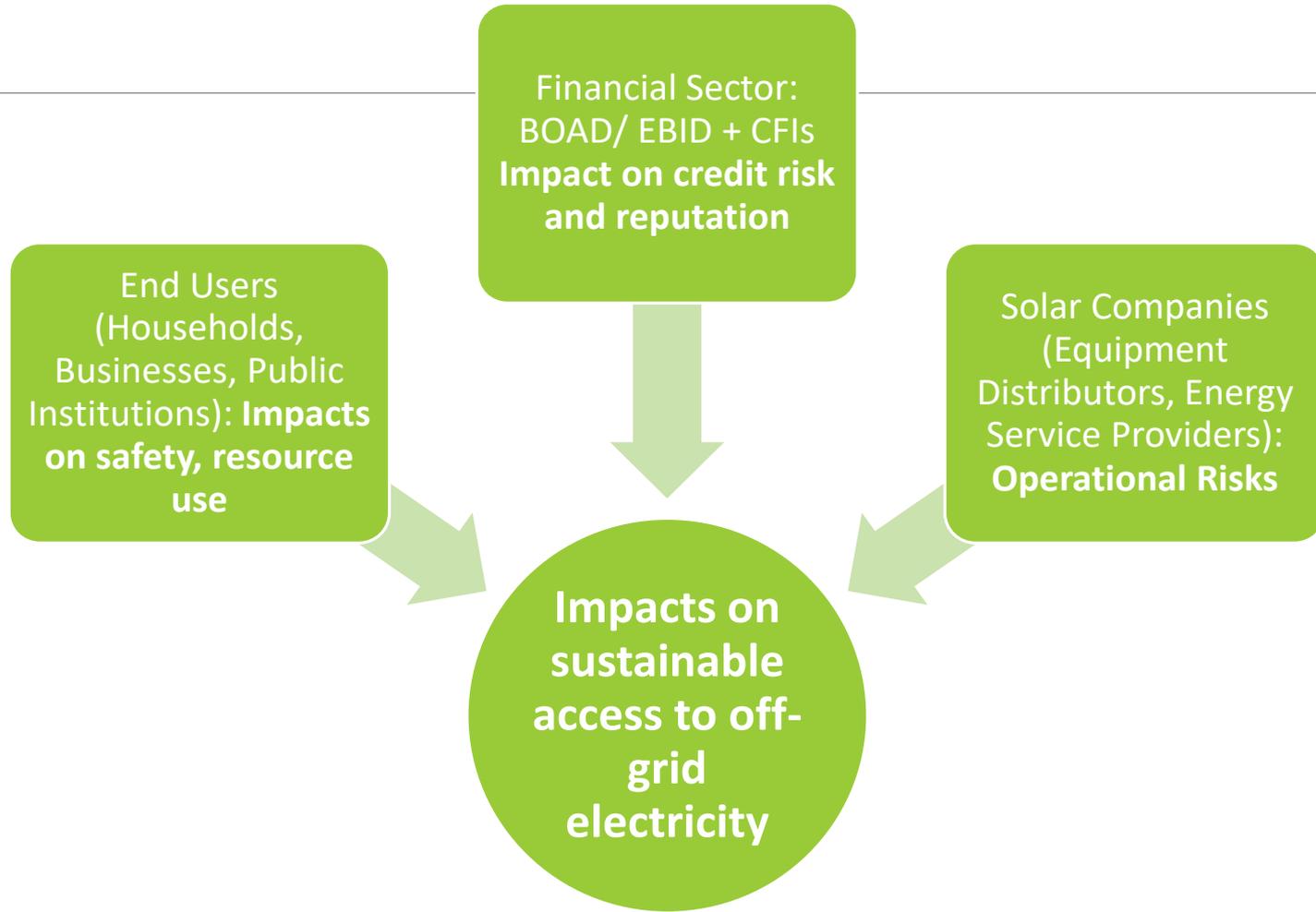


2. Why is it important for all stakeholders to manage such risks?

---

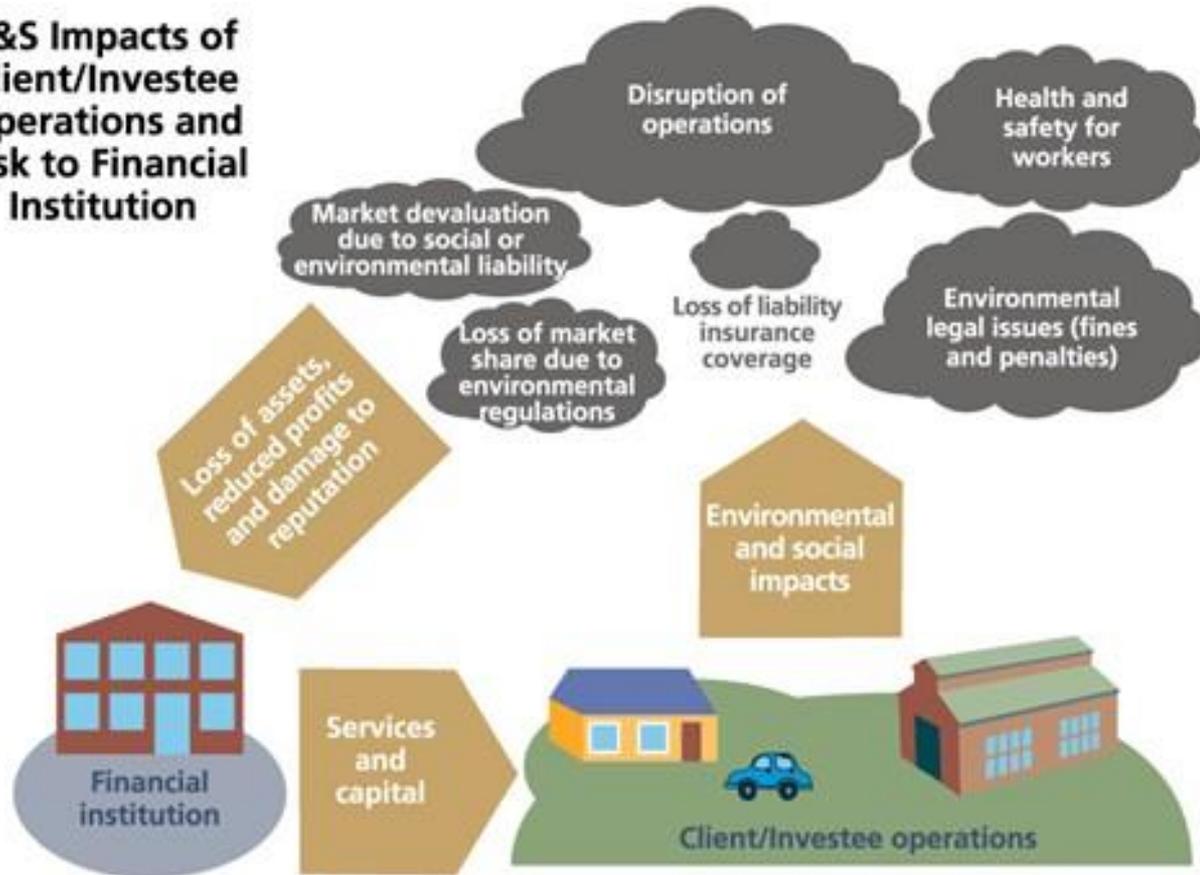
POTENTIAL CONSEQUENCES

# E&S Risk for Key Stakeholder Groups



# Where do E&S Risks Occur?

## E&S Impacts of Client/Investee Operations and Risk to Financial Institution



# How Are Financial Institutions Affected by E&S Risk?



© Can Stock Photo



# Why Should Solar Companies Care?

- Companies can have more reliable and healthy workforce
- Employing women can create more opportunities and more productive businesses
- Avoid fines and ensure compliance with regulations from authorities (Labor and Environment)
- Attract more investments from local and international investors that care about environment and social issues



# End Users Can Also Benefit from Considering E&S Issues...

- § More efficient use of resources such as water (both the quality and quantity),
- § More sustainable productive users are to be aware of the environments risks as they expand their business.
- § Avoid exposure to hazardous materials and waste and proper use of solar equipment
- § Increasing access for women to earning income generating activities



# 3. Principles of ESRM Design for ROGEP

**OPERATIONAL**  
**BOAD, EBID apply**  
**operational E&S**  
**requirements for**  
**CFIs and companies**  
**(ECREEE for grant**  
**funding)**

**Operational Sustainability:**  
require CFIs to do  
E&S due diligence  
and monitoring of  
solar companies '  
E&S risks



**Addressing Risks and Issues at the Market Level:**  
Key strategic risks  
with strategic  
solutions



**Capacity Building and TA:** CFIs,  
Companies, End  
Users

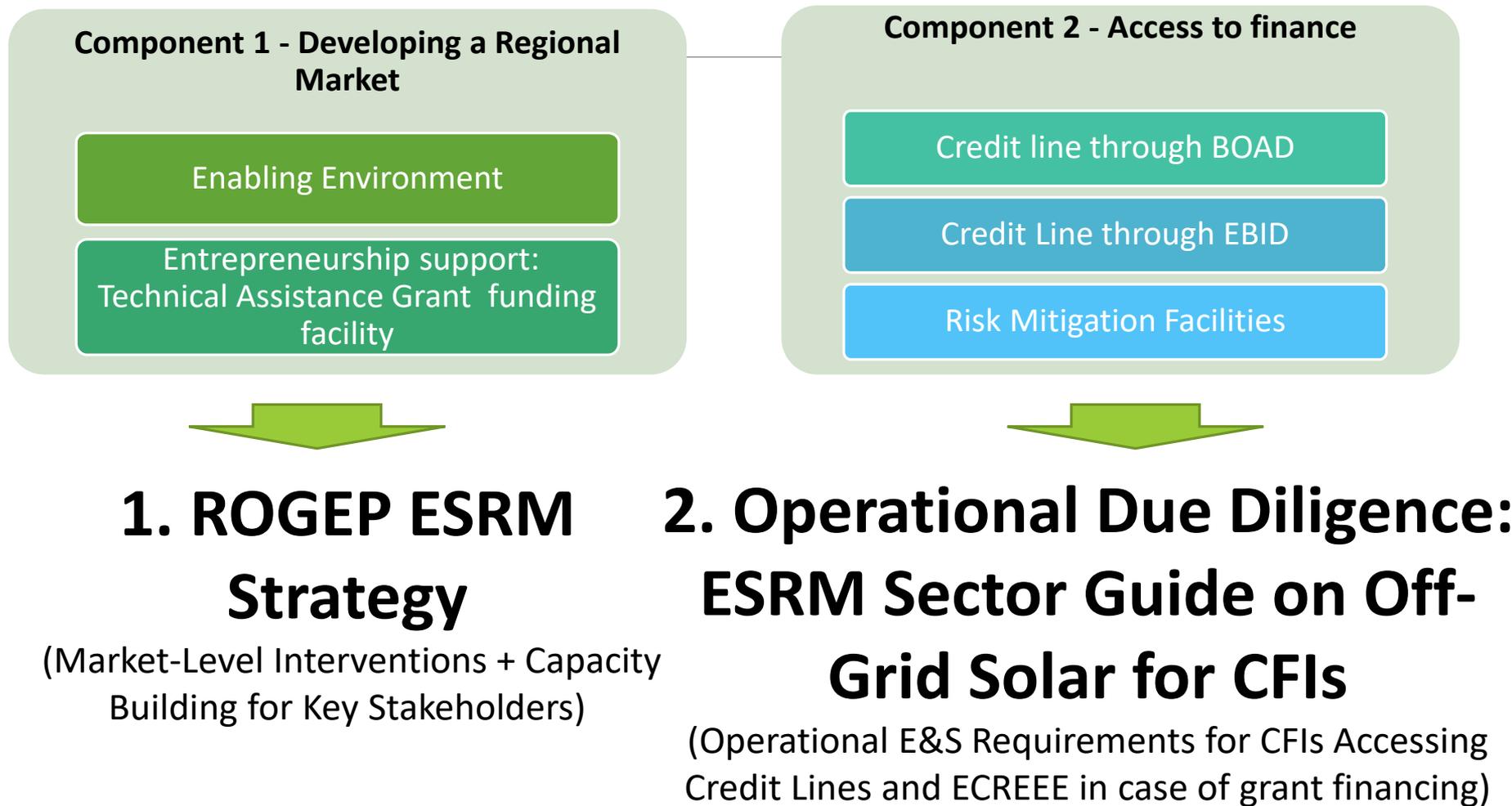


**Coherent**  
***Environmental and***  
***Social Management***  
***System for ROGEP***

**STRATEGIC +**  
**CAPACITY BUILDING**

**ECREEE to lead**  
**strategic**  
**engagements and TA**

# What specific ESRM instruments will be developed?



# 4. Operational E&S Due Diligence: ESRM Sector Guide for CFIs

CFI will apply **ESRM Sector Guide on Off-Grid Solar for CFIs** and provide evidence to BOAD and EBID that the solar businesses they will lend to are screened and monitored

CFIs will build the capacity of the E&S Focal Person(s) and create awareness among their credit/operational staff of the E&S issues in the off-grid sector

Periodic reporting on the E&S compliance by businesses in the portfolio will be provided by CFIs to BOAD or EBID

External auditing of E&S compliance will be conducted to verify whether the businesses are abiding by the requirements

# Operational E&S Due Diligence: Key Requirements for Companies

Environmental and social policy statement for the Company

HR policy that includes fair labor practices, employment of women, prohibition of child labor etc.

Occupational, Health and Safety Guideline for the company and accompanying training for workers

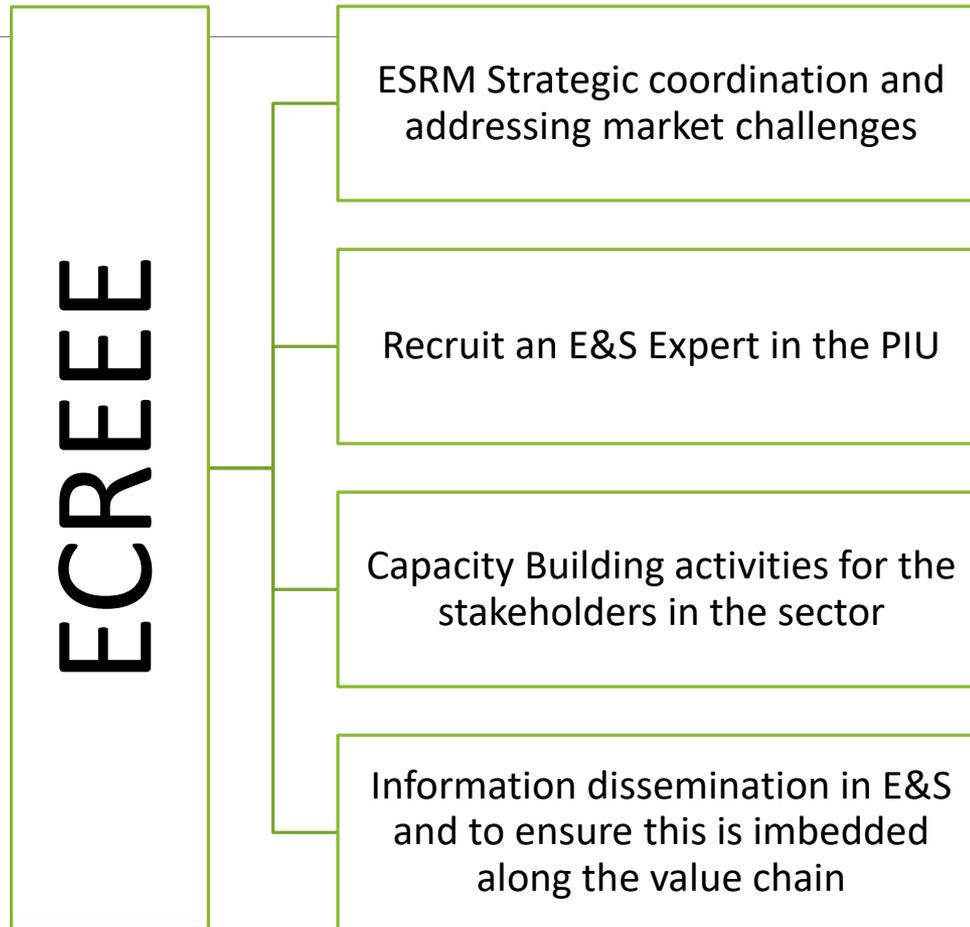
Grievance mechanism for workers and communities/ users

Waster management policy and process

Undertaking form for the above submitted to the CFI prior to finding and periodic reporting to CFIs on implementation

**Tools and templates for companies will be provided in ESRM Sector Guide**

# 5. ROGEP ESRM Strategy: ECREEE Coordination Role



# ECREEE: Capacity Building for CFIs, Companies, End Users

1. Awareness on E&S issues among key stakeholders
2. Institutional capacity for ESRM Staff and Credit/Operation Officers for BOAD, EBID, CFIs
3. Capacity of solar companies for ESMS implementation
4. E&S operational monitoring
5. Citizen / end user engagement
6. Design and implementation of a grievance mechanism
7. South-South knowledge exchange

# ECREEE: Market-level interventions

**1. Waste management (e-waste, used batteries)**

**2. Gender actions**

**3. Inclusion of vulnerable groups**

**4. Sustainability of the supply chains**

**5. Citizen Engagement**

# Waste Management: Strategic Solutions

Policy dialogue at country and regional level

Technical assistance to governments to put in place specific e-waste management measures for solar industry

Design and testing of private sector solutions

Awareness raising of end users

# Gender Actions

## Component 1: Developing a Regional Market

- 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's that will allow them to enter into renewable energy market

# Gender Actions

## Component 1: Developing a Regional Market

- Ensure women entrepreneurs and stakeholders have the equal opportunity to benefit from relevant training and capacity building activities
- Women entrepreneurs are equally represented in regional and national events organized throughout the project
- Select electrification to public institutions by taking into account if and how the institutions' work directly contributes towards advancing gender equality and women's economic development

# Gender Actions

## Component 2: Access to finance

- Ensure that women entrepreneurs in the energy sector will have equal access to finance
- CFIs will provide a line of credit to women in energy business that aim to improve women's income
- include women led business in the communication and outreach actions about the credit line



# Vulnerable Groups

---

- Policy dialogue – promoting social inclusion policies and practice among solar companies and CFIs
- Pilot activities to focus on the marginalized (bottom 40%) such as the graduation approach

# Supply Chain Sustainability

- Integrate key E&S considerations in product standards / certification (e.g. fair labor practices during production)
- Awareness of CFIs, solar companies of supply chain E&S risks
- Raising Public Awareness to Build Trust and Demand

## The True Cost of Chinese Solar Panels: Part 3

BY BRIAN LOMBARDOZZI | WEDNESDAY, SEPTEMBER 24, 2014

SHARE



The human cost of blind consumption, explored.

*The third in a series of blog posts about the Chinese solar panel industry. Read the [first](#) and [second](#) installments.*

Despite U.S. tariffs placed on Chinese solar imports in 2012, [\\$1.5 billion arrived in 2013](#) – up from [\\$21.3 million in 2005](#). This has been considered a boon to solar's proliferation across the U.S. But again, trade that [ignores the conditions of production supports, quietly but irrefutably, the environmental and human costs of unrealistically cheap products.](#)

Those costs are myriad. First, consider [that labor rights violations in China have been well-documented](#). From the use of sweatshops and child labor to [forced labor prison camps](#), labor laws in China often go unenforced as national and local governments pursue breakneck economic growth. Investigations by the Laogai Research Foundation have documented hazardous working conditions in prison camps, including “[mining asbestos without protective gear, battery acid being handled without gloves,](#)” and [vats of chemicals being stirred by naked individuals standing in them](#). And without [proper and consistent monitoring](#) and auditing of the

Source: <http://www.americanmanufacturing.org/blog/entry/the-true-cost-of-chinese-solar-panels-part-3>

# Citizen Engagement

Education and awareness under the project's key delivery areas namely households, small businesses and staff of health and educational institutions

Citizens in the project countries will be made aware of the benefits of solar products and how to deal with the challenges of waste and disposal.

At the national level workshops will be organized and civil societies will be invited to share their views and contribution especially with issues of E&S and the solutions can help to address the risks.

# Feedback....

	Question
1	<p>How would you rate overall usefulness of this consultation for you? (1=not useful &gt;&gt; 5 = very useful)?</p> <p>1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/></p>
2	<p>How much of this framework do you think will be applicable to you? (1=not applicable at all &gt;&gt; 5= all will be applicable)</p> <p>1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/></p>
3	<p>Is there any substantial risk or consideration that was not mentioned today and you think it should be included in this risk management framework?</p>
4	<p>Is the ESRM design clear and your role in managing E&amp;S risks for the project well-understood?</p>