ENVIRONMENTAL AND SOCIAL MANAGEMENT SYSTEMS
Environmental and social risks of hydroelectric dams

Workers plunge to death as scaffolding cable snaps at dam construction site

Lesotho: Pongola Dam construction puts nearly 8,000 people at risk of displacement

Work paralysed at Karuma dam as workers go on strike

Death toll in Ratnagiri dam breach incident climbs to 18, rescue operation continues

Reclaiming Water: Chilean Fight Against US Dam Project Heats Up

Dam blamed for hundreds of dead fish in Brunswick
These risks present themselves as:

- **Reputational risks**: negative image of a company due to its bad environmental and social practices
- **Compliance risks**: fees and fines to rectify environmental and social damage

Both reputational and compliance risks translate into **financial risks**
What are IFC Performance Standards?

- Describe potential environmental and social risks
- IFC clients must pay particular attention to these risks
- Help the client to manage E&S risks and conduct business in a sustainable manner

Performance Standard 1: E&S Management system
Performance Standards 2-8: E&S Performance criteria
Management Systems = Continuous improvement

Identifying and analyzing the risks and objectives
What is important for you as an organization and what are you going to do about it?

Implementing the improved solution
What will you change if results are not what you expected?

Developing and implementing a potential solution
What actions will you take? Who, what, where, when and how?

Measuring how effective the solution was, and analyzing whether it could be improved
Did you see the change you expected after implementing the actions?
IFC Performance Standard 1: Environmental and Social Management System

- Policy
- Management Programs
- Identification of Risks and Impacts
- Organizational Capacity
- Stakeholder Engagement
- Emergency Preparedness
- Grievance Mechanism
- Ongoing Reporting to Affected Communities
- Monitoring and Review
Policy – What is your commitment?

What it is?
Establish expectations for conduct (objectives and rules).

Why is it important?
Signal to ALL that Environmental and Social performance is important.

How do I start?
Commit to comply with E&S regulations
Commit to conform to E&S sustainability standards (IFC Performance Standards and WBG EHS Guidelines)
Identification of risks and impacts

Is the starting point! You need to understand your risks to manage them.
Environmental and Social Impact Assessment (ESIA): Consider IFC Performance Standards in the Terms of Reference for the ESIA. It reduces the need of complementary studies.

**Capacity:** Rely on teams with adequate expertise and skills.

**Scope:** Include all project components, associated facilities (e.g. transmission line), and activities outsourced to contractors.

**Dynamic and ongoing:** Throughout the life of the project – the ESIA is just the first step.

**Consultation:** Involve stakeholders, affected communities, contractors, workers.
Hidroelectrica La Higuera – greenfield 155MW run-of-river hydroelectric plant situated in Chile. Sponsor: Committed senior management with robust management structure.

✓ Failed to assess worse case scenario in cases of extreme drought
✓ Run-of-River and no net consumer of water – company minimized importance of effects with downstream users
✓ After two consecutive years of drought, irrigation cooperative of 6,300 farmers had issues with availability of water
✓ Issue was not net consumption but time when water was available
✓ Since it was a peaking plant, water was available only 6-8 hours per day
✓ High visibility in media and lawsuit requesting stoppage of operations
Management Programs – The mitigation hierarchy

**AVOID**
Don’t do it

**MINIMIZE**
Reduce the impact of what you are doing

**COMPENSATE/OFFSET**
You’ve done it. What will you do now?

**Example**

Plan trajectory of the TL away from sensitive biodiversity areas.

Remove trees before bird nesting season. Install bird diverters to prevent collision.

Regenerate and protect areas with native vegetation. Improve habitat for affected species.

Avoiding the impact is often the cheapest option!
Management Programs

**What** – environmental and social risks you need to address

**Why** – reasons (objectives) for the actions and procedures, and the expected results (targets)

**How** – actions and procedures to be implemented to address the risk

**When** – timeframe and deadlines

**Who** – responsible people
Management Programs

Required plans, processes and procedures must be documented.

- Land Acquisition Framework and Procedures
- Resettlement and Livelihood Restoration Plan
- Biodiversity Action Plan
- Influx Management Plan – mitigation of risks linked to project induced immigration
- Stakeholder Engagement Plan
- Indigenous Peoples Plan
- Cultural Heritage Management Plan – Chance Finds Procedure
- Workforce Management Plan – terms of employment, benefits, accommodations, demobilization
- OHS Plan
- Waste Management Plan
- Hazardous Materials Management Plan
- Spill Prevention Plan
- Blasting Explosives Management Plan
- Transportation Safety/ Traffic Management Plan
- Emergency Preparedness and Response Plan
- Dam Safety Plan
- Site Security Management Plan
- Noise, Vibration, and Dust Control Plan
- Erosion Control Plan
- Site Rehabilitation Plan
- Contractors Assurance Plan
✓ Communicate E&S requirements to bidders
✓ Include E&S performance criteria in the selection of contractors
✓ Include E&S provisions in contracts – what do contractors need to comply with
✓ Include penalties for poor E&S performance
✓ Oversee E&S performance of contractors during construction

The project sponsor is ultimately responsible!
Do not outsource E&S responsibility to contractors.
Organizational capacity and competency

- E&S Team leader with access to senior management
- Dedicated multi-departmental team
- Budget spending authority
- Involved in business decisions

The implementation of E&S plans, processes and procedures requires coordination among all parties involved in the project.
Integrate ESMS responsibilities in job descriptions and performance evaluations

Progressive training:

- Training that addresses knowledge, skills and attitudes

A management system is trained committed people regularly following procedures. How do you make this happen?
Even when you are managing your risks, accidents can happen! Being prepared can dramatically reduce the impact on workers, communities, and company’s facilities.

Key aspects:

- Identify potential emergency scenarios: earthquakes, landslides, flooding, glacial lake outburst flood (GLOF), explosion, fire, civil unrest, release of hazardous substances, OHS accidents, pandemics
- Emergency equipment in line with risk assessment
- Regular training and drills in all shifts
- Communicate and collaborate with local communities and government agencies
- Revise your emergency plan periodically
Failure of a dam as a result of natural phenomena or of inadequate design and maintenance can have disastrous consequences.

World Bank’s Operational Policy [OP] 4.37, together with Bank Procedure [BP] 4.37, on Dam Safety establishes requirements for projects financed by the WB.
Your company can impact many people. They can impact your business in return.
It is the company's responsibility to obtain the social license to operate:

- Prioritize engagement with those most impacted
- Identify vulnerable groups that may require additional support for coping with negative impacts, but also for taking advantage of project’s benefits (e.g., jobs)
- Provide early, timely, documented and meaningful information
- Provide communities with opportunities to express their concerns and suggestions
- Document concerns and suggestions
- Report back on what has been put in place to address concerns and suggestions
- Build relationships over time
Establish communication channels for people to present – open or anonymously – questions, concerns and complaints

Assign team with adequate competence and skills

Implement procedure(s) for reception, registration, resolution, monitoring

Establish a system to communicate back decisions taken and implementation progress

In case of serious complaints from affected communities, you may need independent mediators for resolution

Dedicated capacity and expertise are required to deal with grievances from gender-based violence.
An effective Grievance Mechanism is:

- Established early in the process (before land acquisition)
- Provides confidential and anonymous channels
- Well-publicized
- Easily accessible and at no cost
- Predictable – people know when they can expect a response
- Transparent about process and outcomes
- Drives continual improvement

While contractors may be responsible for implementing corrective measures, the reception of complaints, and the monitoring of resolutions must be centralized by the project sponsor.

An effective Grievance Mechanism provides **early warnings!**
Ongoing reporting to Affected Communities

- Share progress on actions agreed with them
- Share results from monitoring reports (e.g. water quality)
- Share information on activities that could impact them and how are you mitigating them
- Share information on priorities identified by Affected Communities (e.g. number of workers employed from the community)
- Utilize locally appropriate channels (e.g. radio, meetings, posters)
- Local language and clear format
- Regularly
- Proactive, not reactive
✓ Monitoring is the CHECK of the PDCA cycle
✓ Review is the ACT of the PDCA cycle

Monitoring and Review must drive **continual improvement**
✓ Monitor implementation and effectiveness of plans.
✓ Trained personnel responsible for collecting and analyzing data.
✓ Indicators in line with E&S risks.

Techniques of monitoring:
✓ Measurement and testing (with calibrated equipment)
✓ Review of records and documentation
✓ Surveys and interviews
✓ Observation
✓ Daily and weekly EHS inspections – both by contractors and sponsor.
✓ Intensity of inspections in line with level of risk.
✓ Use of phone Apps to expedite inspections, analysis of data, and closure of non-compliances.
✓ Analyze data to plan targeted trainings and implement preventive measures.
9. Monitoring and Review

Process indicators
- Number of workers and community members that can explain the grievance mechanism
- Number of EHS inspections performed
- Number of workers that can explain the company’s code of conduct
- Number of workers that can explain the OHS procedures

Performance indicators
- Open versus closed complaints
- Average number of days to close complaints
- Number of EHS deviations per hour of inspection
- Lost time injuries per million of hours worked
Monitoring and Review

Management Review: Why is important?

✓ Keeps Senior Management up to date and engaged
✓ Accelerate decisions that must be made by Senior Management, such as capital expenditures
✓ Sends signal to employees that this is a top priority

No endorsement by Senior Management = Failure

✓ Must be frequent during construction – critical time / constant change.
✓ Present information in format that facilitates decisions by Senior Management
✓ Keep written records (minutes) of key topics discussed and decisions made in the meeting
ESMS Handbook

✓ Understand the benefits of an ESMS
✓ Learn the nine (9) elements of an IFC PS1 compliant ESMS
✓ Explains environmental, OHS, labor, and community risks and impacts in a simple, illustrative and concise language.
ESMS Self Assessment and Improvement Guide

**MATURITY RATING**

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
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<tbody>
<tr>
<td>5</td>
<td>Mature system implemented internally and with key supply chain partners – continual improvement embedded in operations</td>
</tr>
<tr>
<td>4</td>
<td>Systems well developed and implemented internally – routine improvement projects</td>
</tr>
<tr>
<td>3</td>
<td>Systems approach adopted, but development and implementation is inconsistent – improvement sporadic</td>
</tr>
<tr>
<td>2</td>
<td>Limited system development with sporadic implementation – primarily reactive</td>
</tr>
<tr>
<td>1</td>
<td>Little systems awareness or repeatable processes</td>
</tr>
<tr>
<td>0</td>
<td>No systems awareness or repeatable processes</td>
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- ✓ Questionnaire to assess a company’s ESMS maturity and parity with IFC PS 1 requirements.
- ✓ Tips to develop an ESMS improvement plan.
- ✓ Incorporated into Excel to expedite usage and analysis.
ESMS Toolkit

✓ Tools to strengthen weak or missing elements in client’s existing ESMS
✓ Checklist
✓ Templates
The implementation of an ESMS is mandatory for 100% of IFC investment projects.
There are hundreds of management systems standards with divergent objectives targeting different aspects of conducting business.

IFC clients comply or are certified against different management systems and certification schemes, such as:

- Quality: ISO 9001
- Occupational Safety and Health: ISO 45001
- Environmental Management: ISO 14001

These systems must be enhanced to comply with PS1 requirements and its nine (9) ESMS elements.