



# Environmental and Social Management System Implementation Handbook

**CONSTRUCTION**

Although the environmental and social management system described in this Handbook is based on IFC Performance Standard 1, the process outlined herein may not provide for meeting all the requirements of IFC Performance Standard 1, or any other IFC Performance Standard. The purpose of this Handbook is to demonstrate a technical means of integrating environmental and social concerns into company management, so that a business can become more effective in reducing its impact on the environment, its workers and its neighboring communities.

The Handbook is provided “AS IS,” and is provided without warranty of any kind, either express or implied, including, but not limited to, implied warranties of merchantability, fitness for a particular purpose, or non-infringement. Development of an environmental and social management system based on this Handbook does not imply any type of certification or compliance with any IFC Performance Standards, including but not limited to IFC Performance Standard 1, nor does it imply endorsement by or affiliation or sponsorship with IFC.

The Handbook is distributed with the understanding that neither the authors, nor the organizations and countries they represent, nor the publisher, are engaged in rendering technical advice. The information, policies and procedure templates comprising the Handbook are intended as a reference and for informational purposes only, and are not to be relied upon for operational or any other purposes. Implementation of the Handbook is solely the responsibility and risk of the final users. The material in the Handbook is set out in good faith for general guidance, and no liability can be accepted for any possible loss or expense incurred as a result of relying on the information contained herein. Neither IFC nor any other member of the World Bank Group shall be liable for any direct, indirect, incidental, special, consequential, punitive or exemplary damages, including, but not limited to, damages for loss of profits, goodwill, use, data or other intangible losses (even if IFC has been advised of the possibility of such damages) in any way arising or resulting from use or reliance on the Handbook or any such conclusion or determination. The Handbook is distributed subject to the condition that it shall not by way of trade or otherwise be sold or otherwise circulated on a commercial basis without IFC’s prior written consent.

IFC does not guarantee or provide any warranties as to the accuracy, timeliness, completeness, reliability or usefulness of this publication’s content, and is not responsible or liable for any such content or use thereof. The views, advice, opinions and other statements herein are not reviewed or endorsed by, and do not necessarily represent the views and opinions of IFC or its Board of Directors, the World Bank or its Executive Directors, or the countries they represent.

# Table of Contents

|   |    |
|---|----|
| Welcome & How to Use This Handbook.....   | 4  |
| Section I: Benefits of an Environmental and Social Management System in the Construction Industry.....                  | 7  |
| Section II: Understanding an Environmental and Social Management System .....   | 11 |
| OVERVIEW .....  | 12 |
| ELEMENTS OF AN ENVIRONMENTAL AND SOCIAL MANAGEMENT SYSTEM (ESMS) .....  | 13 |
| SYSTEM DEVELOPMENT AND SYSTEM IMPLEMENTATION .....  | 15 |
| USING THE HANDBOOK AND COMPANION PUBLICATIONS TO DEVELOP AND IMPLEMENT YOUR ESMS.....                                   | 16 |
| Section III: Practical Guidelines for Developing and Implementing Your Environmental and Social Management System ..... | 17 |
| 1. POLICY.....  | 18 |
| <i>Purpose of an Effective Policy.....</i>  | 18 |
| <i>Modifying Your Existing Policy Statement or Creating a New One.....</i>  | 18 |
| <i>Gaining Senior Management and Company Commitment.....</i>  | 19 |
| 2. IDENTIFICATION OF RISKS AND IMPACTS .....  | 20 |
| <i>Key Risks in the Construction Industry.....</i>  | 20 |
| 3. MANAGEMENT PROGRAMS .....  | 23 |
| <i>Identifying Preventive and Corrective Actions.....</i>   | 25 |
| <i>Short Cases.....</i>   | 24 |
| <i>Writing an Effective Action Plan .....</i>   | 38 |
| <i>Writing an Effective Procedure.....</i>  | 39 |
| 4. ORGANIZATIONAL CAPACITY AND COMPETENCY .....   | 40 |
| <i>Roles, Responsibilities and Authorities to Implement the ESMS.....</i>   | 40 |
| <i>Communication and Training.....</i>  | 42 |
| 5. EMERGENCY PREPAREDNESS AND RESPONSE .....  | 44 |
| <i>Common Hazards and Emergency Situations in the Construction Industry.....</i>  | 47 |
| 6. STAKEHOLDER ENGAGEMENT.....  | 50 |
| <i>Mapping Your Stakeholders .....</i>  | 51 |
| <i>Developing a Stakeholder Engagement Plan.....</i>  | 52 |
| 7. EXTERNAL COMMUNICATION AND GRIEVANCE MECHANISM .....   | 54 |
| <i>External Communication.....</i>  | 54 |
| <i>Grievance Mechanism.....</i>   | 54 |
| 8. ONGOING REPORTING TO AFFECTED COMMUNITIES .....  | 57 |
| 9. MONITORING AND REVIEW .....  | 58 |
| <i>Indicators.....</i>  | 59 |
| <i>Measuring and Improving Your ESMS.....</i>   | 62 |
| <i>Linking Your Action Plan and ESMS Improvement Plan.....</i>  | 63 |
| <i>Conducting an Effective Management Review .....</i>  | 64 |

# Welcome & How to Use This Handbook

Environmental and social responsibility is becoming more and more important in today's global economy. There are thousands of environmental and social codes and standards in the world today. The codes and standards define the rules and the objectives. But the challenge is in the implementation. An environmental and social management system (ESMS) helps companies to integrate the rules and objectives into core business operations, through a set of clearly defined, repeatable processes.

This Handbook is intended to be a practical guide to help companies in the construction industry develop and implement an environmental and social management system, which should help to improve overall operations.

In the current economic climate, companies are under pressure to perform or even just survive. New initiatives are often met with resistance as people struggle to keep up with their day-to-day responsibilities. Some people think that an environmental and social management system must be big, complicated and expensive. But that is not really true. To be effective, a management system needs to be scaled to the nature and size of the company.

If a company has existing management systems for quality or health and safety, this Handbook will help to expand them to include environmental and social performance. Our hope is that this Handbook will accelerate a company's journey of continual improvement, for its own benefit and that of its employees and stakeholders.

| Quick Reference for Using this Handbook           |   |
|---|---|
| <b>Sections I – II</b>                            | These sections provide background on environmental and social management systems (ESMS) in the construction industry.   |
| <b>Section III</b>                                | This section provides step-by-step instructions on how to develop and implement an ESMS. If you see a Toolkit icon, it means that there is an accompanying tool in the ESMS Toolkit.  |
| <b>ESMS Toolkit and Case Studies</b>              | <p>Section I of this companion publication gives tools, including forms, templates, checklists, and other useful documents, to help you develop and implement the systems described in the Handbook. We suggest that you adapt each tool for your company.</p> <p>Section II includes case studies presenting two companies in the construction industry that implemented an ESMS. These hypothetical cases illustrate how to develop and implement an ESMS appropriate to the size and nature of your company.</p> <ul style="list-style-type: none"> <li>• ABC Company – an international civil engineer contractor based in Far East</li> <li>• XYZ Company – a family-owned construction company based in Asian subcontinent</li> </ul> |
| <b>ESMS Self-Assessment and Improvement Guide</b> | This companion publication contains a questionnaire, maturity matrix, and improvement tips to help you measure the maturity of your ESMS and develop a plan for improvement.  |

## Acknowledgements

This Handbook was prepared by the Sustainable Business Advisory (SBA) department with primary contributions from Rob Horner, Irene Angeletti, Larissa Luy and Juan Jose Dada.

The Handbook is based on primary contributions and technical expertise from the Social Accountability International (SAI) team of Craig Moss and Jane Hwang, as commissioned by IFC. Additional contributions were made by Yogendra Chaudhry, Doug DeRuisseau, Dundar Sahin and Caroline Lewis. Graphic design services were provided by Pam Henry.

Additional IFC contributors include Justin Pooley, Jeremy Ansell, Debra Sequeira and Ekaterina Grigoryeva. The Handbook also significantly benefited from comments from an internal peer review process, which involved a diverse group of individuals who are too many to acknowledge individually. However, the drafting team is very thankful for their valuable and insightful comments and hopes they find their input reflected in this final version.

*Front cover photo courtesy of Gerardo Pesantez, World Bank Photo Collection*



# Benefits of an Environmental and Social Management System in the Construction Industry

“As construction companies face increasing competition, we realize quality alone cannot create a ‘sustainable advantage.’ From a customer’s perspective, one’s environment and social performance is equally important.”

**Managing Director -  
Multi-national  
construction company,  
Europe**

## Benefits of an Environmental and Social Management System in the Construction Industry

Today, construction companies are confronted with a number of significant environmental and social challenges. None of the challenges is insurmountable, but if not effectively assessed and managed, they will hurt your profitability, reputation, and prospects for future contracts.

Among these challenges are increasing energy and raw materials costs, cost of insurance for workers’ compensation, and, the growing power and influence of environmental and labor regulatory agencies. These risks are in addition to the primary risk of failing to deliver projects on schedule, at the agreed cost, and with the required quality. All of these risks ultimately have financial consequences. Moreover, international exposure is vital to the success of some construction businesses; but exporting such services has added demands from international legislation, local industry standards, and consumer requirements, many of which are increasingly related to environmental and social practices. All of these risks, requirements and pressures are forces that should encourage you to implement a management system.

“Any plan for becoming the market leader requires direction; and, in my experience, firms that achieve high employee satisfaction also achieve higher customer satisfaction and superior economic returns.”

**Senior VP – Commercial and Institutional construction  
company, Africa**



“As a construction company we are a labor and resource intensive company. Measuring and improving our environmental and social performance has consistently helped us increase our profitability even when many of our competitors are struggling to survive.”

**CFO** - A small private construction company in Asia

There are direct business benefits to be derived from implementing an environmental and social management system (ESMS). Conserving and using energy and materials efficiently helps to reduce construction costs. Managing surface water run-off and run-on to control erosion avoids schedule delays and the risk of fines. Recycling building waste from demolition can reduce the increasingly expensive cost of disposal in landfills and other waste facilities.

The same tangible benefits can be realized on the social side. Clear, transparent human resource policies and procedures improve communication between workers and managers. This helps to anticipate and avoid labor problems. Effective occupational health and safety management procedures work toward the identification of workplace and process hazards, then seek to eliminate or reduce them through engineering controls and employee training on how to avoid job site risks. This serves not only to reduce near misses, accidents and fatalities, but also contributes to reducing insurance premiums for workers' compensation.

“Labor shortages had always been a challenge for us. Now, thanks to our, ‘social and labor management system,’ not only are our employees happy and productive, but also they with us stay longer.”

**General Manager** – Contractor to various large construction companies, Latin America

Management systems are widely used by construction companies in quality control and occupational health and safety. An environmental and social management system (ESMS) simply extends that approach to managing the impact your business has on the environment, your host neighborhoods, and other external stakeholders.

Ultimately, your management systems should be integrated and centralized, instead of having one system for quality, one for occupational health and safety, and one for environment. Integrated management systems are the goal, and the focus of this Handbook is on helping you implement an ESMS that is appropriate for the size and nature of your company.



## Understanding an Environmental and Social Management System

# Understanding an Environmental and Social Management System

## OVERVIEW

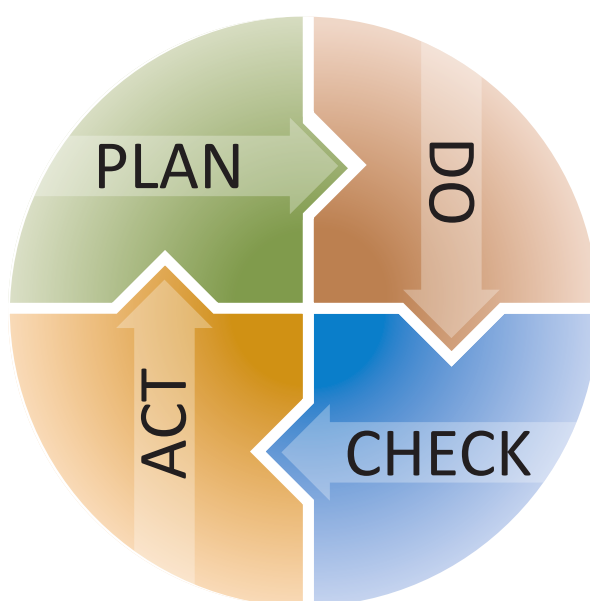
A management system is a set of processes and practices to consistently implement your company's policies to meet your business objectives. The goal is to make sure that you have the appropriate policies and procedures in place and that people consistently follow them. The management system helps to assess and control your risks and is the key to lasting improvement. A key feature is the idea of continual improvement – an ongoing process of reviewing, correcting and improving your system. The most common method is the Plan-Do-Check-Act cycle (PDCA), described below.

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?

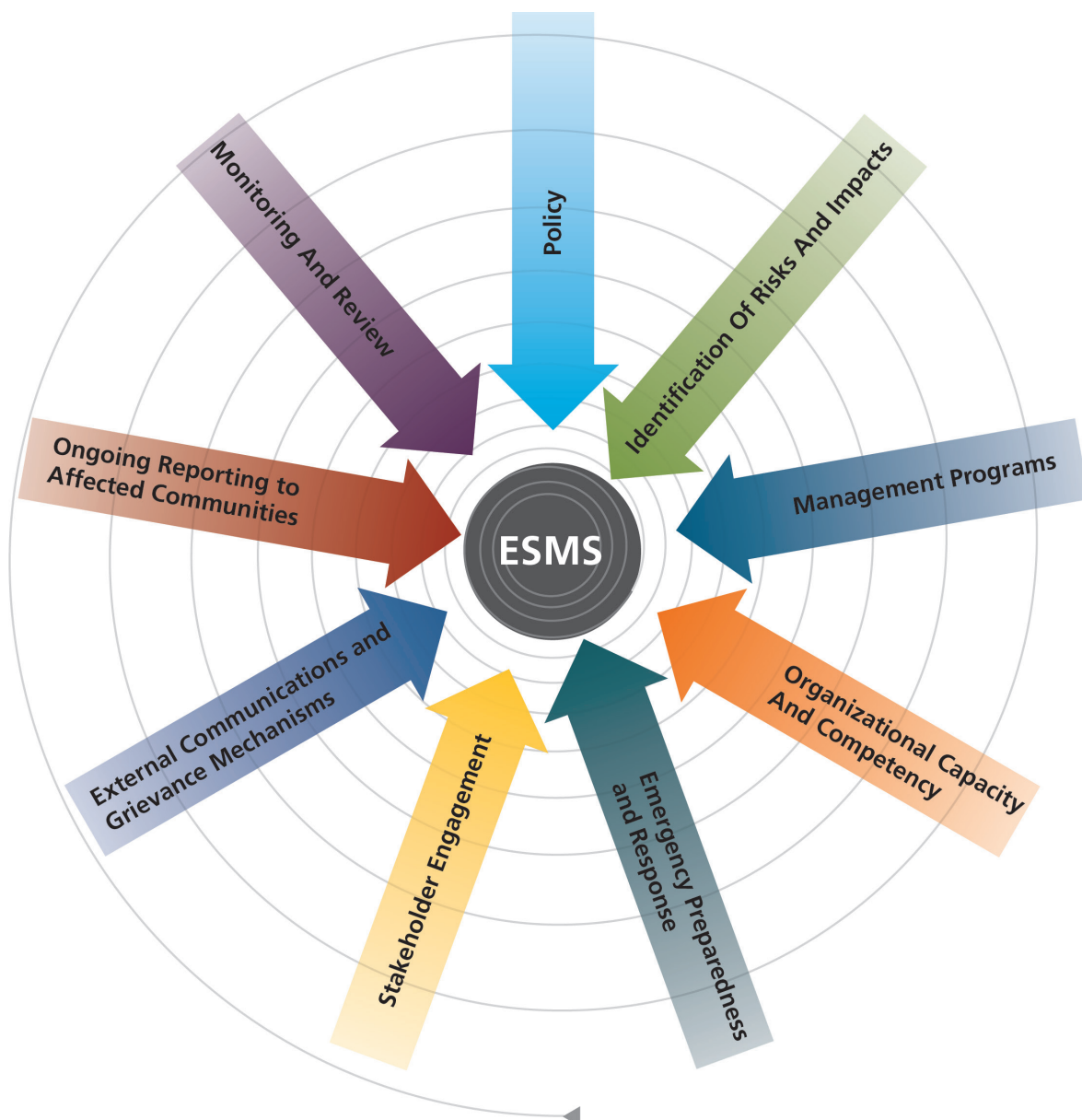
Measuring how effective the solution was, and analyzing whether it could be improved

Did you see the change you expected after implementing the actions?

In the workplace, an effective management system is comprised of trained, committed people routinely following procedures.

## ELEMENTS OF AN ENVIRONMENTAL AND SOCIAL MANAGEMENT SYSTEM (ESMS)

A solid, functioning environmental and social management system (ESMS) is made up of interrelated parts. Take a look at the nine elements of an effective ESMS. Each of these elements is important, because they help you to assess, control and continually improve your environmental and social performance, as part of the Plan-Do-Check-Act cycle. The following section presents step-by-step instructions on how to develop and implement a system using these elements.



## MEASURING AND IMPROVING

**You can't improve what you don't measure.**

A lot of companies in the construction industry already have management systems for quality or occupational health and safety. If so, you may already have elements of an ESMS, and there is no need to replace what you already have. In this Handbook's companion publication, ESMS Self-Assessment and Improvement Guide, we provide a self-assessment rating for each of the ESMS elements. The self-assessment will allow you to measure your current level of system development and implementation. You will answer a series of questions and get your score for each element in the ESMS on a scale of 0 to 5 (5 is highest). The score measures the maturity of your system. Once you understand the maturity of your system, it is easier to target specific steps you can take to improve it.

| THE SYSTEM MATURITY LEVELS (5 = HIGHEST) |  |
|--|--|
| <b>Level 5</b>                           | Mature system implemented internally and with key supply chain partners – continual improvement embedded in operations |
| <b>Level 4</b>                           | Systems well developed and implemented internally – routine improvement projects                                       |
| <b>Level 3</b>                           | Systems approach adopted, but development and implementation is inconsistent – improvement sporadic                    |
| <b>Level 2</b>                           | Limited system development with sporadic implementation – primarily reactive   |
| <b>Level 1</b>                           | Little systems awareness or repeatable processes   |
| <b>Level 0</b>                           | No systems awareness or repeatable processes   |



## REMEMBER

A carefully developed, detailed ESMS is only valuable if it is well-implemented.

### SYSTEM DEVELOPMENT AND SYSTEM IMPLEMENTATION

One of the most important things to understand about a management system is the difference between system development and system implementation. A management system is comprised of trained, committed people routinely following procedures. If you break this statement down, you see that it talks about “procedures.” Procedures are the step-by-step way that people follow your policies. Procedures are the heart of effective system development.

Now let’s look at the other part of the statement – “trained, committed people routinely following procedures.” This is the implementation. There is a lot that goes into making it happen. Of course, some training is important to make sure that people are aware of the procedures and understand what they are supposed to do on a routine basis. But you also need to find a way to get their commitment.

One common observation is that large companies tend to be better at system development. But they often have difficulty getting people in different locations or departments to consistently implement the procedures, despite having well-documented systems. Small companies tend to be better at system implementation – if they have effective leadership. However, they are often weak at developing the documentation needed to ensure continuity when people in the organization change.

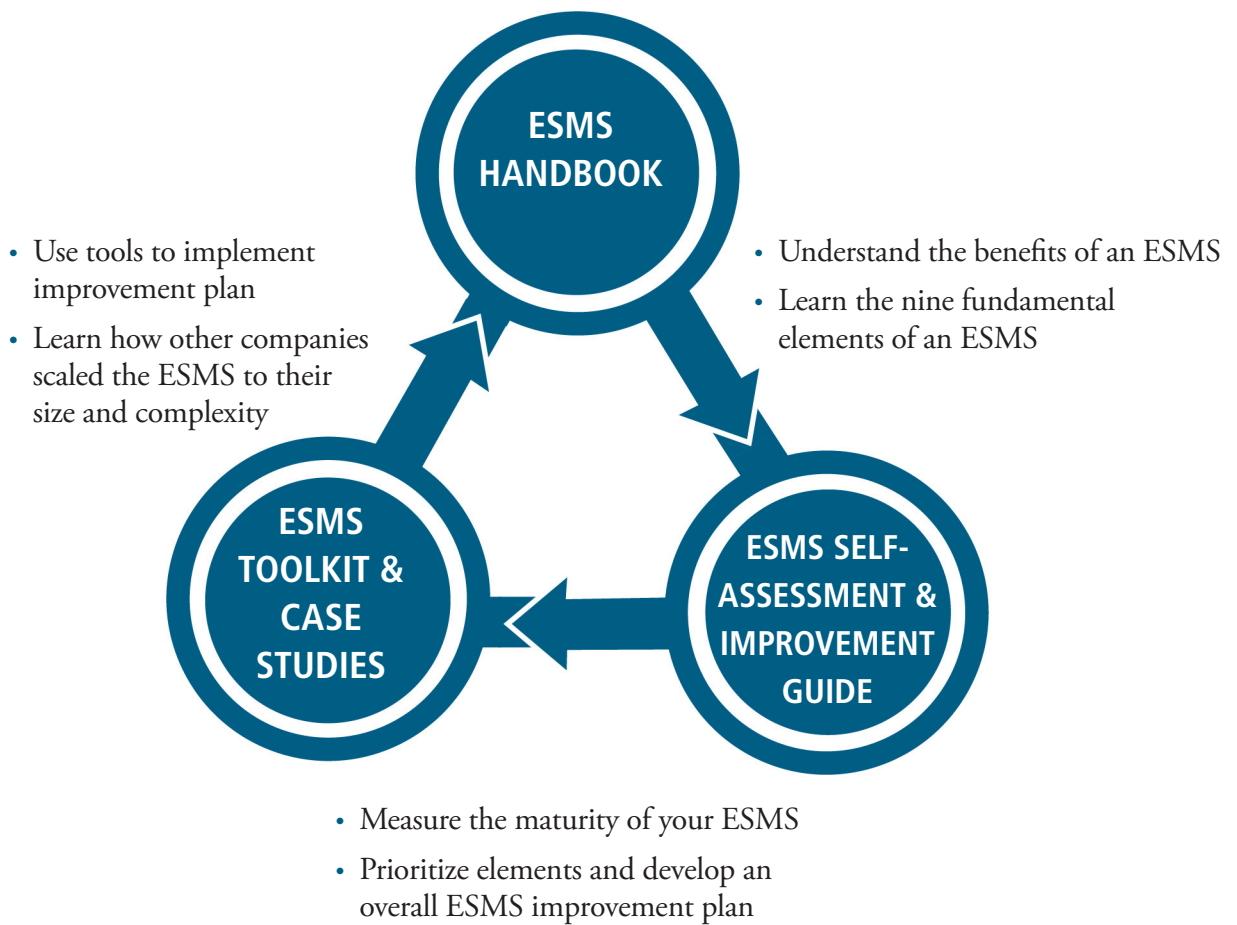
The approach of this Handbook and its companion publications, Toolkit and Case Studies and Self-Assessment and Improvement Guide, balances system development and system implementation in each of the ESMS elements.

| DEFINITIONS                  |   |
|------------------------------|---|
| <b>System Development</b>    | The documented policies and procedures.                       |
| <b>System Implementation</b> | Trained, committed people routinely following the procedures. |

An ESMS does not need to be complicated, but it does need to be documented and then put into practice. Some people mistakenly think a management system is just documents. But that is only a part of it. Management systems are about implementation and continual improvement.

## USING THE HANDBOOK AND COMPANION PUBLICATIONS TO DEVELOP AND IMPLEMENT YOUR ESMS

The Handbook and companion publications are designed to help you measure and improve the maturity rating of your ESMS. The flowchart below shows how you can use these three publications in a cycle of continual improvement.







## Practical Guidelines for Developing and Implementing Your Environmental and Social Management System

This section provides step-by-step instructions on how to develop and implement an ESMS.

For each element of the ESMS, we offer a quick way to measure where you are now.



When you find a toolkit icon, it means there is a tool in the companion publication *Toolkit and Case Studies* to make it easier to get started.

# Policy

5

E&S policies and procedures clearly communicated internally and externally. Senior management commitment to continual improvement.

4

Full set of E&S policies, procedures and records, centrally maintained and routinely reviewed. Wide awareness in company.

3

Policies and procedures in place meeting selected E&S standards. Sporadic communication, implementation and review.

2

Policies in place meeting selected E&S standards. Sporadic, conflicting or confusing procedures.

1

Limited E&S policies in place.

0

No E&S standards adopted. No related policies and procedures.

The cornerstone of your ESMS is your set of policies. Your policies summarize the commitment that your company has made to managing environmental and social risks and impacts. They establish the expectations for conduct in all related aspects of your business.

## PURPOSE OF AN EFFECTIVE POLICY

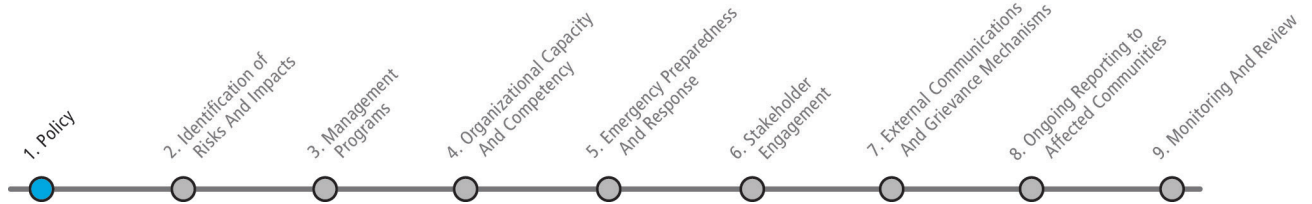
Simply put, the policies are the rules. They tell everyone what is allowed and what is not allowed when it comes to social and environmental issues such as labor and working conditions, resource efficiency and pollution prevention, and community health, safety and security.

A good practice for writing the policies and making them understood is a Policy Statement. The Policy Statement communicates your company's policies to your management, staff, board, suppliers, contractors, customers and all other stakeholders. It is important for everyone to have a common understanding of the core values of the company, how you expect people to behave and how external stakeholders can expect you to operate.

## MODIFYING YOUR EXISTING POLICY STATEMENT OR CREATING A NEW ONE

The Policy Statement should be clear and simple – it does not need to be long and technical like a legal document. Many companies already have a corporate code of conduct that serves as a Policy Statement and includes issues such as ethics. You can expand your existing code to align with internationally recognized environmental and social standards for issues relevant to your business, such as the IFC Performance Standards for Environmental and Social Sustainability.

It is important to think through the creation of the Policy Statement and tailor it to your company operations. In developing your Policy Statement, be aware of the specific risks you face in the construction industry.



## GAINING SENIOR MANAGEMENT AND COMPANY COMMITMENT

Modifying or adopting your Policy Statement will require senior management support. In some companies, it may require approval from the Board of Directors. A high level of senior management support is critical for integrating environmental and social commitment throughout all levels of your company.

Committing to environmental and social policies probably requires some change in the behavior of your company, workers, contractors and suppliers. This can be challenging. There are different strategies and different techniques for changing organizational behavior, but experts agree that to create lasting change, senior management must be committed to the effort.

The first step is building awareness. There are many issues that occupy your employees' attention day-to-day. As just a written document, your Policy Statement may not get their attention or seem relevant to their daily activities. Senior management needs to make this Policy Statement come alive.

To do so, they need to communicate the importance of environmental and social issues, by making them an ongoing part of high-level Board and management discussions, public speeches, and messages to employees.

Once people are aware of the Policy Statement, the next step is building commitment – also known as “buy-in.” You will probably meet resistance: “Why do we need to do this? It is too much work. I’ve already got enough to do. How does this help our bottom-line?” Senior management needs to effectively shape and communicate the message internally and externally. They need to send a clear message that this is a long-term commitment by the company.



Use the Toolkit item **Checklist for Developing a Company Policy Statement** to get ideas of what you could include in your policy.

The key message is that this will contribute to the company's success and that each person will benefit - but that they will also be held accountable.

Once you have convinced people that they need to do something, senior management needs to drive implementation. They do not need to lead the effort on a day-to-day operational level, but they do need to adopt the policy and oversee the implementation plan. Resources will be necessary in order to communicate the policy internally and externally, integrate new procedures and train all relevant staff and suppliers.

Crafting the initial messages can be a good time to talk through the above



Use the Toolkit item **CEO Letter Announcing the ESMS - Internal** to get started.

stages with your senior management. Consider accompanying the Policy Statements with a message from the CEO.

For any change initiative, think of three critical stages:  
Awareness;  
Commitment;  
and  
Implementation.

Your senior management can help you to accelerate all three stages.

# Identification of Risks and Impacts

The primary objective of a risk assessment is to identify the potential negative environmental and social impacts so that you can develop the appropriate strategies to address them.

In the following pages, we present the key issues that come up in the construction industry.

## KEY RISKS IN THE CONSTRUCTION INDUSTRY

### 1. Environmental: Pollution Prevention and Resource Efficiency

- Uncontrolled storm water discharge leading to erosion of barren surfaces and downstream flooding
- In-stream sand-and-gravel mining causing degradation of rivers
- Dewatering and over pumping of ground water causing area subsidence and sinkholes
- Inadequate disposal of construction waste leading to land/water contamination
- Inadequate storage, dispensing and use of hydrocarbons for construction-related equipment
- Emission of noise and dust during crushing, grinding, drilling, blasting, and transport of rock
- Emission of NO, NO<sub>2</sub>, and CO during blasting activities
- Shock waves during blasting activities impacting physical environment (e.g. other buildings) and biodiversity (particularly during breeding or birthing)
- Emission of noise from compression brakes on heavy transport vehicles
- Rupture or blow-apart of hydraulic hoses on heavy equipment
- Damage to ecosystems through land conversion, clearing, grubbing and removal of vegetation for temporary or permanent facilities and haul roads

### 2. Occupational Health and Safety

- Lack of OHS specifications in contracts
- Lack of job-specific risk assessment and qualified OHS oversight – particularly when multiple jobsites and night shifts
- Not appropriate OHS reporting lines – problems tend to be ignored if OHS officer reports directly to the jobsite manager
- Excessive use of overtime
- Absence of a robust and stringently enforced zero tolerance policy for alcohol, drugs and other intoxicating or impairing substances

5

Mature system, routinely reviewed and updated as part of a continual improvement plan. Internal and external inputs. Procedures extended to contractors, subcontractors, third parties and supply chain as relevant.

4

Systematic, documented identification and prioritization of E&S risks and impacts. Routinely reviewed and updated across existing, new and changing activities. Wide awareness and engagement in company.

3

Awareness and engagement of staff in identification and prioritization of E&S risks and impacts. External experts involved as required.

2

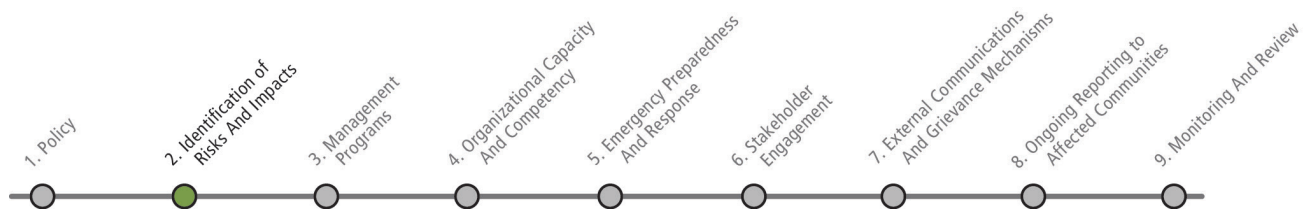
Procedures in place for identification of E&S risks and impacts across all key activities.

1

Basic identification and assessment of E&S risks and impacts, but limited to a few activities.

0

No identification or assessment of E&S risks and impacts.



- Appropriate access control to jobsites – particularly when there are hazardous activities underway
- Presence of unskilled workers leading to an increased risk of accidents and exposure to hazards
- Language barriers and cultural differences for migrant workers leading to an increased risk of accidents and exposure to hazards
- Failure to equip workers with PPE including head, eye, hand and foot protection, and highly visible/reflective clothing
- Fatalities and/or injuries related to:
  - falls from heights due to improper installation and use of formwork/ scaffolding/ stairways / railings
  - falling materials
  - inappropriate use and maintenance of heavy construction machinery and equipment
  - excavation cave-ins when working underground without shoring or other protective means
  - entering confined spaces without preparation
  - carrying heavy loads
- Exposure to construction materials such as cement dust in excess of the allowable limits defined in MSDSs and ICSCs
- Exposure to dust particles containing dangerous trace components such as asbestos – particularly during demolition
- Unsafe levels of noise from machinery and demolition
- Eye injuries associated with welding, grinding and other construction activity
- Lack of potable water and sanitation facilities
- Lack of appropriate housing and cooking facilities for workers leading to overcrowding, informal cooking in rooms, etc.

### 3. Labor

- Failure to screen contractors' and subcontractors' possession of licenses leading to assignment of unqualified workers to potentially hazardous work
- Failure to monitor contractors' and subcontractors' compliance with and enforcement of labor laws
- Low awareness of labor laws among contractors and subcontractors as minimum working conditions are typically absent from the subcontracting process

- Use of migrant/temporary labor subject to working conditions below minimum standard established by law
- Restricted freedom of association due to high turnover and hostility of employers to organized labor
- Low wages
- Gender discrimination in terms of employment (such as remuneration)
- Sexual harassment

### 4. Community Health, Safety and Security

- Accidents due to increased vehicle traffic from transport of construction materials and waste
- Unsafe loading or overloading of heavy vehicles used to transport construction materials and waste
- Employment of poorly trained vehicle operators who engage in inappropriate behavior (e.g. speeding, over revving, excessive brake use in heavy vehicles) potentially leading to mechanical failures and accidents
- Failure to deploy traffic warning signs and personnel to control movement of workers, equipment and goods to and within construction site
- Uncontrolled storm water discharge loaded with sediments (e.g., cement dust, soil from barren surfaces) leading to downstream flooding and rendering water courses unusable for irrigation or potable water
- Poorly constructed temporary structures, roads or bridges may collapse and kill/injure members of community or damage neighboring properties
- Lack of proper fencing or boundary controls to prevent site access from unauthorized personnel and members of the community (especially children)
- Exposure to dust from use of machinery or demolition, potentially containing dangerous trace components
- Exposure to noise or vibrations from extraction, demolition, drilling, breaking or crushing
- Spread of HIV-AIDS and other STDs due to migratory labor force
- Increase of disease vectors - mosquitoes, black flies, rodents - from failure to manage liquid and solid wastes
- Inappropriate use of force by security guards

## Top 3 risks and opportunities in the Construction industry

1 Construction sites and movement of materials to, and wastes from them, overwhelm existing transport routes, and can lead to downstream impacts on housing, water, land use, farming and other local operations. Moreover they cause dust and air emissions from the use of heavy equipment and during demolition. These emissions present OHS risks as well as hazards to the community.

2 Construction is a highly dangerous industry with many inherent OHS risks. Worldwide, the ILO has estimated that there are over 100,000 fatalities due to OHS hazards in construction annually, and some 30 to 40 per cent of fatal occupational injuries overall. Specific risks arise from underground construction, demolition (especially of industrial buildings and those containing asbestos) and the use of heavy machinery. These risks all require special precautions and equipment.

3 Use of migrant labor is widespread in the construction industry, particularly for unskilled or low-skilled workers. Many are young inexperienced workers. Temporary work and unfair contracting leave migrant workers vulnerable to violations of freedom of association, forced labor, harassment, unlawful deduction of wages, unpaid overtime and other labor violations.

There are different ways to conduct a risk assessment. One common method is to map your facility and production processes – this can highlight OHS and environmental risks. A common method for labor risks is to use a checklist of risk factors, such as employee demographics, regional labor laws, contracting arrangements, etc.

The following are key considerations for a robust risk assessment system:

- Cover environmental, OHS, labor and community risks;
- Conduct at regular intervals – at least once a year;
- Conduct any time there are significant changes to operations;
- Conduct any time there are external changes such as new laws or regulations;
- Include input from all levels of workers and managers;
- Include input from affected communities and other external stakeholders;
- Use external consultants and experts if your staff does not have the capability;
- Assess and prioritize risks according to both the severity and probability of negative impacts;
- Consider risks in your supply chain in addition to those in your company; and
- Scale as appropriate to the size and complexity of your business.



Now that you have an understanding of the typical risks in the construction industry, you can first use the **Risk Identification Worksheet** to identify your potential risks and negative impacts based on your operations and operating environment. Then you can use the **Process Mapping** or the **Physical Mapping** tools to identify in more detail where problems are likely to arise within your production process.

Often it is not possible or practical for you to deal with every single environmental and social impact that your company could possibly have. You can use the **Risk Assessment Form** to prioritize which risks should be addressed first.

For more information on environmental, OHS and community risks and impacts in your industry, consult the *WBG EHS Guidelines* at [www.ifc.org/sustainability](http://www.ifc.org/sustainability).

# Management Programs

Management Programs are centered on Action Plans and improved procedures to avoid, minimize or compensate for the risks and impacts that were identified.

For example, if you have a policy commitment to avoid discrimination in the workplace and you have identified this as a risk factor based on the lack of a system for employees to express their complaints, you may implement a complaint procedure as a way to minimize the risk of discrimination. Or, if one of your policy objectives is the reduction of solid waste and you have identified this as a risk factor because of the high percentage of construction waste produced in your worksite, you may take action by sending demolition waste to a recycling facility to re-use materials such as concrete, tyres, rigid plastic, masonry and lumber and avoid sending them to the landfill.

Verified progress against objectives and targets; significant improvements in E&S performance. Demonstrated commitment to continual improvement using annual improvement plans.

Routine, consistent implementation of actions/activities to proactively manage E&S risks and impacts. Measurable company-wide objectives and targets. Periodic review and update.

Actions/activities in place to manage E&S risks and impacts, following the mitigation hierarchy – avoid, minimize, offset/compensate. Proactive approach to managing issues.

Procedures and assigned responsibilities to address and mitigate E&S risks and impacts across all key activities. Primarily reactive.

A few informal programs or activities to mitigate E&S impacts. No systems awareness or repeatable processes.

No process for mitigating E&S risks and impacts.

5

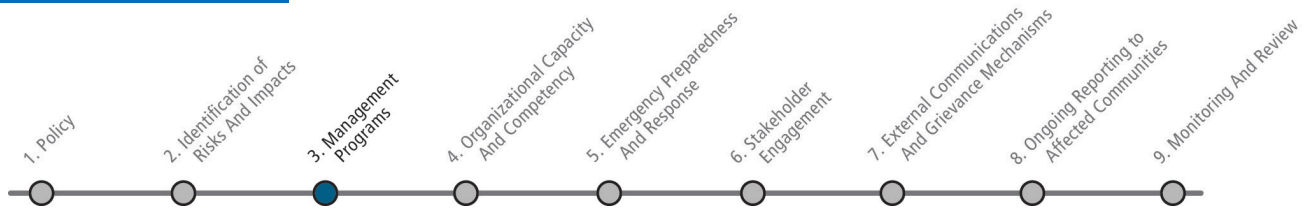
4

3

2

1

0

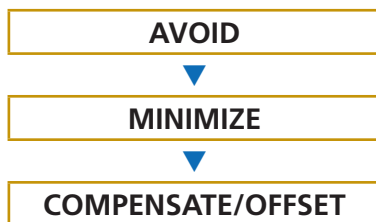


## IDENTIFYING PREVENTIVE AND CORRECTIVE ACTIONS

It is good practice to emphasize preventive and proactive actions: (1) try to avoid causing social or environmental damage; (2) if not possible, then minimize the impact; (3) if not possible, then compensate or offset the damage.

First, attempt to take actions to avoid or prevent the negative impacts. For example, suppose you are expanding operations and have identified potable water as a key risk. You might change your new facility location or design it differently, so that you avoid contamination of groundwater close to homeowners and communities. Or, suppose you have identified a certain construction process that exposes workers to toxic chemicals and pollutes the local river system. You might design your product mix to avoid this process or find alternate methods.

### Prioritizing Your Actions



In many cases, complete avoidance is not possible – you may not be able to relocate or find alternative processes or materials. In these cases, you should try to minimize the impact. For example, suppose that you are located in an area where women are traditionally given lower status and less access to education, and in the workplace they are often mistreated by male co-workers and supervisors. The local cultural context and the need to hire both men and women is unavoidable. It is important to pay attention to your recruitment, hiring and training procedures, to make sure that women are hired on equitable terms and given equal access to training and promotion opportunities. You can also develop non-discrimination procedures to ensure that rules for recruitment, hiring and training are clear for everyone to follow. Additionally, you can conduct training to make sure that everyone is aware of and follows the procedures.

In some cases, it may not be possible to completely avoid or minimize certain negative impacts. Then you should find ways to offset them with comparable positive impacts or provide compensation to those impacted. For example, suppose your operation uses a large amount of water. Despite taking action to minimize water consumption, there are still periods of the year when water becomes scarce in the local community. You might collaborate with community leaders to dig new wells or provide alternate sources of drinking water.

## SHORT CASES

Here we present several short cases that illustrate some of the actions that companies can take to avoid, minimize or offset/compensate common environmental and social key risks in the food and beverage industry. Action Plans can be scaled to the size of your company and the nature of the risks you face.



## City Builders

### RISK: Construction waste disposal

City Builders is a small company owned by a local business carrying out many demolition and construction jobs in Mendoza city. Currently the company is working on a contract in the heart of the city that involves demolition of an old office complex to build a multi-story housing complex. The local residents have complained frequently that the company has littered the entire area with construction debris potentially contaminated with asbestos and other hazardous materials. Demolition was started without any effort to rid the building of rodents and other vermin first. Unmanaged piles of construction rubble have accumulated resulting in harborage for rodents, extensive dust, presence of scavengers living in the vicinity, an unpleasant sight affecting property values and land contamination in the surrounding area from windborne dust. Putrescible wastes from the construction crew are adding significantly to rodent problems in the area.

#### IMPACT

- Improper disposal of construction wastes causing land contamination and impacting local community

#### AVOID

- Establish and implement a construction waste management plan for all construction sites
- Establish and implement procedures for reuse, recycle, and safe disposal of construction waste to a landfill site licensed to take such wastes
- Train and periodically retrain all workers on proper demolition behavior and handling and disposal of construction and putrescible wastes
- Locate and remove hazardous facilities such as underground storage tanks prior to commencement of demolition
- Implement rodent elimination program prior to commencement of demolition
- Conduct asbestos survey and if necessary prepare and implement an asbestos remediation plan prior to demolition
- Conduct air monitoring for asbestos removal activity and other demolition exercises
- Implement needed measures to prevent fugitive dust migration offsite
- Deploy containers for collection and safe disposal of solid waste from the site
- Deploy pest (rodent proof) containers for collection and safe disposal of putrescible waste from the site
- Remove building demolition rubble and recyclable materials at least daily
- Employ water mist to reduce production and offsite transport of dust and particulate from building demolition. Have this effluent drain to suitable collection points or to municipal sewers after been pre-treated to acceptable levels.
- Transport dust generating wastes in covered vehicles. Periodically monitor effectiveness of dust covers during transport.

#### MINIMIZE

- Develop and deploy a grievance mechanism for local area residents to facilitate understanding of impacts and issues in a timely manner

#### OFFSET

- Remove accumulated waste materials
- Immediately implement a rodent removal/destruction program
- Compensate local residents negatively affected by uncontrolled activities
- Provide physical and other health-related examinations for individuals claiming physical harm from demolition activity

# Sudan Development Company

## RISK: Surface run-off from construction site

Sudan Development Company started building a large agro-industrial complex about six months ago in South Sudan. The region has a number of diverse wetlands that support a wide range of plants and animals. Recently, the project has been strongly contested by the local environmental NGOs citing the problem of surface run-off from the project site. A recent investigative report from a journalist states that this run-off has contributed to significant discharges of sediment that have degraded water quality. The wetlands are not only a conservation area but parts of it support inland fisheries which are exploited for sustenance as well as on a commercial basis. The damage has severely affected the livelihood of the local populations.

### IMPACT

- Adverse impact on the wetlands water quality
- Adverse impact on local fisheries and livelihood of local communities

### AVOID

- Obtain and review the environmental impact assessment and management plan; adhere to the mitigation measures written into the documents, if any
- Schedule works to avoid expected high rainfall
- Mark the boundaries of the construction site; ensure soil disturbance occurs only within marked boundaries
- Preserve existing vegetation cover as much as possible
- Clear land in stages so as to avoid large scale barren areas
- Plan ahead and limit the area of exposed soil at any one time

### MINIMIZE

- Install silt fences downhill from bare soil to catch all runoff
- Divert clean storm-water away from areas where soil is to be exposed by constructing intercepting drains/diversion berms
- Construct temporary sedimentation ponds for storm water; direct drainage into the sedimentation ponds
- Establish an adequate inspection, maintenance and cleaning program for sediment runoff control structures
- Ensure that contingency plans are in place for unusual storm event
- As soon as feasible, ensure seeding and re-establishment of vegetation on areas that were cleared or degraded prior to and during construction; provide temporary protection with mulch and matting until vegetative cover including grass is reestablished

### OFFSET

- Reconstruct overwhelmed, eroded or otherwise impacted surface facilities including drainage channels, sediment basins
- Rehabilitate affected wetlands
- Replant affected plant species
- Ensure adequate replenishment and flow of uncontaminated water to wetlands
- Provide alternative source of livelihood to the affected communities

# Sudan Development Company

## RISK: Oil and chemical spills

Energy Infrastructure Company is one of the largest infrastructure companies in the country currently engaged with the construction of an underground oil pipeline network in Chad's southwestern region. The project ownership is comprised of a consortium of two-international oil companies. Since the beginning of the project, the company has undergone several accidental releases of petroleum and other toxic chemicals at its construction sites. One of the recent accidents involved spillage of significant quantities of liquid fuel from a storage tank. The oil companies are concerned that even small releases may endanger public health and contaminate water and soil in the region causing great damage to the companies' reputation. The oil companies have threatened to terminate the contract with Energy Infrastructure if the construction company does not improve its environmental performance.

### IMPACT

- Contamination of water and soil
- Adverse impact on public health

### AVOID

- Carry out hazard and operability (HazOps) studies for storage and dispatching petroleum products and hazardous materials; fully implement remedial measures to prevent unplanned events
- Establish and implement procedures for safe handling of fuel and hazardous chemicals at site based upon the results of periodic HazOps
- Implement HazOps recommendations for storage units to prevent accidents from moving equipment such as vehicles or fork-lifts
- Provide secondary containment of a suitable volume for all liquid materials storage
- Deploy automatic cut-offs for all fuel dispensers
- Render all storage units highly resistant to vandals

### MINIMIZE

- Actively manage materials procurement and inventories to receive infrequently used chemicals just prior to use; reduce quantities of chemicals and fuel stored on-site to minimum practicable levels
- Assemble, train, equip and deploy a spill response team
- Establish on-call contracts with hazardous materials and waste haulers and emergency responders for containment, removal and disposal of spilled material
- Install bunds to prevent spilled hydrocarbons and other materials escaping and causing environmental damage
- Design the height of bunds (secondary containment) walls considering essential construction materials, vehicular access and storm water management to minimize the impact of materials' spills

### OFFSET

- Ensure environmental reclamation and ecological restoration is carried out for all environmental spills
- Collect soil and ground water samples from material spill areas to ensure that complete cleanup and remediation has been carried out
- Seek spill site cleanup confirmation from regulatory agencies or prime contractor environmental staff
- Remediate affected properties and facilities to fully address complaints arising out of unplanned events and releases

## City Roads Company

### RISK: Exposure to noise and vibrations due to heavy construction machinery

City Roads Company is a local infrastructure development company currently working on a highway project in Dornod province, Mongolia. The road construction work involves extensive land disturbance including removing vegetation and reshaping the topography using heavy equipment. To meet the project timeline, the company has recently started working round the clock.

The local community is demanding they stop the night shift operation as it is causing a lot of disturbance due to extremely high noise. They have also complained that the noise is disruptive during the day to the community school and hospital.

| IMPACT   |
|--|
| <ul style="list-style-type: none"> <li>• Adverse health effects on local community</li> </ul>  |
| AVOID  |
| <ul style="list-style-type: none"> <li>• Fit and maintain appropriate mufflers on earth-moving and other vehicles on the site</li> <li>• Enclose noisy equipment at fixed facilities (e.g. electric power generators at crushing facilities)</li> <li>• Limit all crushing, drilling and material transfer to daylight hours; construction work during night shift should be limited to grading, compaction and similar low noise operations</li> </ul>  |
| MINIMIZE   |
| <ul style="list-style-type: none"> <li>• Prohibit the use of compression brakes close to sensitive facilities such as schools and hospitals and during evening hours; post warning signs “no engine breaks” around sensitive facilities</li> <li>• Schedule deliveries to the site so that disruption to local amenities and traffic is minimized</li> <li>• Provide appropriate training to workers for proper operation of vehicles and construction equipment and minimize unnecessary idling</li> <li>• Develop and implement a preventive maintenance schedule for all heavy construction equipment and machinery to minimize noise and vibrations</li> <li>• Advise local residents when unavoidable out-of-hours work will occur</li> </ul> |
| OFFSET   |
| <ul style="list-style-type: none"> <li>• Assist community financially, to adopt noise insulation measures (e.g. provision of sound insulation, erection of noise barriers, wall installation, etc.)</li> </ul>   |

## Country Builders Pvt. Ltd.

### RISK: Exposure to dust and air emissions from drilling/crushing

Country Builders Pvt. Ltd. is one of the largest private construction companies engaged in construction projects throughout the Philippines. The company boasts being one of the most specialized in the country, employing over 500 employees and having access to the most sophisticated heavy construction machinery. The company is well known for its quality programs, customer loyalty and best labor practices in the sector. However, the company was recently highlighted in the national news for its growing conflict with the local communities where it is involved with the construction of a big upcoming industrial complex. The project site is located close to a village and the villagers have complained on several occasions of an increase in air pollution and dust from the drilling, breaking and crushing processes and increased vehicular movement. Some villagers have developed persistent coughs and complained of breathing problems.

| IMPACT   |
|--|
| <ul style="list-style-type: none"> <li>• Respiratory illnesses among local villagers</li> </ul>  |
| AVOID  |
| <ul style="list-style-type: none"> <li>• Obtain and review the environmental impact assessment and management plan; adhere to dust control mitigation measures written into the documents, if any</li> <li>• Identify and prevent all “non-necessary” movement of equipment and construction machinery</li> <li>• Reduce need for multiple transfer points (e.g. processing plants should be located in quarry areas)</li> <li>• Explore opportunities for “pre-fab” material and construction aggregates</li> </ul>   |
| MINIMIZE   |
| <ul style="list-style-type: none"> <li>• Suspend blasting or earthworks on windy days</li> <li>• Spray water on temporary/haul roads or apply surface treatment (e.g. calcium chloride and other binding agents)</li> <li>• Impose speed limits for trucks</li> <li>• Prohibit off-road driving outside designated areas unless specifically authorized</li> <li>• Cover loads on all construction vehicles</li> <li>• Use enclosed conveyors and belt transport instead of hauling material by trucks</li> <li>• Spray water on stockpiles</li> <li>• Spray water mist on crushing operations and vibrating screens</li> <li>• Develop and implement maintenance schedule for all heavy construction equipment and machinery to minimize noise and air emissions</li> </ul> |
| OFFSET   |
| <ul style="list-style-type: none"> <li>• Engage with affected communities to identify areas affected by high particulate deposition and initiate feasible cleaning and removal activities</li> <li>• Support community health clinics to diagnose and treat local people affected by upper respiratory illnesses attributable to exposure to dust and air emissions from the construction site</li> </ul>  |

## National Construction

### RISK: Use of scaffolds; Absence of health and safety committees

National Construction is a small construction company presently working on two multi-story buildings around Kampala district. The construction sector in Uganda is undergoing fast growth. The company has recently been awarded a new contract and they want to finish existing projects soon so that the new project can be started on time. The management has brought in new laborers and has decided to add one more shift to the existing operations. Recently the construction manager was approached by workers who complained about the growing number of accidents and injuries at the sites. In the last week, two workers were severely injured in separate instances when they fell from supported scaffolds. There have also been several cases of falling objects from scaffolds, which were not reported as they did not result in any major injury. Uganda's Occupational Safety and Health Act requires that companies employing more than 20 people should have health and safety committees that report on identified risks. None of the construction sites operated by this company has these committees.

#### IMPACT

- Injuries/fatalities due to falling from heights and falling objects
- Incident reoccurrences due to the lack of identification of risks by health and safety committees and implementation of corrective actions

#### AVOID

- Develop occupational health and safety policy regarding the installation and use of scaffolding; communicate policy to managers, supervisors and workers
- Hire a specialized company to install scaffolding, if existent in the local market
- Have a qualified professional check that scaffolding has been set up correctly and in compliance with OSHA or other international standards; ensure instructions for scaffolding installation are available at the workplace
- Regularly train workers on scaffolding installation practices and procedures:
  - Install guardrails during erection of scaffolding; guardrails should remain in place until that section of the scaffolding is dismantled
  - Install full deck of planks at each floor
  - Install an appropriate access system (i.e. stairway or ladder progressively installed as scaffolding is erected)
  - Inform employees that climbing the scaffold framework is not acceptable
  - Barricade areas below if there is a chance of items falling from scaffolding
  - Deploy canopies or safety nets to contain falling objects
  - Honor clearance distances required between power lines and scaffolding; de-energize the lines if mandatory clearances cannot be met

**MINIMIZE**

- Establish and implement systems (and documentation) for regular inspection of scaffolding; inspection must be performed by a competent worker
- Regularly train workers on safe scaffolding use procedures and practices:
  - Do not carry materials when climbing scaffolding; use a hoist or rope to move materials to upper levels
  - Do not accumulate tools, materials or debris on the platform
  - Do not overload the scaffolding with too many people or materials in any one area
  - Do not work on scaffolding during storms or high winds
  - Use appropriate PPE (hard hats and steel-toed footwear) when working on scaffolds or around them
  - Use personal fall protection equipment (safety harness) when working over a void or leaning out from the scaffold without the protection of a guardrail
- Ensure that safety signs in local language are posted and understood by the workers
- Assign supervisor to record all OHS incidents
- Assemble joint management-worker health and safety committee to investigate and analyze incidents, propose corrective actions and confirm that appropriate action to prevent reoccurrence has been taken

**OFFSET**

- Provide medical assistance for cases of workplace related injury
- Compensate injured workers for wages lost
- Compensate for treatment and recovery, loss ability to work, and loss of life

## Residential Projects Company

### RISK: Use of earth-moving/heavy equipment

Residential Projects Company is a newly established company with its headquarters in Kuala Lumpur. Currently it is involved with the construction of 300 housing units in Sarawak province. The project involves construction of housing, infrastructure and landscaping in the area. Most of the building crew is new and the company is still in the process of developing systems, procedures and operational guidelines. There have been a few instances of minor injuries and workers' complaints in the past but the management has yet to establish a formal occupational health and safety management system. One of the accident cases this week involved a worker being critically injured at the worksite. This happened when a dump truck backed over him. The incident investigation report revealed that the truck was backing up without guidance from the traffic controller and the victim had his vision obstructed by a hooded rain jacket. The noise level at the site was high and the victim was talking on his cellular phone.

#### IMPACT

- Injuries/Fatalities due to being struck by heavy equipment

#### AVOID

- Develop occupational health and safety policy regarding the use of heavy equipment; communicate policy to managers, supervisors and workers
- Plan a drive-through site to eliminate the need for vehicles to back up
- Establish designated pedestrian routes through worksites and use signs to indicate them
- Prevent unauthorized workers or bystanders from entering a danger zone; when appropriate, install barricades and signs around the danger zone

#### MINIMIZE

- Permit only qualified and authorized personnel to operate heavy equipment
- Ensure that mobile equipment backup alarms are audible above ambient noise levels
- Regularly train workers on procedures and practices for safe work around heavy equipment:
  - Ban cellular phones and headphones unless special permission is granted for work purposes
  - Mobile equipment operators must be directed by a worker (i.e. spotter, traffic controller) with an unobstructed view of the area that the vehicle is reversing into
  - Spotters and drivers must agree on hand signals before backing up
  - Spotters must always maintain visual contact with the driver while the vehicle is backing
  - Drivers must stop reversing immediately if they lose sight of the spotter
  - Spotters must not perform additional duties while they are acting as spotters
  - Workers must wear high-visibility clothing, especially during night operations
  - All employees shall be familiarized with the worksite and all vehicle operations; make sure workers are aware of blind areas
- Ensure that safety signs in local language are installed and are understood by workers

#### OFFSET

- Provide medical assistance for cases of workplace related injury
- Compensate injured workers for wages lost
- Compensate for loss of life or loss ability to work



## Country Builders

### RISK: Use of crane suspended personnel platforms

Country Builders is a leading developer in Venezuela with one of its major project sites in the Monagas province. The project involves architectural, civil & infrastructure works. Followed by a major accident at the construction site last week, the company is seeking to employ two full time safety managers to oversee occupational health and safety issues. The accident happened when four workers were being lowered on a work platform suspended by a crane into a steel caisson. During the process, the work platform fell into the bottom of the excavated area, and the workers were pinned by the 350 pound load block (hook and cable connection). Two workers are in critical condition while the other two sustained major leg injuries. During investigation it was found that the dead end of the load line was not adequately secured to the hoist drum and the load line slipped off the drum.

| IMPACT  |
|---|
| <ul style="list-style-type: none"> <li>• Injuries/Fatalities due to unsafe crane operations</li> </ul>  |
| AVOID   |
| <ul style="list-style-type: none"> <li>• Develop occupational health and safety policy regarding the use of cranes; communicate policy to managers, supervisor and workers</li> <li>• Use conventional means of access (e.g. scaffolds and ladders) if feasible; use work platforms suspended by crane only when conventional means present greater hazards</li> <li>• Ensure that only skilled and trained employees are assigned the operation and maintenance of cranes</li> <li>• Regularly inspect all critical components of the crane and emergency stop button functions</li> <li>• Ensure that wire ropes comply with the required minimum safety factor for the maximum intended load</li> <li>• Use only crane-suspended work platforms in full compliance with OSHA or other international requirements</li> </ul>                |
| MINIMIZE  |
| <ul style="list-style-type: none"> <li>• Ensure the platform is not loaded in excess of its rated load capacity</li> <li>• Perform a trial lift with the unoccupied work platform throughout the entire range of travel immediately before workers enter the platform; the platform must be loaded at least to its anticipated lift weight; commission inspections and repairs by qualified, competent workers if the lift trial exposed any defects</li> <li>• Hold a meeting with all employees involved in personnel hoisting operations to review OSHA standards on crane suspended personnel platforms; this meeting must be held before the trial lift and must be repeated for any employees newly assigned to the operation</li> <li>• Ensure that safety signs in local language are posted and understood by the workers</li> </ul> |
| OFFSET  |
| <ul style="list-style-type: none"> <li>• Provide medical assistance for cases of workplace related injury</li> <li>• Compensate injured workers for wages lost</li> <li>• Compensate for treatment and recovery, lost ability to work, and loss of life</li> </ul>  |

## Best Commercial Builders Inc.

### RISK: Lack of appropriate sanitary facilities

Best Commercial Builders is one of the leading builders of residential properties in Chile. Recently, the company has started working on a new housing project in Tocopilla Province. The country has a strong skilled labor shortage in the construction sector. Therefore, like many other construction companies, Best Commercial is reaching out to women and training them for various trades; these positions were once reserved for men. Approximately 7% of the construction workers at this site are female. During one of the safety meetings, the women employees have complained that access to sanitary facilities is a major problem at this site. Temporary facilities provided by the company are unisex, often without privacy, and generally not very well maintained. Unclean facilities can result in disease as well as urinary tract infections. Due to the lack of facilities, the women workers avoid drinking water on the job, risking heat stress and other health problems.

#### IMPACT

- Gender discrimination and potential health and safety impacts for female employees due to unclean sanitary facilities

#### AVOID

- Develop occupational health and safety policy regarding the provision of clean drinking water and clean sanitary facilities; communicate policy to managers, supervisors and workers
- Provide adequate number of sanitary facilities for male and female workers (e.g. one separate toilet for each 20 male employees and each 10 female employees) and ensure privacy (e.g. sanitary facility can be locked from the inside)
- Hire cleaning staff and maintain a cleaning schedule for sanitary facilities at all construction sites
- Provide/maintain adequate supplies of potable water
- Arrange for adequate number of clean temporary/portable facilities separated for male and female workers in all short term construction sites

#### MINIMIZE

- Establish employee grievance mechanism for reporting concerns related to drinking water and sanitary facilities
- Communicate to workers how to file complaints
- Task OSH committee with the responsibility to identify and address workers' concerns on access to drinking water and sanitary facilities at site; the committee must include female employees and members of management

#### OFFSET

- Introduce health check-up/treatment for female workers who may have been infected in the past due to inadequate sanitary facilities
- Compensate for wages lost during ill-health treatment

## B&B Construction

### RISK: Male dominated environments

B&B Construction is a small construction company in Sao Paulo that was started 5 years ago by two brothers who worked earlier with a large construction company. Since its inception B&B has been providing labor and other construction services as a contractor to various large companies. B&B's construction sites are overwhelmingly male dominated, and on many jobsites women construction workers have complained about sexual harassment with three such cases directed against the construction supervisor at one of its sites. The owner for this site is a large multinational company and they have well established labor codes of conduct that are contractually binding on all their suppliers and contractors. Based on the reported complaints, the site owner has formed a committee which is investigating the reported sexual harassment cases. During the interviews with the B&B female employees, many other workers reported that they are reluctant to report the harassment problems lest they be tagged as complainers or whiners. Based on its investigation, the committee is recommending terminating the contract with B&B construction as it has failed to provide a harassment free and safe work environment for its female employees.

#### IMPACT

- Sexual harassment of female employees

#### AVOID

- Develop clear policies against sexual harassment conforming to national laws and requirements of key clients; communicate policies to managers, supervisors and workers
- Modify labor contracts to state that B&B Construction projects are staffed by men and women, and that B&B has a zero tolerance policy toward any form (verbal or physical) of sexual harassment
- Ensure that new employee orientation includes briefing on this issue and emphasizes that this behavior constitutes grounds for immediate dismissal

#### MINIMIZE

- Periodically conduct mandatory training on sexual harassment policies and gender sensitivity issues for all managers, supervisors and workers
- Train managers, supervisors and workers on how to recognize and prevent sexual harassment
- Establish and communicate disciplinary procedures against sexual harassment cases
- Inform workers on how to respond to incidents of sexual harassment
- Implement a risk-free communication channel for reporting – openly or anonymously - sexual harassment cases
- Establish an anti-sexual harassment committee to detect, report and assist in the redress of all sexual harassment cases. The sexual harassment committee must include 50 percent female members and members of top management
- Investigate all sexual harassment cases quickly and thoroughly; maintain accurate records of the investigations, findings, and remedial measures undertaken
- Regularly communicate to employees on the gender related complaints and the status of corrective and preventive actions initiated by the company

#### OFFSET

- Take immediate action when sexual harassment is discovered, suspected or reported to protect affected employee
- Make sure employees who present charges do not face retaliation
- Enforce zero tolerance policy; dismiss employees found to have engaged in sexual harassment

## ABC Property Ltd.

### RISK: Use of labor intermediaries to recruit seasonal migrants

ABC properties Ltd. was recently exposed by the local media for various labor law violations in Andhra Pradesh in India. The story became public when some of the migrant workers from Bihar (another province) managed to escape from the work site and contact a local NGO working on social and labor issues in the region. The NGO produced the frightened workers before the media and regional labor inspector for their testimony. The workers narrated that they were paid Rs. 50 per week as wages, as against the promised Rs. 157 per day. The workers were provided accommodation at a charge and were not allowed to go out without permission. The NGO has hired a prominent lawyer to represent the workers who explained that the company has violated several national regulations and international labor codes. Construction workers in India are guaranteed certain forms of protection and rights which include the right to minimum wages, overtime payments, rest days, specific allowances in the case of migrant workers, housing and other social security benefits. ABC relies on labor intermediaries to recruit and supply seasonal migrants from rural areas. However, as employers, construction companies are legally responsible for providing protection to workers.

#### IMPACT

- Forced labor due to indebtedness owed to labor intermediaries
- Non-payment of minimum wage
- Curtailing freedom of movement

#### AVOID

- Develop policies on remuneration, working conditions and workers' accommodation for migrant workers conforming to national labor laws
- Communicate policies to labor intermediaries and make sure they understand
- Make policies contractually binding under the service agreement with labor intermediaries
- Appoint a team of company's supervisors to physically observe payment of wages to migrant workers by labor intermediaries and inspect workers' accommodations
- In India, register workers with the State Welfare Board, that is the primary guarantor of social security, working conditions and overtime pay for construction workers

#### MINIMIZE

- Ensure that workers are informed (in all applicable languages) on their rights including wages, benefits and deductions
- Ensure all workers receive contracts and periodic clear records of pay calculations in their native language
- Implement a risk-free communication channel to receive workers' complaints – openly or anonymously – on labor rights violations including payment of wages
- Set up periodic formal meetings between workers and company managers to document workers' concerns; distribute minutes/results of meetings and review issues raised during management meetings

#### OFFSET

- Reimburse workers for illegal deductions made by labor intermediaries
- Retroactively pay workers whose compensation did not meet legal minimum wage (or agreed contract value if higher than legal minimum)
- Establish ongoing dialogue with local labor NGOs, trade unions and other interested parties to review labor risks and company's initiatives in addressing those risks

# International Infrastructure Company

## RISK: Use of contractors and subcontractors

International Infrastructure Company is a large infrastructure development corporation working in various African countries. Recently, the company acquired a large government contract in Lagos that requires building large housing complexes, sports complexes and related infrastructure. The project schedule requires completion in six months' time and the company has engaged several contractors and sub-contractors to meet the project timeline. While working on a labor research project, a team of international researchers found the working conditions at one contractor's site shocking: injuries are common (from falling debris, structural collapse and machine-related) and minimum wage is not being paid. Overtime pay is nonexistent. The researchers have tried to help the workers by contacting the local chapter of the largest trade union. However, when the workers tried to organize a meeting with the union representatives in the canteen, management forbade it. Since then, workers have been threatened that they will lose their jobs if they do not "keep their heads down and work". One worker who spoke up has been fired.

### IMPACT

- Labor legal non-compliances at the contractor and subcontractor level

### AVOID

- Develop and disseminate – among company's procuring officers and potential tenderers – company's policy on OHS and workers' rights including freedom of association conforming with national labor laws and international conventions; extend policy to workers of contractors and subcontractors in company's construction sites
- Include labor and OHS criteria for the prequalification of contractors
- Require tenders to itemize labor costs to ensure sufficient allocation of funds (i.e. wages and benefits, accommodation, sanitary facilities, canteen, drinking water, transport, workers' insurance, etc.)
- Require tenders to itemize OHS costs (i.e. PPE, training, etc.) and to present OHS costs in a separate, standalone proposal accompanying the financial/technical proposal
- Include labor and OHS policies in labor contract agreements with contractors
- Appoint a qualified, experienced contractor to develop an OHS action plan with implementing procedures and clear allocation of responsibilities, mandatory training course content, definition of appropriate PPE, etc.

### MINIMIZE

- Make sure that all workers are informed on their rights including wages and benefits and on their fundamental right to associate freely under the law
- Appoint a team of supervisors to physically observe payment of wages and inspect welfare facilities and OHS practices in company's construction sites
- Develop OHS training tools on high risk activities (i.e. falls from heights; falling objects; electrocution; caught-in by machinery); make periodic training mandatory for all workers and supervisors
- Prohibit site entry to workers without documented OHS training and appropriate PPE
- Develop pictorial posters and booklets on OHS and workers' rights; post them in all construction sites and distribute to all workers
- Request contractors to identify subcontractors with color coded hard hats; make zone managers responsible for identifying at-risk behavior from subcontractors
- Set up a hotline to receive workers' complaints – openly or anonymously – via voice or SMS; hotline must be accessible to workers of contractors and subcontractors

### OFFSET

- Retroactively compensate workers for lost earnings at legal minimum wage and overtime premium
- Compensate for injuries and recuperation, loss of ability to work, and loss of life
- Require contractor to re-instate fired worker

## WRITING AN EFFECTIVE ACTION PLAN

Whatever actions you decide to take, think of them as a continual improvement process - you will need to set targets, set deadlines, measure the results, and adjust the plans if necessary. You need to assign responsibilities and start to involve the right internal people and departments.

As you develop your Action Plans, these are the key questions that you need to think about:

- **What** – environmental and social risks you want to address
- **How** – related actions and procedures to be implemented to address the risk
- **Why** – reasons (objectives) for the actions and procedures, and the expected results (targets)
- **When** – timeframe and deadlines
- **Who** – responsible people



Use the Toolkit item **Action Plan Chart** to get started.

The above examples address some of the risks highlighted in the industry. These are just some of the actions that might be taken. You can adapt them to your situation and add as needed – be flexible to meet your company’s specific situation. As you tailor your action plans, consult with your workers and managers, experts and external stakeholders, including your suppliers and community. They can offer insight into important issues and effective actions. They can also help you obtain commitment for plans you are trying to implement, and provide candid feedback about how well the plans are working. This will be critical to the continual improvement of your systems.

For recommendations on how to address environmental, OHS and community risks and impacts in your industry, consult the *WBG EHS Guidelines* at [www.ifc.org/sustainability](http://www.ifc.org/sustainability).

## WRITING AN EFFECTIVE PROCEDURE

Operational control procedures serve as step-by-step instructions for workers, supervisors and managers. They allow for everyone to have a common understanding of how to behave. They enable the rules to be followed even when there is staff turnover. Clear, detailed procedures help to embed your social and environmental policies into your daily operations.

It is a good practice to document your procedures. The key is to make your procedures as clear and as brief as possible. You can use text, checklists, flowcharts, or simple illustrations. The format for your procedure can vary depending on the audience. A written procedure may be more appropriate for managers and supervisors, while illustrations may be useful when dealing with less literate or immigrant workers. Keep your procedure as short and simple as possible.



Use the Toolkit item **Outline of Procedure** and the **Sample Procedure Flowchart** to get started.

Simply documenting a procedure is not enough. Effective implementation is the ultimate goal. Most importantly, employees need to be aware that a new procedure exists and understand why it is important to follow. They need the skills and knowledge to be able to implement it. This is achieved through routine communication and effective training. You will learn more about this in the next chapter, Organizational Capacity and Competency.

Finally, you must ensure that your employees have access to the current version of each procedure. Out-of-date documentation should be removed or clearly marked as outdated to ensure that no one unintentionally follows the old procedure.

# Organizational Capacity and Competency

A well-implemented ESMS is ultimately about trained, committed people. How do you make that happen?

## ROLES, RESPONSIBILITIES AND AUTHORITIES TO IMPLEMENT THE ESMS

First, you need senior management commitment. Senior management commitment starts with adopting the ESMS policies, but it must go beyond that. Senior management support is critical to implementing a sustainable ESMS. It is the responsibility of senior management to lead the effort. They don't have to lead the effort on a day-to-day basis, but they do need to send a clear message, to all employees at all levels, that this is a long-term commitment by your company.

Beyond senior management commitment, you need a team that takes responsibility for the ESMS. This does not need to be a full-time job for anyone, but senior management needs to ensure realignment of reporting duties, allocation of appropriate time and authority to carry out the work involved.

A well-balanced ESMS Team is a prerequisite for meaningful engagement with your peers and colleagues. It should include knowledgeable professionals from environment, health and safety, operations or production, contracts and purchasing, human resources, for example.

In fact, the success of a management system depends on departments that have traditionally been seen as beyond the reach of environmental and social issues, such as human resources, production, procurement and maintenance. For example, human resources manages training needs related to the labor aspects, production focuses on the more efficient use of resources and the reduction of waste, procurement manages the qualifications and performance of suppliers and contractors, and maintenance ensures that the equipment runs efficiently and that spills, leaks and other emergency situations are minimized.

The ESMS Team should not work in isolation when identifying risks and impacts, developing improved procedures, designing actions plans, etc. To

5 All levels of the company are trained and engaged – multiple units and workers as well as managers. E&S staff has implementation authority. Management commitment is reflected in resources devoted to E&S management and training.

4 Multiple units have E&S responsibilities, and senior management is involved. E&S is managed as an integrated system. New staff receives some E&S management guidance.

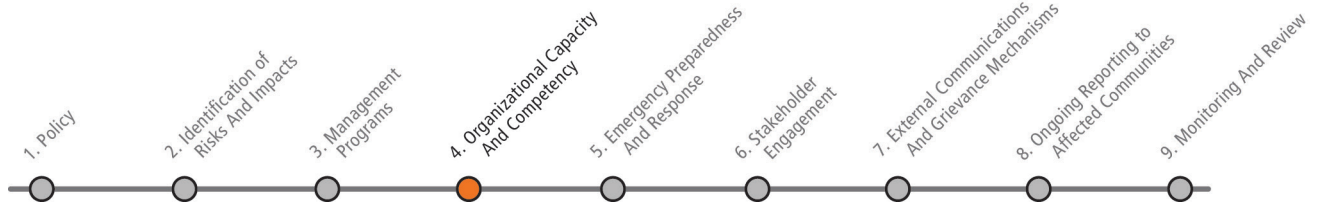
3 All levels of the company are involved in awareness training. E&S roles and responsibilities are assigned and part of daily operations. E&S staff is trained and competent.

2 E&S roles are defined and assigned. Each issue is handled only by one functional area. Some awareness training is provided at orientation and additional training is provided for EHS staff.

1 No assigned staff with E&S management responsibilities. Some limited awareness and E&S roles and responsibilities starting to get defined. No systems awareness or repeatable processes.

0 No internal awareness and no formally assigned responsibility for E&S.





be truly effective, the ESMS Team needs to consult with people from all levels of the company, including supervisors and workers, who are key frontline identifiers of problems.

As with the overall management system, the team should be scaled to the size and complexity of your company. Your organization might not have multiple departments with distinct roles; maybe a few people cover several functions. The key is to involve people across the range of functions. If a team already exists in your company (e.g. fire safety team, health and safety committee) consider building your ESMS Team upon it.

Once the ESMS Team is selected, they need to select a team leader. This is an important role, especially in the beginning. The team leader needs to set the tone for the group and keep people motivated. All new initiatives in a company face hurdles, and developing and implementing an ESMS is no exception. The team leader needs to help the team overcome the inevitable hurdles, and should have direct access to senior management.

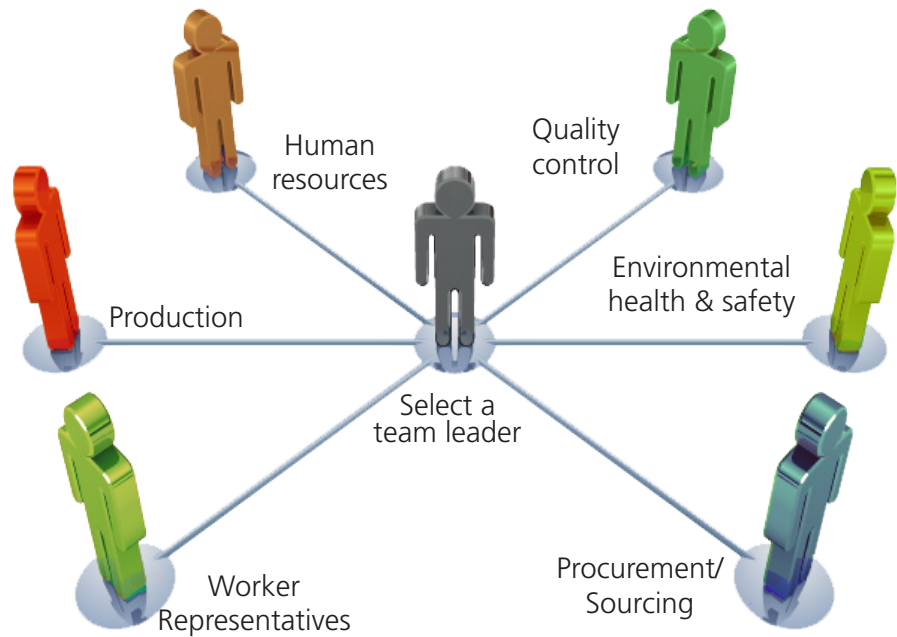


Take a look at the Toolkit item **Roadmap and Time Estimate for Developing and Implementing an ESMS** in the Toolkit and Case Studies for a list and sequencing of activities to develop and implement an ESMS.

When selecting a team leader, look for someone who has the following qualities:

- communicator;
- problem-solver;
- project manager;
- pragmatic; and
- respectful to all.

### EXAMPLE OF AN ESMS TEAM



### COMMUNICATION AND TRAINING

Now that you have identified the actions to be taken and updated your procedures, you need trained, committed people who follow the ESMS procedures. This is the end goal of communication and training.

There are three key steps that build on each other:

#### 1. They need to be aware of the ESMS.

- What is it?
- What are its goals?
- What do I need to do?

#### 2. They need to understand that the ESMS is necessary and will improve the company.

- How does this help our company?
- How does it help my department?
- What will change?
- What is in it for me?

#### 3. They need to obtain the skills and knowledge to be effective in their roles.

- What are the new policies and procedures?
- What exactly do I need to do?
- How do I do that?
- What will happen if I don't do it?

**TIP****Effective Communication and Training**

Ask yourself if the goal of this specific communication or training module is to build awareness, to gain commitment and/or give people the knowledge and skills needed to implement.

Your ESMS Team needs detailed training so they can develop the necessary knowledge and skills. They will need to understand the basics of the Plan-Do-Check-Act cycle and know the nine elements of an ESMS. This Handbook provides the information they will need, but additional help may be necessary. In addition to the detailed training of the team, everyone will need to receive awareness training so there is a shared understanding of the goals of the ESMS.

The chapters in this Handbook provide an easy way to structure efficient general training. You can give everybody an overview about what you have learned here about developing and implementing an ESMS.

You may also need to provide training that is specifically related to your Action Plan and new operating procedures.

Examine the specific actions and who is going to be involved. This is a quick way to determine what training will be needed by the various departments and people in your company. Ask yourself what knowledge and skills do people need to effectively implement new procedures, carry out allocated responsibilities and complete the action plan.



Use the Toolkit item **Training Plan Worksheet** as template and tie it to your Action Plans and improved procedures.

**AWARENESS****COMMITMENT****IMPLEMENTATION**

# Emergency Preparedness and Response

Even when you have considered all the risks and put the appropriate management programs in place, accidents and emergency situations can happen.

Your business is a dynamic operation, and many things change from day to day – people go in and out of your workforce, materials and suppliers enter and exit your supply chain, facilities and equipment are added to and removed from your production line. A management system will help to maintain continuity and consistency throughout these changes. However, there may be momentary lapses or gaps in the system (e.g. someone not properly trained, someone not following the procedures, a machine breakdown), or an external force (e.g. natural disaster) that can lead to an accident or emergency situation at your facility. While it is not always possible to prevent such situations, you can be prepared to respond effectively to prevent and mitigate any harm to your workers, community and the environment.

5 Regular engagement with local community and government for onsite and offsite emergency plan. Formal resource-sharing agreements with neighboring companies.

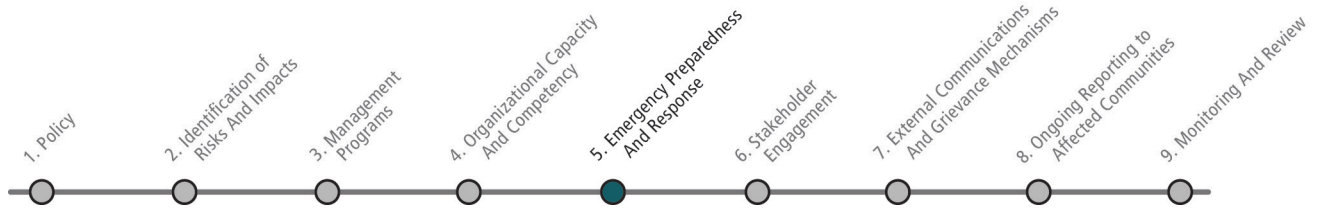
4 Senior management and all units and shifts, including contract and temporary workers, participate in emergency risk assessment, preparedness planning and mock drills. Continual improvement.

3 All onsite and off-site emergency issues have been identified and an effective preparedness plan is in place. The plan meets the local regulatory requirements and the local industry best practices.

2 The emergency preparedness plan is in place, but there is no evidence of consistent implementation. Some trainings are provided to the workers on emergency requirements.

1 Emergency management planning is not effective, as all emergency risks have not been identified. Occasional trainings are provided to workers.

0 Very limited emergency control and personal protective equipment. No formal plan in place.



The key to effective response is effective preparation. The following steps will help you to anticipate the possible scenarios and prepare accordingly:

- Identify the areas where accidents and emergency situations may occur, and communities and individuals that may be impacted. This should begin during your overall risk and impact assessment, through your process analysis, physical mapping and consultations with workers, experts and the community.
- Develop response procedures for each identified emergency situation that clearly explain what actions need to be taken. These need to be detailed clearly for everyone in your company to understand what he or she needs to do.
- Provide the necessary equipment and resources to effectively implement the response plans. A stockpile of fire extinguishers does not put out fires, unless people can effectively find and use them when needed. Think about equipment that is easy for people to use and is located where it can be immediately accessed during accidents and emergencies.
- Assign responsibilities so that each activity has people responsible for carrying it out. Also designate people who will routinely analyze how well the system is working and update the risk assessment and plans.
- Communicate so that everyone in your company understands the importance of the emergency preparedness and response system and is encouraged to help monitor and improve its effectiveness. Also include people in the community who may be affected.
- Provide periodic training so that everyone in your company has an overview of the system, and knows the response plans. Don't just lecture about what to do – ask for and obtain input on what needs to be addressed and what can be improved. Even with the most detailed procedures and plans, people will need to exercise individual judgment and adapt to quickly changing situations. This is more likely to happen if you engage people in all aspects of the system beforehand.
- Work with government agencies and community groups to identify areas where you can collaborate to respond effectively to internal and external situations.
- Conduct periodic checks and drills to test how well the system is working and to re-assess the risks to reflect changing conditions. Incorporate your findings to continually improve your system.
- Remember, it is essential that the emergency response plan be site specific. Even if you have similar operations at two different sites, it does not mean that the same emergency plan would be effective at both locations. An emergency response plan at each site should be independently reviewed for its suitability and effectiveness.



Look at the **Sample Emergency Preparedness and Response Procedures** for examples.

## An Emergency Preparedness and Response Plan should include:

- identification of potential emergencies based on hazard assessment;
- procedures to respond to the identified emergency situations;
- procedures to shut down equipment;
- procedures to contain and limit pollution;
- procedures for decontamination;
- procedures for rescue and evacuation, including a designated meeting place outside the facility;
- location of alarms and schedule of maintenance;
- list and location of equipment and facilities for employees responsible for responding to the emergency (fire-fighting equipment, spill response equipment, personal protection equipment for the emergency response teams, first aid kits and stations);
- protocols for the use of the emergency equipment and facilities;
- schedule for periodic inspection, testing and maintenance of emergency equipment;
- clear identification of evacuation routes and meeting points;
- schedule of trainings (drills), including with local emergency response services (fire fighters);
- procedures for emergency drills;
- emergency contacts and communication protocols, including with affected communities when necessary, and procedures for interaction with the government authorities;
- procedures for periodic review and update of emergency response plans.

## Common Hazards and Emergency Situations in the Construction Industry

| Common Hazards/<br>Emergency<br>Situations in the<br>Construction<br>Industry   | Potential Causes  |
|---|---|
| <p><b>Accidents arising from use of platform, scaffolding, ladders and working at elevated places</b></p> <p>Unsafe workplace conditions (slippery or unstable surfaces), using defective equipment, unqualified and poorly trained workers, unsafe connections and anchor points, unsafe behavior (smoking, throwing garbage, carrying equipment), poor positioning of scaffolding and platforms</p> | <ul style="list-style-type: none"> <li>• Using cracked, broken and greased ladders and scaffolding materials</li> <li>• Nonexistent protective fences around fixed ladders and beneath platforms and scaffolding</li> <li>• Using top step levels of portable ladders and placing portable ladders in unsafe positions on floors</li> <li>• Installation and dismantling of scaffolding and platforms by unauthorized/untrained persons and without required work permits</li> <li>• Unsafe placement of scaffold footing, overloading of scaffolding platforms and ladders and loose and unsafe connections between scaffolding and platforms</li> <li>• Slippery surfaces on scaffolding and platforms</li> <li>• Waste and scattered equipment on scaffolding and platforms</li> <li>• Oversized (more than 15 centimeters) extensions of scaffolding, and platforms and working on scaffolding and platforms (exceeding 2 meters height) without safety harness</li> <li>• Using painted and waste wood as scaffolding material</li> <li>• Metal scaffolding not being grounded against static electricity</li> <li>• Workers carrying materials and hand tools while accessing scaffolding and platforms</li> <li>• Working under scaffolding and platforms while other works are carried out on overhead scaffolding and platforms</li> <li>• Unsafe working locations surrounding scaffolding, platforms and ladders such as busy roads</li> </ul> |
| <p><b>Injuries sustained from lifting and hauling</b></p> <p>Absence of sufficient safety locks, unsafe connections and anchor points, defective crane parts, poor loading and positioning, misjudged calculations (crane boom length, load weight), improper warning systems and signs</p>   | <ul style="list-style-type: none"> <li>• Broken, worn out and crushed steel rope and pulley connections</li> <li>• Loose, wide hooks, hooks without safety locks or worn out safety lock springs</li> <li>• Defective limit switches, automatic stoppers and power transmission systems</li> <li>• Deformation of crane rails and defective crane warning system</li> <li>• Overloading of cranes and swinging loads</li> <li>• Load being hung on/around unsafe working locations, and locations where there are workers</li> <li>• Crane boom length not being in compliance with catalogue values</li> <li>• Lifting or lowering of workers using crane's ropes and hooks</li> <li>• Poorly trained riggers or unlicensed operators not using proper warning and communication signs</li> <li>• Lifting operations during unsuitable (harsh or abnormal) weather conditions</li> <li>• Unsafe crane cabins (containing flammable, explosive, hazardous matters, electrical heaters and without protective systems)</li> </ul>  |

| Common Hazards/<br>Emergency<br>Situations in the<br>Construction<br>Industry  | Potential Causes   |
|--|--|
| <p><b>Exposure and emergency events due to hazardous, flammable, explosive, and radioactive substances</b></p> <p>Unsafe handling and storage, improper or insufficient PPE, absent or inadequate warning signs and response systems (for leakage, fire and smoke), unsafe and defective equipment</p> | <ul style="list-style-type: none"> <li>• Unsafe storage and transportation of flammable, combustible, explosive, and radioactive materials</li> <li>• Leakage from such containers with consequent damage (to eyes, skin and through contact and inhalation)</li> <li>• Lack of warning signs on flammable, explosive, radioactive, hazardous, and harmful materials</li> <li>• Use of equipment producing sparks close to explosive, combustible, and flammable materials</li> <li>• Lack of convenient/adequate fire extinguishers and fire safety equipment at places where explosive, combustible, and flammable materials are stored</li> <li>• Improper storage (e.g. unventilated places) and transport (e.g. rolling instead of using carts) of pressurized gas cylinders</li> <li>• Dirty nozzles of gas welding apparatus, unsafe gas hoses and related connections with hoses passing through unsafe places</li> <li>• Harmful gas, dusts, and smoke uptake by compressors</li> <li>• Skin contact with irritating chemicals</li> <li>• Presence of unauthorized, unprotected persons at radiography units and locations</li> <li>• Insufficient illumination at workplaces and at locations where flammable, combustible and explosive materials are stored</li> </ul> |
| <p><b>Hazards from excavation work and works carried out with construction machinery</b></p> <p>Unqualified and unauthorized workers, defective or improper construction machines, absent or insufficient warning signs and systems, non compliance with maintenance procedures</p>                    | <ul style="list-style-type: none"> <li>• Unsafe and unmarked excavation area without excavation permit</li> <li>• Trench works undertaken during heavy rain creating a hazard if side walls are unsupported, and excavated material and machines are stored near the edge of trenches</li> <li>• High machinery vibration and noise levels</li> <li>• Poor access site roads with slippery, deformed surfaces</li> <li>• Worn out or old construction machines without proper maintenance and/or improper operation by untrained or unqualified operators</li> <li>• Hazardous use (overloading, alcoholic or drug intoxication, overtiredness, no seat belts, using cellphones) of construction equipment</li> <li>• Working with construction machinery and equipment under and near the high voltage transmission lines</li> <li>• Lack of alarm systems on construction machines</li> </ul>  |



| Common Hazards/<br>Emergency<br>Situations in the<br>Construction<br>Industry   | Potential Causes   |
|---|--|
| <p><b>Hazards from work involving sand blasting, painting and coating work</b><br/>Improper or insufficient PPE and defective equipment</p>   | <ul style="list-style-type: none"> <li>• Working without blasting mask and protective clothing</li> <li>• Using defective sand blasting and paint spray machines</li> <li>• Inhalation and skin exposure to coating/painting material</li> <li>• Presence of unsuitable and uncollected painting and coating waste at the working area</li> </ul>  |
| <p><b>Exposure to injury from work carried out in confined spaces</b></p>   | <ul style="list-style-type: none"> <li>• Working in confined spaces without an approved confined space entry procedure and permit</li> <li>• Failure to include flammable and explosive gas measurement of confined spaces prior to entry</li> <li>• Using equipment, which produces sparks in confined spaces containing explosive and combustible material</li> </ul>  |
| <p><b>Hazards and emergency events arising from working with electrical energy, and with electrical hand tools and machines</b><br/>Improper or insufficient protectors, improper hand tools or equipment, unsafe cable connections and passages, unqualified or unauthorized workers</p> | <ul style="list-style-type: none"> <li>• Absence of log out/tag out maintenance procedures, training and required apparatus to de-energize and isolate electrical circuits</li> <li>• Use of ungrounded and improperly grounded machinery and equipment</li> <li>• Cracked fuses, plugs, and sockets, damaged distribution sockets and circuit breakers, and poorly connected, worn, frayed, or bare cables</li> <li>• Electrical cables passing through/laid around damp, humid, and otherwise unsafe locations</li> <li>• Risk of electric shocks from unsafe high voltage units and static electricity generation</li> <li>• Use of inherently unsafe electric hand tools in flammable and explosive environments</li> <li>• Use of hand tools without proper skin and eye protection</li> <li>• Lack of PPE for workers that may be in contact with exposed electric parts (e.g. electrical gloves and insulated tools rated for the voltage level, class B hard hats, electrically rated steel-toed boots, safety glasses)</li> <li>• On/Off power circuit switches that are not located at clearly visible points</li> <li>• Broken, unsafe switches</li> <li>• Use of unqualified electricians for repairs and for issuing compliance certificates</li> <li>• Absent, insufficient, and unreadable warning signs related to electrical hazards</li> <li>• Lack of (high voltage) work permit to allow high risk work</li> <li>• Use of non-insulated floor materials at high voltage units</li> <li>• High voltage transmission lines over/nearby operation sites and workplaces, and high voltage poles with unsafe surrounding</li> <li>• Improper deployment and installation of lightning conductors</li> </ul> |

# Stakeholder Engagement

5

Stakeholder engagement is part of regular activities. Awareness and engagement at senior levels. Fluent and inclusive communication and consultation process with stakeholders.

4

Multiple and ongoing public consultation and participation in a culturally appropriate manner. Stakeholder feedback is actively considered. Reporting to communities and effective grievance mechanism is evidenced by formal records.

3

Stakeholders have been identified and engaged in several events with effective dialogue. Some procedures and assigned responsibility for engaging with stakeholders.

2

Some public events, limited ongoing engagement process. Sporadic and selective responses when approached by stakeholders.

1

Limited channels in place. A few meetings and discussions, but not an ongoing process yet.

0

Little or no transparency with stakeholders.

Your company may have an impact on the lives of many people and organizations. All of these people and organizations are your stakeholders - they have a stake in your company's financial, environmental and social performance.

Look at the diagram below and think about how your company interacts with each group. Your relationship with each group is different, and you need to adapt the way you engage with each of them to mitigate risks to your business.

Systematically engaging with affected communities in the identification and management of the impacts that negatively affect them contributes to building trust, credibility and local support. Engaging with them also provides the opportunity to highlight the positive aspects of the company's presence. This lowers the risk of anti-company sentiments that could lead to costly litigation or disruption of company operations.





Other stakeholders such as activists and NGOs may not be directly affected by your operations but may have an interest in what you do. Keeping these groups informed and maintaining an open communication channel may lower the risk of negative campaigns that could affect your company's reputation.

## MAPPING YOUR STAKEHOLDERS

The first step in building a relationship with your stakeholders is to identify them. To start, look back at your risk assessment and the areas of potential negative impacts and identify who would be directly or indirectly impacted.

Once you have identified your stakeholders, you should prioritize the different groups based on the nature and severity of the impacts, and the ability of these groups to influence your business. Engagement should be stronger and more frequent with those groups that are more severely affected, as well as with those that have a greater ability to influence your business.

Also, as you identify your stakeholders and the issues that may affect or interest them, you can tailor your communication material and methods to effectively engage with each of them.

### INTERNAL AND EXTERNAL STAKEHOLDERS

Workers are an important internal stakeholder group. They also need to be involved in the identification of risks that affect them and be consulted when developing action plans and procedures. However, the methods of engagement with them will differ from those used for external stakeholders.



Use the Toolkit item **Stakeholder Map** and **Impact Zoning Tool for Affected Communities** to get started.

## For effective consultation with affected communities :

- Start early;
- Disclose meaningful and accurate information;
- Use culturally appropriate means to reach them;
- Provide opportunities for two-way dialogue ;
- Document to keep track of issues raised; and
- Report back on how their input has been used and considered

### DEVELOPING A STAKEHOLDER ENGAGEMENT PLAN

After mapping your stakeholders, the next step is to develop a plan for how to engage with the groups that you have identified. Your stakeholder engagement plan can be simple. But it is important to be proactive and to address key environmental and social concerns.

At a minimum, even if your company does not have adverse impacts on communities or other stakeholders, you should always implement a procedure to receive communications from the public and accordingly adjust your management program (see Element 7, External Communication).

If it is determined that there are affected communities, you need to implement a Grievance Mechanism (see Element 7, Grievance Mechanism) and actively engage them in consultation, regularly disclosing clear and meaningful information on both your impacts and potential benefits, and providing communities with opportunities to express their concerns and suggestions.

In the case of potentially significant adverse impacts to individuals and communities, you should engage them in a process of Informed Consultation and Participation (ICP). Compared to a consultation process, an ICP should ensure a more in-depth exchange of information and a higher level of participation from affected stakeholders in decision-making, so that their proposed mitigation measures are incorporated into the company's action plan.

Finally, you should periodically report to affected stakeholders on the actions your company is putting in place to address the issues identified through the engagement process (see Element 8, Ongoing Reporting to Affected Communities).

Regular communication with the various stakeholder groups is an excellent way for you to understand how company operations affect them and to get early warnings of potential problems. In all your efforts to reach out to stakeholders, ensure that you do so early on – relationship-building takes time. Don't wait until a crisis arises to act, as it will be more difficult without those relationships in place to manage the problem.



Use the Toolkit item **Stakeholder Engagement Plan Worksheet** to record how you will engage with the important stakeholder groups.

## TIP

**Effective Stakeholder Engagement**

- Be strategic and prioritize which stakeholders to approach – you may not have the resources to engage them all at once.
- Update your stakeholder map regularly and in the case of significant events (e.g., changes to your business, government elections, natural disasters, etc.).
- Be aware of what issues are important to each group.
- If you are dealing with a representative for the group, make sure that he/she legitimately represents the interests of the affected groups and communities.
- Engage with stakeholders in their own communities and places where they feel comfortable.
- Reach out to vulnerable and marginalized groups.
- Keep a record of questions, comments and suggestions. Records provide important information that should be used to adapt your Action Plans and improve your ESMS.
- Recognize that your employees are a good link to stakeholders in the “outside world.”
- Be prepared to respond to stakeholders, and do not generate expectations that cannot or will not be fulfilled.

**DEFINITIONS**

|                             |  |
|-----------------------------|--|
| <b>Stakeholder</b>          | Any person or organization that has an interest in or is affected by your company  |
| <b>Affected Communities</b> | People or communities who are subject to company-related adverse impacts on their environment, infrastructure, way of life, personal safety, health or livelihood. |

For more information on how to develop and implement a Stakeholder Engagement Plan, refer to the Good Practice Handbook “*Stakeholder Engagement*,” IFC (2007).

# External Communications and Grievance Mechanisms

5

Proactive and responsive external communication and grievance mechanism. Stakeholders are consulted on ESMS effectiveness and are part of the regular review process.

4

Effective grievance mechanism is evidenced by formal records. There is routine review of the records and the effectiveness of the program.

3

Grievance mechanism is fully implemented; however, there is not enough evidence of its effectiveness. No tracking of internal or external awareness; limited tracking of cases.

2

Procedures and assigned responsibilities for receiving and handling complaints. Awareness is limited to those directly handling the complaints.

1

Some basic procedures for receiving complaints. Responsibility limited to one person or unit.

0

No mechanism in place.

If your company has social and environmental impacts in the community, inquiries, concerns and complaints are bound to arise. How you respond to and manage these issues will have significant implications for how your business is perceived and, possibly, whether or not it succeeds.

## EXTERNAL COMMUNICATIONS

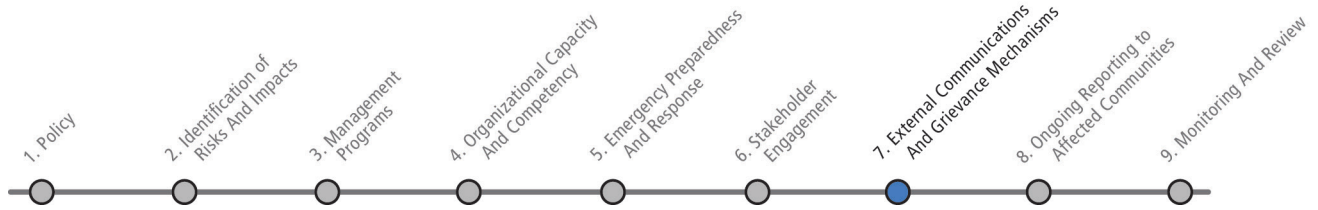
Even if affected communities per se are not identified, you should always establish and maintain a publicly available and easily accessible channel for stakeholders to contact you (e.g., phone number, website, email address, etc.).

External stakeholders can provide valuable information, such as suggestions on product improvement, advance warning in critical situations, feedback on interactions with your employees, and/or comments from regulators, NGOs and individuals regarding your company's environmental and social performance.

The procedure for external communication should include methods to (i) receive, register and validate external communications and requests for information from the public; (ii) screen and assess the importance of the issue raised and determine how to address it; (iii) provide, track, document and publish responses; and (iv) adjust the management program when appropriate.

## GRIEVANCE MECHANISMS

The purpose of a grievance mechanism is to establish a way for individuals, groups or communities affected by your business to contact you if they have an inquiry, a concern or a formal complaint.



In practice, a grievance mechanism should:

- Establish a way for people to contact you – openly or anonymously – to pose their questions, to express concerns or to file a complaint. Examples are suggestion boxes, a toll-free telephone hotline, an email address, and regular meetings arranged to discuss particular problem areas.
- Assign a person or team in your company to be responsible for receiving, registering and processing all grievances.
- Establish procedures to register, screen, categorize, investigate and determine resolution and redress options.
- Establish a system to communicate decisions taken and progress on pending actions. It is important that people know when they can expect a response.

Not all complaints can be resolved in the same way. Simpler issues, such as a company truck running over chickens in the road, might be dealt with by the same team responsible for registering the complaint. More complex problems, such as allegations of widespread groundwater contamination, might require immediate intervention by senior managers and more dedicated resources for investigating, documenting and reporting. For complex and recurring problems, consider reaching out to third-party facilitators that can act as independent mediators.

#### TIP

##### Implementing a Grievance Mechanism

- Scale it to fit the level and complexity of social and environmental risks and impacts identified in your company.
- Design the process to be easily understandable, accessible, trusted and culturally appropriate.
- Publicize the availability of the grievance procedure so people know where to go and whom to approach.
- Commit to a response time and keep to it as this will increase transparency and a sense of “fair process.”
- Keep records of each step to create a “paper trail.”

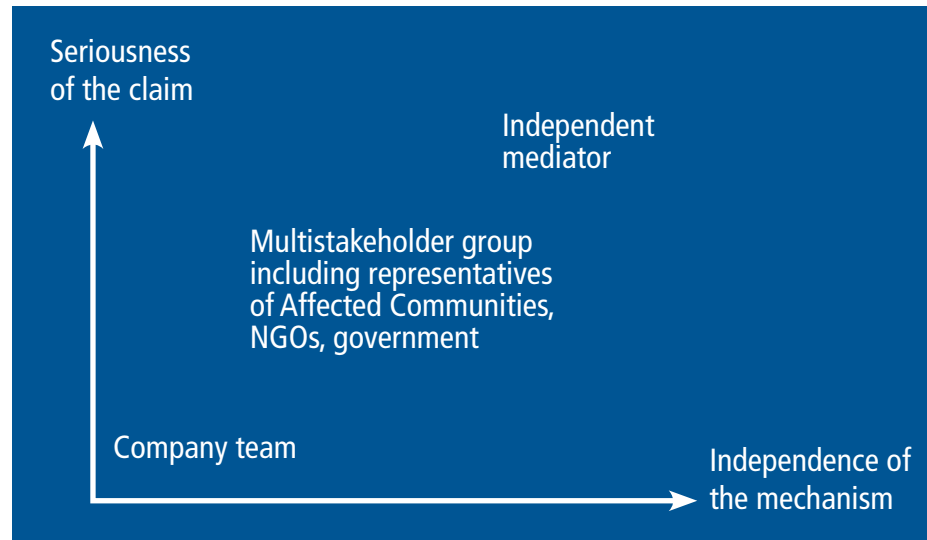
The more serious the claim is, the more independent the mechanism should be to determine the resolution and options for redress.

The most important thing is to make sure the grievance mechanism is accessible and trusted. Tailor it for the local community so that it is easy for them to raise concerns. This requirement mandates having the right people leading this effort inside your company. The grievance mechanism must be accessible at no cost and without retribution to the party that originated the complaint and should not impede access to judicial or administrative remedies.

Don't underestimate the value of a well-implemented grievance mechanism. The information you receive can act as an early-warning system before the problem becomes too costly and time-consuming to address.



Look at the Toolkit items [Checklist for an Effective Grievance Mechanism](#) and [Grievances Log](#) to get started.



#### TIP

##### **A Grievance Mechanism is**

UNDERSTANDABLE AND TRUSTED when:

- affected communities understand the procedure to handle a complaint;
- people are aware of the expected response time; and
- confidentiality of the person raising the complaint is protected.

CULTURALLY APPROPRIATE AND ACCESSIBLE when:

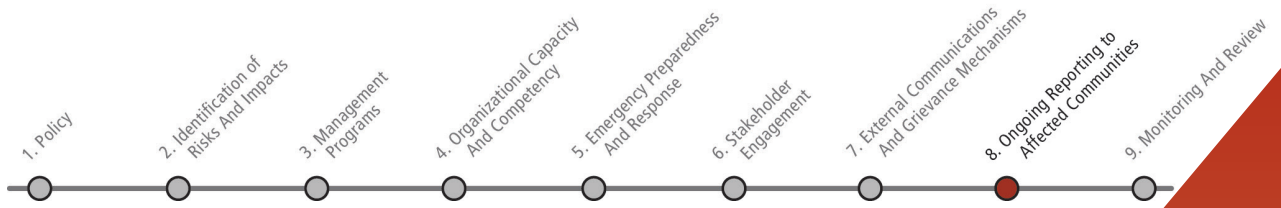
- claims can be presented in the local language;
- technology required to present a claim is commonly used (e.g., paper, text messaging, internet); and
- illiterate persons can present verbal complaints.

AT NO COST when:

- people don't need to travel long distances to present a claim; and
- the company covers the costs of third party facilitation.

For more information on how to develop and implement a Grievance Mechanism, refer to the Good Practice Note "*Addressing Grievances from Project-Affected Communities*," IFC (2009), and the Advisory Note "*A Guide to Designing and Implementing Grievance Mechanisms for Development Projects*," CAO (2008).





# Ongoing Reporting to Affected Communities

Affected communities will want to know what actions your company has put in place to resolve the issues identified when engaging with them.

Keeping affected communities informed of what you are doing is a critical element for building and maintaining a good relationship. If people know when they will receive an update, it helps to build trust. It can also reduce the amount of time you spend responding to questions.

Affected communities' issues and concerns are proactively addressed. There is ongoing communication to avoid risks and impacts before new projects as well as to address existing issues.

Reporting to affected communities is regularly implemented and evidenced in documentation. Key units are involved in the review of the key issues.

When applicable, consultation processes have been implemented. External consultants are involved as required. No ongoing review.

Procedures in place for reporting, usually assigned to E&S staff. Primarily reactive.

Some basic communications with affected communities, mostly limited to meetings.

No reporting.

## TIP

### Ongoing Communication

- Provide an immediate update if new environmental or social risks emerge.
- Report progress on implementation of your commitments.
- Report monitoring results on issues that interest the community.
- Use the opportunity to communicate the benefits generated by your company.
- Translate information into local languages and easily understandable formats.
- Try to maintain continuity in who deals with the community.
- Involve your employees as communication links to the community.
- Consider conducting a stakeholder survey to learn how your company is perceived.

The frequency of this communication will be proportional to the scale of stakeholders' concerns, but it should be at least annually. If your company's activities change or new environmental and social risks emerge, you do need to contact stakeholders outside of the regular schedule to discuss these changes.

You can also decide to report back to the wider public on your progress in meeting your commitments to avoid, reduce and mitigate any negative environmental or social impacts from your company's activities. Sustainability reporting initiatives,

guidelines, including sector-specific guidelines, and good practices are also rapidly emerging in this area. The most notable is the Global Reporting Initiative (GRI).



Look at the Toolkit item **Reporting to Affected Communities** for examples of formats and venues you can use.

# Monitoring and Review

5

Robust system of continual learning and improvement. Senior management receives periodic reports about E&S performance and progress toward E&S objectives and targets. All key project decisions consider E&S.

4

Monitoring, supervising and auditing activities are integrated and included in management review. Includes consultation with workers, customers and suppliers. E&S objectives and targets are included in job descriptions and performance reviews.

3

Routine review of monitoring and supervision activities, including participation of workers. Corrective actions routinely implemented. An E&S internal audit plan is in place.

2

Key E&S monitoring plans in place, with inspection and supervision activities. Primarily reactive and guided by external experts, customers and investors.

1

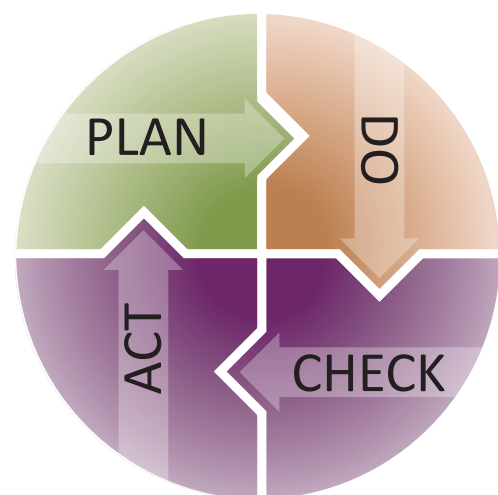
Few monitoring plans to satisfy regulatory requirements. No formal review activities. No systems awareness or repeatable processes

0

No monitoring of E&S performance.

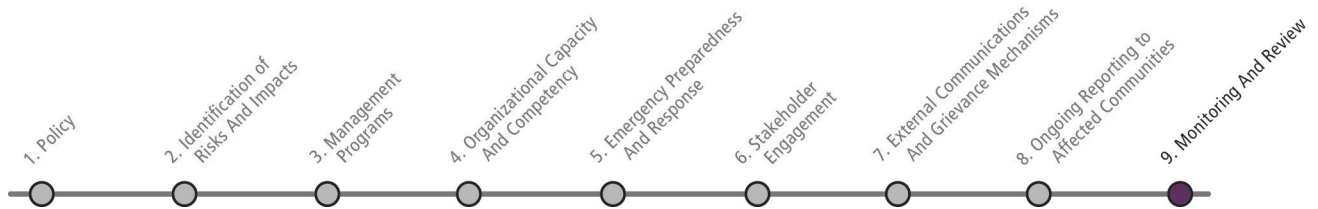
We've talked about the relationship between your ESMS and the Plan-Do-Check-Act cycle of continual improvement. Monitoring and review are critical, because this is how you check and adjust the system.

So far, you've formed or assigned a team to lead the effort. You have developed your ESMS and started to implement your action plans in response to the risks and impacts you identified. You've started to train people. The next step is to monitor the effectiveness of your ESMS and your action plans and make the necessary adjustments.



**Monitoring** is the **CHECK** step of the PDCA cycle

**Review** is the **ACT** step of the PDCA cycle

**TIP****Monitoring measures intent, implementation and effectiveness****Intent:**

1. Are the nine elements of the ESMS in place?

**Implementation:**

2. Are the action plans being carried out?
3. Are procedures being followed?

**Effectiveness:**

4. Are you in compliance with laws and regulations?
5. Are you making progress toward your overall objectives and targets?
6. How is the environmental and social performance of the company in general?

**INDICATORS**

A key aspect of monitoring is defining relevant indicators. These are quantitative or qualitative measures of progress against set goals. Some indicators might focus on **performance**, evaluated against the criteria defined in your environmental and social policy.

Some examples of key performance indicators could be:

- energy consumption;
- volume of solid waste disposal;
- water consumption;
- liquid effluents discharge;
- emissions to air;
- noise and vibration;
- work zone air quality;
- accidents, incidents, near-misses;
- lost work time frequency, severity, and incidence rates;
- emergency response incidents;
- average working hours and wages paid;
- wages levels;
- incidence of child labor;
- incidences of disciplinary and discriminatory complaints; and
- employee demographics matching access to training, jobs, and wages.

## Measuring and Improving

Remember, you can't improve what you don't measure.

You can also use this information when reporting to a wider public on your ESMS performance. When selecting your key performance indicators, you may refer to voluntary guidelines such as the Construction & Real Estate Sector Supplement (CRESS) of the Global Reporting Initiative, which provides a list of indicators relevant to the construction industry.

Other indicators can look at the **processes or inputs** that you use to try to achieve performance.

For example, in your action plan, you might have included worker training as a necessary step to raise awareness among workers about OHS, so that they can help to identify and address key risks and hazards. In this case, you might evaluate your progress against the action plan by tracking the percentage of workers who have been trained, or the percentage of workers who can correctly describe the risk analysis procedure.

Some examples of process indicators include:

- procedures in place for chemical, fuel and hazardous waste handling, storage, and disposal;
- processes analyzing for efficient use of energy and materials;
- percentage of workers who can explain the grievance mechanism;
- percentage of workers who can explain the health and safety procedures;
- percentage of workers trained on labor standards requirements; and
- communications from stakeholders.

It is helpful to have a mix of performance and process indicators, to get a deeper understanding of whether you are measuring the appropriate things and whether you are taking the appropriate actions. For example, a performance indicator such as “zero incidences of child labor” does not tell the full story: Was this the result of effective procedures and training or was the system inadequate in identifying and recording incidences?

For environmental and OHS performance indicators and benchmarks relevant to your industry, consult the *WBG EHS Guidelines* at [www.ifc.org/sustainability](http://www.ifc.org/sustainability)



Look at the **Monitoring Plans** in the Toolkit and Case Studies for more examples of key indicators common in the Construction industry.

## THE BASICS OF MONITORING

### Visual observation

**physical walk-through of your work site and surrounding land.** Examples of what you may observe: restrictions to site entry, visitor check-in area, slip, trip, and fall hazards, excavation without protection, crane swing warning system, warning signs, use of PPE, presence of safety officer, backup alarms on heavy equipment, storage of petroleum, oil, and lubricants, storage of paints and solvents, waste segregation, sequencing of vehicle traffic, adequate lighting for non-daylight work, confined spaces.

### Interviews

**consultations with workers, managers and external stakeholders.** Examples of topics you might discuss: Do workers and managers understand the policies and procedures? How are they impacted? Are there ideas for improvement? Do workers feel comfortable filing complaints? How are external stakeholders impacted by the company? Are there ideas for improvement? Do external stakeholders feel comfortable filing complaints?

### Measuring and testing

**checking using equipment that is properly calibrated.** Examples of what you might check: fugitive dust emissions, noise, quality of drinking water for workers, worksite and ambient air quality if working on previous contaminated site or presence of hazardous materials (e.g. asbestos) in demolition work, water quality from dewatering to verify compliance with discharge permits.

### Document review

**looking through documents and records.** Examples of what you might review: EA management plan and/or permit requirements, book of permits, energy bills, project health and safety plan, OHS records, OHS corrective actions plans and status of corrective actions, equipment calibration logs, inspection records, complaint logs, wage slips, time cards, policies and procedures, training records.



Look at the Toolkit item **Auditing Guidance** for guidelines on how to conduct an audit.

**Monitoring** and **auditing** are words that are often used interchangeably, which can be confusing. Auditing is a formal, on-site evaluation against a specific set of criteria. Audits can be conducted internally by your own staff or by outside parties. Monitoring is an umbrella term that includes various methods for evaluating performance. These may include: visual observation, measuring and testing, questionnaires, surveys, interviews with employees and external stakeholders, and document review. It is important to design your monitoring program to obtain qualitative and quantitative information. It is also important that workers and managers are monitoring the workplace on an on going basis.

### MEASURING AND IMPROVING YOUR ESMS

While your Action Plan monitoring looks at whether corrective actions are being implemented and are achieving the intended results, your ESMS monitoring is looking at the maturity of your system development and implementation. The Action Plan lists new actions you are taking to address risks. But for the new actions to be sustainable, you also need to improve your ESMS. The two need to be linked.

This Handbook's companion publication ESMS Self-Assessment and Improvement Guide provides you with a practical tool to monitor the maturity of your ESMS. For each of the nine ESMS elements, we provide self-assessment questions that show you the level of your ESMS development and implementation on a scale of 0 to 5 (5 is the highest). Conducting the ESMS self-assessment is an important first step that enables you to see where you stand now. The results form the basis of your ESMS Improvement Plan. The ESMS self-assessment responses should be based on Visual Observation, Measuring or Testing, Document Review and Interviewing People.

Let's take another look at the nine elements of the ESMS and maturity ratings.

## Purpose of Action Plan and ESMS Improvement Plan

**Action Plan:** specific actions to correct environmental, labor and community problems and remediate negative impacts

**ESMS Improvement Plan:** steps targeted to continually improve the management system to support activities in the Action Plan

|          | Policy   | Identification of Risks and Impacts | Management Programs | Organizational Capacity and Competency | Emergency Preparedness and Response | Stakeholder Engagement | External Communications and Grievance Mechanisms | Ongoing Reporting to Affected Communities | Monitoring and Review |
|----------|--|-------------------------------------|---------------------|--|-------------------------------------|------------------------|--|---|-----------------------|
| <b>5</b> | Mature system implemented internally and with key supply chain partners – continual improvement embedded in operations |                                     |                     |  |                                     |                        |  |   |                       |
| <b>4</b> | Systems well-developed and implemented internally – routine improvement projects                                       |                                     |                     |  |                                     |                        |  |   |                       |
| <b>3</b> | Systems approach adopted, but development and implementation is inconsistent - improvement sporadic                    |                                     |                     |  |                                     |                        |  |   |                       |
| <b>2</b> | Limited system development with sporadic implementation – primarily reactive   |                                     |                     |  |                                     |                        |  |   |                       |
| <b>1</b> | Little systems awareness or repeatable processes   |                                     |                     |  |                                     |                        |  |   |                       |
| <b>0</b> | No systems awareness or repeatable processes   |                                     |                     |  |                                     |                        |  |   |                       |

### LINKING YOUR ACTION PLAN AND ESMS IMPROVEMENT PLAN

It is important to understand the link between the Action Plan and the ESMS Improvement Plan. The Action Plan lists specific projects and activities. The ESMS Improvement Plan is about making system improvements needed to support the activities and to make the necessary changes in how the company operates.

Improving environmental and social performance and integrating it into your routine business operations takes time. The improvement plan for your ESMS needs to be practical. It needs to be designed with the understanding that people have their core operating responsibilities in your company. You cannot improve everything at once. The ESMS Team plays the critical role of leading the improvement effort. Prioritizing what to work on first is an important job for the team in coordination with senior management. The ESMS Self-Assessment and Improvement Guide will help you to get started.

## CONDUCTING AN EFFECTIVE MANAGEMENT REVIEW

The purpose of the management review is to routinely involve senior management in evaluating the development and implementation of the ESMS. The management review is led by the ESMS Team. In the beginning, we recommend conducting a management review every three to six months. Once the ESMS is well-established, once a year is usually fine. It is important to keep a written record (called minutes) during the meeting of the key topics discussed and the decisions made. The minutes should be kept in a central log.

For the ESMS Team, the management review is an important opportunity to keep senior management involved. Remember, the sustainability of the program requires ongoing commitment from senior management.

### Typical Agenda for a Management Review:

- Review progress on Action Plan
- Review progress on ESMS Improvement Plan
- Review compliance with environmental and labor laws and regulations
- Review progress on environmental and social performance
- Discuss possible adjustments in risk assessment
- Prioritize activities for next three, six and 12 months
- Review and approve needed resources by senior management





**Address:**

2121 Pennsylvania Avenue, NW  
Washington, DC 20433 USA  
Tel. 1-202-473-3800  
[www.ifc.org/sustainability](http://www.ifc.org/sustainability)



**Copyright**

The material in this publication is copyrighted. IFC encourages the dissemination of the content for educational purposes. Content from this publication may be used freely without prior permission, provided that clear attribution is given to IFC and that content is not used for commercial purposes.

June 2014