Environmental and Social Management System Implementation Handbook

ANIMAL PRODUCTION
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.

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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 animal production 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.
Welcome and How to Use this Handbook

Quick Reference for Using this Handbook

<table>
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<tr>
<th>Sections I – II</th>
<th>These sections provide background on environmental and social management systems (ESMS) in the animal production industry.</th>
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<tr>
<td>Section III</td>
<td>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.</td>
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| ESMS Toolkit and Case Studies | 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. Section II includes case studies presenting two companies in the animal production 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.  
  - ABC Company – a family owned poultry production farm in Brazil.  
  - XYZ Company – a midsized cattle farming company in Ethiopia. |
| ESMS Self-Assessment and Improvement Guide | 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 Irene Angeletti, Rob Horner, 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 SAI contributors include Eileen Kauffman, Doug DeRuisseau, Yogendra Chaudhry, Dundar Sahin and Caroline Lewis. Graphic design services were provided by Pam Henry.

Additional IFC contributors include Debra Sequeira, Ekaterina Grigoryeva, Louis Philippe Mousseau and Jeremy Ansell. 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.
Benefits of an Environmental and Social Management System in the Animal Production Industry
Benefits of an Environmental and Social Management System in the Animal Production Industry

Today, animal production companies are confronted with a number of significant environmental and social challenges. None of the challenges is insurmountable, but if not effectively addressed and managed, they will hurt your core business operations and profitability.

Among these challenges are increasing energy and feed costs, the growing power and influence of environmental and labor regulatory agencies, and rapidly evolving consumer awareness and concerns about environmental and social issues. These risks are in addition to the primary risk of failing to manage food safety while building brand and consumer confidence. All of these risks ultimately can have financial consequences. Moreover, export is vital to the success of many animal production businesses; but exporting brings even more demands from international legislation, voluntary standards and consumer requirements – increasingly related to environmental and social practices. All of these risks, requirements and pressures that your business faces are forces that encourage you to implement a management system.

There are direct business benefits to be derived from implementing an environmental and social management system. Conserving and using energy and materials efficiently helps to reduce production costs. Reducing waste and discharges...

“The economic impacts of livestock diseases are difficult to quantify because of the complexity of the effects that they may have. We use our quality and EHS program as an early warning system for disease diagnostics and management.”

CFO - Livestock grower and marketing company, Asia

“Poor quality of veterinary services and prevalence of many epidemic and endemic livestock diseases were our major challenges. A worker hygiene, sanitation and quality management program has helped us reduce our risk by 40-50%.”

General Manager - Livestock producer and exporter, Africa
can minimize the cost of increasingly expensive, regulated discharges to the environment (such as greenhouse gases and wastewater). In the animal production industry, there can be financial benefits from waste management. Instead of merely capturing and treating animal waste with no benefit, you can convert organic wastes to biogas for boiler fuel or generate electric power, or organic fertilizer and soil amendments to strengthen crop production sustainability. A management system can elucidate where expenditures exceed industry benchmarks and identify potential production cost savings.

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 incidents, accidents and fatalities, but also contributes to reducing insurance premiums for worker compensation.

“The livestock sector is increasingly affected by competition for natural resources, particularly land and water and by the need to operate in a carbon-constrained economy. Good environment practices and community engagement programs are two key factors in our rapid economic growth.”

Managing Director - Livestock Merchant Wholesalers in Latin America.

“While expanding we realized that increasing livestock numbers will add to the demand for water, particularly in the production of livestock feed, so we decided to invest in water saving and rain water harvesting in the region. The support from regulators and community is crucial to business like ours.”

Senior VP - Pig farmer and feed company in Asia
Management systems are widely used by animal production companies in quality control and food safety. An environmental and social management system simply extends that approach to managing the impact your business has on the environment and the working conditions at your facility.

Ultimately, your management systems should be integrated and centralized, instead of having one system for quality, one for food safety and one for ESMS. Integrated management systems are the goal, but 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 animal production industry already have management systems for quality or food 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)

| Level 5        | Mature system implemented internally and with key supply chain partners – continual improvement embedded in operations |
| Level 4        | Systems well developed and implemented internally – routine improvement projects |
| Level 3        | Systems approach adopted, but development and implementation is inconsistent – improvement sporadic |
| Level 2        | Limited system development with sporadic implementation – primarily reactive |
| Level 1        | Little systems awareness or repeatable processes |
| Level 0        | 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

<table>
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<th>System Development</th>
<th>The documented policies and procedures.</th>
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<tr>
<td>System Implementation</td>
<td>Trained, committed people routinely following the procedures.</td>
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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.

- ESMS HANDBOOK
  - Understand the benefits of an ESMS
  - Learn the nine fundamental elements of an ESMS

- ESMS TOOLKIT & CASE STUDIES
  - Use tools to implement improvement plan
  - Learn how other companies scaled the ESMS to their size and complexity

- ESMS SELF-ASSESSMENT & IMPROVEMENT GUIDE
  - Measure the maturity of your ESMS
  - Prioritize elements and develop an overall ESMS improvement plan
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.
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 animal production 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. 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 stages with your senior management. Consider accompanying the Policy Statements with a message from the CEO.
You’ve made an important first step by defining your environmental and social policies and gaining senior management commitment to making them an important part of how your company operates. Now you need to identify the relevant environmental and social risks and impacts that your company needs to address.

In the following pages, we present the key issues that tend to come up in the animal production industry.

**KEY RISKS IN THE ANIMAL PRODUCTION INDUSTRY**

1. **Environmental: Pollution Prevention and Resource Efficiency**
   - Generation of large amounts of solid waste and sludge from waste feed, animal waste and carcasses, packaging (for feed and pesticides), used bedding, ventilation equipment, and unused/spoilt medications
   - Release of effluents containing high BOD, COD, TSS, ammonia, nutrients, sediment, pesticides, pathogens, feed additives, growth enhancers and antibiotics from poultry housing and cattle sheds, feeding, watering and manure storage areas
   - Cleaning fluids, detergents and disinfectants entering wastewater
   - Improper or insufficient wastewater treatment prior to its discharge into water system
   - Deforestation, land degradation, and desertification from overgrazing
   - Atmospheric emissions of CO2 and equivalents (nitrous oxide and methane) responsible for climate change as well as ammonia, bioaerosols and dust
2. Occupational Health and Safety

- Injuries related to vehicle operation and repair and falls into confined spaces such as manure pits, silos, grain bins, water tanks
- Back injuries from repetitive manual work such as handling animals in stables, shackling birds, and hauling manure
- Injuries sustained from bites and kicks by livestock and poultry
- Exposure to pesticides including dermal contact, inhalation from their preparation and application which can be increased by climatic conditions (wind) and ingestion via contaminated water
- Exposure to airborne hazards such as poultry dust, organic and inorganic dust from mammalian livestock operations leading to acute toxic alveolitis and farmer’s lung
- Exposure to dangerous gases such as hydrogen sulfide and ammonia especially in confined manure storage areas (pits, storage tanks, application tankers)
- Exposure to disease causing agents transmitted from live animals and manure (bacteria, parasites and ticks, and viruses including bird flu)

3. Labor

- Use of migrant and temporary labor
- Use of child labor especially as part of family unit of workers
- Use of recruitment agencies/contractors with associated risk of forced labor
- Excessive overtime not properly compensated and unrealistic production quota
- Living or minimum wage is not paid or insufficient for a reasonable standard of living
- Restrictions on Freedom of Association and Collective Bargaining

4. Community health, safety and security

- Improper handling, segregation and disposal of sick or diseased animals
- Emission of foul smelling odors and pungent hazardous gases such as ammonia from denitrification of manure
- Elimination of dissolved oxygen in surface waters leading to anoxic conditions and loss of aquatic life in streams and rivers due to eutrophication
- Increased vehicle traffic due to transport of animal feed, waste, raw materials
- Constraints on local water supplies especially with livestock farming, and potential contamination of drinking water supplies
- Danger of surfacing antibiotic-resistant strains of disease causing microorganisms due to excessive industrial use of antibiotics
- Public concerns regarding animal welfare and inhumane treatment
- Danger to health and safety from ingestion of contaminated or adulterated beef, milk, pork and chicken from pathogenic organisms such as Avian influenza and parasitical worms
Top 3 risks and opportunities in the Animal Production industry

1 Liquid waste from livestock farming can lead to environmental pollution. Intensive livestock farming generates large amounts of organic waste. In addition to nutrients, these may contain antibiotics, hormones and pesticides. From such water pollution, conflicts with other uses, such as with fisheries and drinking water extraction may result. Pesticides must be handled carefully in order to mitigate risks for human health and the environment.

2 Large-scale farming may lead to deforestation and desertification. Large forest areas may have to be cleared for pastures. Grazing animals may prevent forest growth. Overgrazing, i.e. unsustainably large animal populations on too-small areas, may lead to desertification, which turns pasture into unproductive wasteland. Some of these impacts may be irreversible. Well-managed livestock farms ensure that their business is sustainable in the long run.

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 risks to workers 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, worker 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 animal production 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.

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3. **Intensive livestock farming** may put a strain on the local water supply. Animal farming requires considerable amounts of potable water as well as large land areas for grazing, biosafety considerations, and feeding. A reliable and continuous supply of potable water is essential. There may be potential for optimizing the efficiency of water use, for preventing shortages and for addressing conflicts with other users of the same water resources.

Source: Livestock Farming Sector Factsheet – www.firstforsustainability.org
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 protection of nearby water bodies and you have identified this as a risk factor because of the high quantity of manure produced by your operations, you may take action by building a composting facility to avoid sending manure to waste lagoons.
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 manure handling practice that exposes workers to toxic gases in confined spaces. You might avoid this risk by ensuring proper ventilation or minimize by training workers on the hazard.

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 animal production industry. Action Plans can be scaled to the size of your company and the nature of the risks you face.
Mega Enterprises
RISK: Water Pollution

Mega Enterprises is one of the leading livestock companies in the Republic of Belarus. The organization is well known throughout the country for its large, concentrated animal feeding operations. Recently, the company was highlighted in the news because of a waterborne disease outbreak in communities surrounding one of its farms and, fish kills in local surface waters. Collected manure from feedlot operations was allowed to escape confinement and flow to surface waters. The farm was visited by the provincial health authorities who found that most of the animals were crowded into relatively small areas; their manure and urine are transported to massive waste lagoons. In the past few months lagoon walls and confining structures have failed several times. These breaches, coupled with frequent leakage and overflows, are responsible for discharges of pathogenic bacteria, nitrates and water treatment-resistant pathogenic spores into water supplies; and consequent contamination and eutrophication of water bodies.

<table>
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<td>Impact on raw water sources utilized for community potable water systems</td>
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<table>
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<th>AVOID</th>
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<tr>
<td>• Commission engineering feasibility studies to evaluate the following treatment methods:</td>
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<tr>
<td>• solid animal waste combustion for heat, steam, and electricity generation; use of ash for organic fertilizer and soil amendment</td>
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<tr>
<td>• liquid-solid separation systems; composting solids to produce organic fertilizer; using liquids for irrigation</td>
</tr>
<tr>
<td>• anaerobic digestion of liquefied manure; collect and combust methane generated; collect and distribute digested sludge and effluent for land application;</td>
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<tr>
<td>• constructed wetlands</td>
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<tr>
<td>• Seek capital investment for feasible approaches</td>
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<tr>
<td>• Design and construct storm water diversion facilities to prevent liquefaction of solid manure; divert clean storm runoff and run-on to retention ponds that slowly discharge to surface water to avoid siltation and transfer of contaminants; retention ponds should contain the volume generated by a 25-year storm event</td>
</tr>
<tr>
<td>• Construct liquefied manure storage facilities that are watertight to prevent leakage and contact with precipitation, and with adequate capacity for cold weather storage (6-8 months)</td>
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### MINIMIZE
- Establish setback distances for locating operation facilities from residences
- Establish appropriate setbacks and vegetative buffers between land application areas and water courses
- Prohibit applications to land with unsuitable slopes (e.g. greater than 12%)
- Ascertain ground water depth and flow direction quality; use these data to maintain appropriate setback distances between manure storage and wells, surface water courses, sinkholes and springs
- Redesign green and composted solid manure application programs and procedures to prevent surface water contamination, provide organic fertilizer for crops, plantations, and other vegetation
- Prepare an annual manure management plan addressing specific practices for all-season management of animal wastes
- Control volume of wastes produced by formulating diets to reduce manure production

### OFFSET
- Provide diagnostic and curative medical assistance to the community affected by contaminated water supply
- Identify and provide alternative potable water supply to affected communities until safe community water supply is restored
- Audit municipal potable water treatment plant operations and provide funds for retrofit, reparation, and improved operation to ensure that raw waters are treated adequately
- Provide guidance for the local authority to monitor raw water quality and to modify treatment unit processes when confronted with deteriorating sources of raw water
- Remediate ecosystems affected by manure pollution to renew and revive ecosystem services
Canadian Livestock Company
RISK: Greenhouse Gas Emissions

Canadian Livestock Company is one of the largest livestock producers in Alberta, Canada. The company is aiming to increase production by 40 percent in the next five years. A recent report by a researcher from a local university claims that Alberta’s livestock industry contributes about 1% of Canada’s total GHG emissions. The report indicates that the main gases emitted by the livestock industry are methane from animals, and methane and nitrous oxide from manure handling and storage. Methane and nitrous oxide are very potent in terms of their greenhouse effect compared to carbon dioxide. Methane is 21 times more potent and nitrous oxide is 310 times more potent than carbon dioxide, per unit of gas. During the annual general meeting last month, shareholders emphasized the need to minimize total GHG emissions from the company’s operations. The Board wants the organization to develop programs to minimize GHG emissions and start reporting its environmental performance through annual sustainability reports. A new environmental manager has been appointed to develop a GHG monitoring and mitigation program.

<table>
<thead>
<tr>
<th>IMPACT</th>
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<tbody>
<tr>
<td>High GHG emissions from livestock production</td>
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<thead>
<tr>
<th>AVOID</th>
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<tbody>
<tr>
<td>• Increase calf crop percentage by improving production efficiencies so minimizing the number of cows needed to achieve the same number of calves</td>
</tr>
<tr>
<td>• Anaerobically digest animal manure in closed system and combust resulting methane and other gases</td>
</tr>
<tr>
<td>• Combust collected gases from anaerobic digestion in CHP (combined heat and power) engine</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MINIMIZE</th>
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<tbody>
<tr>
<td>• Improve digestibility with higher quality feeds (better pastures, high grain diets)</td>
</tr>
<tr>
<td>• Add plant-derived edible oils to feed; oil added to cattle feed will not only add energy to the diet but also inhibit methane production</td>
</tr>
<tr>
<td>• Include ionophores as a feed additive to reduce methanogenic bacteria in the rumen</td>
</tr>
<tr>
<td>• Apply manure to land more frequently rather than stockpiling or storing it in lagoons for long periods; however, also avoid excessive manure applications and optimize application timing to reduce nitrous oxide emissions</td>
</tr>
<tr>
<td>• Aerate manure during composting</td>
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<tr>
<th>OFFSET</th>
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<tbody>
<tr>
<td>• Periodically report GHG emissions through the use of greenhouse gas calculators</td>
</tr>
<tr>
<td>• Offset GHG emissions by purchasing carbon credits</td>
</tr>
<tr>
<td>• Support local or regional initiatives and programs on carbon sequestration or climate change adaptation.</td>
</tr>
</tbody>
</table>
## CASE STUDY: INDONESIA

### Java Cattle Farms

**RISK:** Gender discrimination

Java Cattle Farms (JCF) is a family owned commercial cattle smallholding in East Java, Indonesia. The region has one of the highest population densities in the country and livestock farming is one of the major economic activities in the area. Close integration of crop and livestock production is one of the key reasons for increasing cattle growth in such a densely populated and intensely farmed region. JCF creates employment for various family members, particularly women and children. Additional labor demand is mostly sourced from the neighboring villages. JCF prefers to employ women as the need for workers is often temporary and the business can pay them less.

### IMPACT

Gender discrimination in wage payments

### AVOID

- Revise Human Resources procedures to stipulate JCF requirements to comply with labor regulations and ensure that equal remuneration is paid to the workers for the same job irrespective of their gender
- Periodically train and re-train all managers, supervisors and workers on the revised Human Resources procedures addressing company practices on hiring and wage payments and gender sensitivity issues
- Implement zero tolerance disciplinary procedures against supervisors and managers responsible for gender discrimination and low wage payment to female workers

### MINIMIZE

- Create an employee grievance mechanism and robust, effective communication channels to monitor and resolve gender discrimination cases involving payment of low wages to female workers
- Establish and implement time bound objectives to minimize gender discrimination, gender sensitization and redress of reported complaints
- Regularly report to company workers, supervisors and managers on gender/wage related complaints and the status of corrective and preventive actions

### OFFSET

- Identify and pay back wages to all affected female employees
- Ensure timely redress of all reported wage related complaints
### Sheep and Goat Company

#### RISK

Use of large amounts of freshwater

Sheep and Goat Company (SGC) is a medium size commercial livestock company in Southern Ethiopia. The main feed resources of the area are natural pastures (herbaceous vegetation composed mainly of grasses and shrubs, tree leaves and pods), which show marked seasonal variation in availability and quality based on variability of rainfall distribution. Productivity of animals in terms of milk production, growth rate and reproductive performance is generally low. The company exports both live animals and meat to various African countries, as well as the Middle East, where live animals are demanded due to religious and cultural practices. In general the area is characterized by low availability of surface water. The sources of water in the region include wells (elas), ponds and bore holes. The local villagers complain that due to high water consumption by SGC there is always a shortage of water supply for the local communities. The shortage is more serious during the dry season and as a result people are forced to travel long distance (up to 5 hours walk) in search of water.

#### IMPACT

Shortages of water for local communities

#### AVOID

- Do a water audit: install water meters, collect data for 5-10 days, and compare with animal drinking needs to detect problems
- Adjust ball valves on troughs to prevent overflow
- Use smaller troughs that require less water for cleaning
- Replace troughs with on-demand drinkers
- Check drinkers’ flow rates to ensure water flow exclusively when demanded
- Fit drinkers with catch basins to retain overflow
- Assess the diet; feeding a diet containing excessive protein or excessive mineral levels results in increased thirst and water consumption

#### MINIMIZE

- Perform regular maintenance of water devices to prevent and repair leaks
- Minimize water for washing processes, by using:
  - broom and scrape before washing;
  - pressure washers instead of volume washers;
  - collected water trough overflow as cleaning water;
  - water-saving nozzles and/or trigger taps on hoses;
  - brush and bucket for some cleaning
- Minimize the time animals spend standing in the yard to reduce the amount of manure that needs to be cleaned up
- Dry clean yards to maximum feasible extent; collect manure for composting
- Create low volume footbaths or mats (to replace footbaths) to reduce water consumption for disease control
- Store water used for cleaning the animals in treatment storage ponds and recycle for yard washing or irrigation

#### OFFSET

- Install Ranney wells to help increase water supply for the local community
- Engage with local communities and NGOs to rehabilitate elas and promote the adoption of rainwater harvesting technologies (e.g. roof water, ponds)
- Distribute purchased potable water to affected communities during the dry season; provide containers for storage of delivered water
Piglet Breeding Company

RISK: Use of restricted substances in animal production

Piglet Breeding Company (PBC) is a small pig farming company in Thanh Hoa Province of Northern Vietnam. The company is a family owned business and is in the process of modernizing its facility to improve productivity. The local breeds are gradually being replaced or crossbred with exotic breeds by the company. Recently it was reported by the local media that some husbandry units in the neighboring province were feeding controlled substances to their pigs and as a result consumer demand has fallen in the last few days. The provincial officials found the beta-agonist Ractopamine (Ractopamine has been banned in the European Union, mainland China and Russia), a growth promoting and lean meat enhancing drug only recently approved for use in Vietnam, in some pig-rearing households in Dong Nai during surprise checks. After the “lean meat” story was published, most of PBC’s customers have started demanding “some sort of quality certification”. The Quality Manager is not aware of regulations related to controlled substances and is therefore planning to hire an external consultant to advise them on the issue. The company has been informed about Global Good Agriculture Practices (GAP) certification and will further evaluate this program with the external consultant.

**IMPACT**
Food safety and negative impact on consumers’ health

**AVOID**
- Establish a list of approved veterinary drugs; consult the Codex Alimentarius Commission, a UN food standards-setting body, for maximum residue limits (MRLs) for veterinary drugs, and specific tolerances for local and export markets (e.g. FDA-established safe levels)
- Establish procedures and animal drug approval mechanisms; and train procurement and production departments to prevent purchase and use of banned substances
- Strictly monitor and control veterinary drug purchase, management and administration

**MINIMIZE**
- Immediately audit all livestock veterinary and feeding processes to identify any possible use of banned substances in the operations
- If the use of banned/controlled substances is identified, test a sample of live animals for each lot
- Isolate and quarantine animals testing positive for banned/controlled additives to ensure they are not slaughtered until drug residues comply with safe levels
- Establish procedures and train workers to ensure that drug administration is managed overall by a veterinarian according to label directions and good veterinary practices (see Global GAP all farms and pork modules)
- Regularly test animal tissues for veterinary drug residues to ensure levels are below MRL

**OFFSET**
- Recall all products from the market that are affected/contaminated with banned substances or approved substances whose concentration is above MRL

CASE STUDY: VIETNAM
CASE STUDY: ARGENTINA

Hogs Company
RISK: Odor and air emissions from farm operations

Hogs Company is a leading pig farming company operating in the province of Buenos Aires, Argentina. The company has been facing criticism from local environmental groups for some time because of the air emissions and foul odors generated by its operations. The surrounding community has often complained to the company that the environmental emissions and odors from the farms are affecting the community health and wellbeing and are often a nuisance to the people. A local news channel, which ran the story last week, claimed that people who are living near the farms are breathing in hundreds of gases, formed as manure decomposes. The stench is often unbearable, but worse still the gases contain many harmful chemicals. The news channel claimed that gases like hydrogen sulfide (H2S) and ammonia released by the farm are dangerous even at low levels. The effect from these gases could be irreversible and range from sore throat to seizures, comas and even death in the case of high occupational exposure. Some of the common effects claimed by the people living in the vicinity are headaches, shortness of breath, wheezing, excessive coughing and diarrhea.

<table>
<thead>
<tr>
<th>IMPACT</th>
<th>Impact on community health due to air emissions and foul odors</th>
</tr>
</thead>
</table>
| AVOID           | • Separate liquid from solid waste; compost solid waste to produce organic fertilizer; transport liquid waste to a covered anaerobic lagoon with a system for gas collection and combustion (biogas can be combusted in a furnace/boiler or used to run a CHP engine); use liquid effluents from the anaerobic digester as liquid fertilizer
|                 | • Revise operations to dry bedding and employ solid waste for production of organic fertilizer through composting
|                 | • Revise swine diet to reduce manure production and odor emission: reduce crude protein content and supplement with amino acids; supplement diet with enzymes to improve nutrient utilization; add fat to the feed to reduce production of particulate which carries odor
|                 | • Consider appropriate setbacks from nearby homes and public facilities when selecting site |
MINIMIZE

- Place permeable cover or biocover (straw) over manure pits/tanks/small lagoons (bottom load the manure); covers limit volatilization and provide a high surface area for filtering and aerobic degradation of odors and other gases emitted from the slurry
- Separate liquid from solid waste; compost solids to produce organic fertilizer; inject liquid fraction of manure into the soil for crop production
- If outdoor lot for solid manure storage is used:
  - cover solid manure pile with impermeable material to prevent liquefaction of solids;
  - maintain good drainage and add leachate to liquid manure fraction for fertilization purposes;
  - divert storm water run-on and eliminate all runoff affecting solid manure pile
- Use shelterbelts: plant rows of trees and other vegetation around the facility, thus creating a barrier for both dust and odorous compounds emitted from the facility
- Remove mortality waste promptly; send to rendering facility within 24 hours
- If prompt removal of mortality waste is not feasible, then incinerate, refrigerate, compost, or bury if allowed by regulation
- Keep facilities and animals clean and dry

OFFSET

- Engage with local communities and news media to educate the public about the characteristics of hydrogen sulfide (H2S); H2S gas can be detected at very low concentrations (0.0005–0.3 ppm [parts per million]) but allowable workplace maximum concentrations are 10 ppm and IDLH (immediately dangerous to life and health) concentrations are ≥100 ppm
- Measure H2S ambient air concentration in affected housing areas and put the actual concentrations of emissions into perspective for community and news media to alleviate fears while remedial measures are ongoing
- Provide financial assistance to affected community members for proper medical diagnosis and treatment if needed
- Consider resettlement and rehabilitation for the community members affected by measured ambient air concentrations of H2S that approach allowable occupational exposure limits
Brazil Swine Company
RISK: Atmospheric hazards in confined spaces

Brazil Swine Company is a large pig farm located in Santa Catarina in the southern region of the country. The company is currently under investigation by the local health and safety regulators after one of its contractor’s employees was exposed to high concentration of manure gases during a routine cleaning work. The worker is reported to be in a critical condition and is undergoing treatment in the district hospital. The incident happened when the contractor’s employee was working in one of the animal housing facilities where the manure pit was located below the facility floor. The investigations revealed that the manure pit was agitated when the worker was in the barn. Trapped manure gases produced during agitation may have been pulled from the manure pit to the animal housing facility through the transfer pipes. This resulted in the presence of toxic gases and the displacement of oxygen, causing poisonous reactions in the exposed worker and asphyxiation. The company faces charges that it failed to provide information, instruction, training and supervision to workers to allow them to work safely.

IMPACT

Fatalities/illnesses due to exposure to manure decomposition-associated gases including hydrogen sulfide, ammonia, carbon dioxide and methane

AVOID

- Modify manure collection practices to ensure continuous flow (transport) or active pumping of manure from animal housing facilities to exterior manure storage
- Install back flow preventers to avoid the migration of dangerous gases from exterior manure storage to animal housing facilities through conveyance piping
- Keep at least one foot of space between the highest manure level collected in any gutter or pit underneath the animal housing facility and the level of the slotted floors; this will reduce the amount toxic gases accumulation
- Ensure that low places are vented to the exterior as most of the associated toxic gases are heavier than oxygen and when generated will fill depressions, pits and similar places
- Incorporate gas evacuation extractors with external vents to actively evacuate gases generated by manure decomposition in manure pits/tanks
- Install gas detectors and audible, visible alarms for specific gas concentrations exceeding allowable workplace concentrations
- Remove all animals and people during agitation of manure pits and keep them at a safe distance until gas detectors show that concentrations levels are below allowable workplace concentrations
- Engineer new manure storage systems to provide access to all serviceable parts from the outside, eliminating the need to enter confined spaces
- Commission an audit of waste management practices to ensure best practices, such as active liquefied manure transport to closed digestion system and combustion or beneficial use of gases generated by manure digestion
- Commission a cost benefit study for conversion to dry bedding accompanied by collection and composting of solid wastes for use as organic fertilizer
- Define benefits accruing from reduced water demand, reduced waste generation and elimination of OHS hazards posed by generation of toxic gases from manure liquefaction and digestion
MINIMIZE

- Conduct job hazards analyses for all aspects of animal rearing including organic waste management
- Develop robust safe practices procedures for entry into confined spaces of places with hazardous atmospheres. These should address:
  - Mandatory ventilation of closed, confined spaces prior to preparation for entry;
  - Consideration of alternative options for maintenance of manure storage areas;
  - Restriction of preventive maintenance to periods when the primary hazards have been eliminated or reduced to insignificance (e.g. all manure is removed);
  - Prohibition of entry to manure storage areas during or just after agitation;
  - Installation, operation and calibration of gas detection devices equipped with audible and visual alarms according to manufacturer’s instructions
  - Mandate use of hazard-specific PPE including full face supplied air respirators or self-contained breathing apparatus, dermal protection, safety belt or harness with lifeline tied to mechanical lifting device, and an external team supporting any such entries;
  - Provide individual who has entered the confined space with the means to alert surface team to problems mandating his/her extraction such as bells, whistles operated by supplied air, etc.;
  - Team roles (e.g. a standby person should be in constant contact and ready to lift the worker to safety with mechanical lifting equipment)
- Train employees, contractors and subcontractors on associated hazards, preventive measures, correct use and maintenance of appropriate PPE, and specific prohibitions
- Provide follow-up OHS training to ensure that the level of job hazards awareness is high and assigned employees are aware of specific hazards and how to avoid them
- Repeat confined space entry training programs on a regular basis
- Develop job specific skill matrix and ensure that only trained and qualified workers are authorized for entry into confined spaces or places with hazardous atmospheres; provide identification to these workers; put in place robust prohibitions to prevent entry by untrained personnel
- Assign first responders and train them on first-aid suitable to the specific workplace
- Post signs alerting all employees to confined spaces and associated dangers due to toxic gases at access points of manure storage pits or under floor manure transfer chambers. Signs in more than one language may be necessary. Signs should be understandable to workers who cannot read.
- Deter entry to manure pits/tanks by unauthorized people by:
  - removing access ladders;
  - installing covers (weighing at least 20 kg) over manure tanks;
  - enclosing all open liquid manure storage vessels with a permanent safety fence or wall with a minimum height of 1.5 m and having gates with locks

OFFSET

- Provide timely assistance and medical care for workers who are injured in the workplace
- Compensate workers for lost wages, loss of ability to work, and loss of life in line with local labor regulations and company’s policies
### Modern Enterprise
#### RISK: Handling large animals

Modern Enterprise is one of the largest cow-calf enterprises in the Chihuahua State of Mexico. The company is engaged in the production of meat, milk, breeding stock, animals for work, and animals for recreation, including fighting bulls and rodeo cattle. Company management is concerned about the increasing number of accidents related to the handling of large animals. In the last three months the company had several minor and major safety incidents where workers were kicked or knocked down by animals. In one of the incidents last week, a worker was pinned against a wall by a steer; the incident resulted in a serious fracture and head injuries to the worker. In another unrelated incident, a worker was kicked and severely injured by a cow when he tried to approach it from behind. The incident investigation reveals that the worker was new and he was trying to move the cow away from feed for its medical examination.

<table>
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<tr>
<th>IMPACT</th>
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<tbody>
<tr>
<td>Physical injuries due to management of large and potentially aggressive animals</td>
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<thead>
<tr>
<th>AVOID</th>
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<tbody>
<tr>
<td>• Design and install cattle working facilities and equipment to perform the necessary cattle management activities while providing safe working conditions for staff</td>
</tr>
<tr>
<td>• Install panic bar man-gates or other safe means to easily climb a solid fence to facilitate ready escape when animals exhibit aggressive behavior</td>
</tr>
<tr>
<td>• Ensure that animals are properly restrained during medical treatment or examination</td>
</tr>
<tr>
<td>• Apply humane and non threatening means to move animals around and to restrain them as needed for examination and treatment</td>
</tr>
<tr>
<td>• Train workers on safe handling of animals</td>
</tr>
<tr>
<td>• Mandate that only workers with the required level of training, orientation and demonstrated competence handle large farm animals</td>
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<tr>
<th>MINIMIZE</th>
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</thead>
<tbody>
<tr>
<td>• Perform job hazard analyses for all animal management activities</td>
</tr>
<tr>
<td>• Incorporate job hazard analyses and preventive and emergency measures for animal handling and management into operations and OHS procedures, subcontractor specifications, and employee training</td>
</tr>
<tr>
<td>• Ensure all workers coming into potential contact with animals wear personal protective equipment designed and purchased in response to the findings of job hazard analyses, such as steel toed footwear, etc.</td>
</tr>
<tr>
<td>• Periodically train all new and existing supervisors and workers, including contractors and subcontractors, on procedures for safe handling of large animals, warning signs of each animal type, mandatory protective equipment, and means of escape from aggressive animals</td>
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<tbody>
<tr>
<td>• Provide medical care and timely assistance for workers who are injured in the workplace</td>
</tr>
<tr>
<td>• Compensate workers for lost wages, loss ability to work, and loss of life, in line with local labor regulations and company’s policies</td>
</tr>
<tr>
<td>• Immediately sell consistently bad tempered, aggressive and dangerous animals as beef cattle</td>
</tr>
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**CASE STUDY: ECUADOR**

**Ecuador Poultry Farms**

**RISK:** Excessive overtime due to short term work demand

Ecuador Poultry Farms is a well-known poultry company operating in the outskirts of Guayaquil City, Ecuador. The company is one of the oldest in the country, engaged in raising chickens both for eggs and for meat. The company has over 300 employees and is undergoing a rapid expansion program with the aim to double production in the next 2-3 years. The expansion plan includes purchasing and installing additional hatchery equipment and a complete up-grading of the ventilation system. Since this expansion program was not planned in advance, management is facing a shortage of skilled workers required for equipment commissioning and other specialized work related to the ventilation system. The engineering and maintenance employees who are the skilled workers have complained twice in the last two weeks that they are being forced to work excessive hours. One accident last week was attributed to fatigue due to long working hours. Upon further investigation, some workers have claimed that they have been working for two shifts every day for the last 10 days.

**IMPACT**

Workplace injuries/illnesses caused by workers’ fatigue due to excessive overtime

**AVOID**

- Establish Human Resources procedures addressing company policies on terms of employment and working conditions
- Communicate Revised HR procedures to managers, supervisors and workers in dedicated training sessions
- Ensure that the revised Human Resources procedures stipulate that workers may not be required to work more than a 48-hour work week or a 60-hour work week including overtime for more than two weeks and a one day off in seven
- Ensure that all future expansion programs are planned in advance and that suitable numbers of skilled manpower are available before commencing a new project
- Maintain a list of pre-approved, qualified contractors to cater to short term or unexpected work demands
- Increase the project timeframe or target completion date to prevent excessive overtime if sub-contracting is not feasible

**MINIMIZE**

- Increase awareness among senior management, supervisors and worker representatives on labor regulations regarding working hours and linkages between excessive overtime and increased risk of workplace illnesses/injuries
- Monitor working hours and OHS records; take corrective actions where excessive overtime is recorded
- Implement an employee grievance mechanism and complaint resolution procedures for addressing worker concerns on excessive working hours and other issues
- Ensure overtime bonus is paid

**OFFSET**

- Retroactively compensate workers for overtime work at the established overtime rate
- Provide health checks and medical assistance to workers suffering from fatigue or work-related stress due to excessive working hours
- Provide medical assistance for cases of workplace related injury/illnesses
- Compensate injured workers for wages lost, loss of ability to work and loss of life due to workplace injuries/illnesses
Alajuela Beef Company
RISK: Migrant labor / Freedom of Association

Alajuela Beef Company is a small beef and dairy operation run by a local business family in Costa Rica. The 600 hectares of property have been owned by the family for three generations. The company has traditionally relied on migrant workers from Nicaragua and currently employs over 60 of these workers. The workers have complained about poor working conditions and long working hours. Problems escalated last month when about eight workers were fired for approaching the company owner demanding better working conditions and a rise in their existing wage. The workers were told that the company does not want to engage in trade unionism as it is not ‘healthy’ for the company and that if any worker has a concern he can talk to his manager. The fired workers have approached a local trade union which has promised to help them. The union has advised the workers that Costa Rica passed new legislation providing greater protection for migrant workers who now have the right to join and form unions and are entitled to social security, basic health care and safe working conditions.

<table>
<thead>
<tr>
<th>IMPACT</th>
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<tbody>
<tr>
<td>Restriction on freedom of association and collective bargaining rights of migrant workers</td>
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<table>
<thead>
<tr>
<th>AVOID</th>
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<tbody>
<tr>
<td>Revise human resources manual and implementing procedures to address non-discrimination against workers that form or join workers’ organizations; examples of discrimination include terminating contracts, refusal to hire, demotions, intimidation, harassment, conducting illegal/unreasonable searches, using violence, and using courts to bring illegitimate claims</td>
</tr>
<tr>
<td>Communicate revised HR Manual content and implementing procedures through training for managers, supervisors, workers and local workers’ organizations</td>
</tr>
<tr>
<td>Regularly train management, supervisors and workers on the right to organize and bargain collectively</td>
</tr>
<tr>
<td>Ensure that job descriptions prepared by Human Resources for managers and supervisors address responsibilities for keeping workers informed of their rights</td>
</tr>
<tr>
<td>Appoint a senior manager as liaison to dispel workers’ fears of reprisal if they choose worker representatives or join a union or organization</td>
</tr>
<tr>
<td>Allow workers to meet freely without management present</td>
</tr>
<tr>
<td>Allow union representatives to access workers in the workplace during breaks and before and after work</td>
</tr>
<tr>
<td>Accept to bargain collectively and in good faith, do not limit the issues that can be negotiated</td>
</tr>
<tr>
<td>Respect collective agreements; working conditions and terms of employment under collective agreements must be at least as good as those required by law</td>
</tr>
<tr>
<td>Deduct union dues from workers’ wages when required or allow authorized workers’ representatives to collect dues regularly on company premises</td>
</tr>
<tr>
<td>Do not offer workers bribes to withdraw from unions</td>
</tr>
<tr>
<td>Do not deduct more wages than those corresponding to the days lost during a strike</td>
</tr>
<tr>
<td>Do not use security forces or police to break a peaceful strike</td>
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</tbody>
</table>
### MINIMIZE

- Retrain management and supervisors to ensure that traditional anti-union attitudes, and violence against trade union leaders is eliminated and punitive action taken if it occurs
- Establish and maintain ongoing dialogue between workers and management to identify and address all labor issues in a timely manner
- Establish and implement a grievance mechanism to receive workers’ complaints – open or anonymously – including reporting cases of direct or indirect threat against workers who exercise their right of association
- Periodically review reported grievances and records of contract termination/dismissals to identify instances of discrimination against workers
- Establish a zero tolerance policy for managers or supervisors who ignore company HR policy and procedures regarding freedom of association collective bargaining rights

### OFFSET

- Re-instate fired workers and compensate for lost wages
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

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

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.
Section III: Practical Guidelines for Developing and Implementing your Environmental and Social Management System

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.

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 be truly effective, the ESMS Team needs to consult with people from all levels of the company, including supervisors and workers, as they 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.

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

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

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

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.

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.

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

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

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.
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 Fire Response Procedure** and **Sample Epizootic Disease Response Procedure** Flowchart 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 such as toxic emissions;
- 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 Animal Production

<table>
<thead>
<tr>
<th>Common Hazards/ Emergency Situations in Animal Production</th>
<th>Potential Causes</th>
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</table>
| **Physical injuries** including musculo-skeletal injuries, and physical/muscular strains, sprains and cuts | • Inadequate procedures and oversight of activities such as heavy lifting and carrying, leading to injury from poor posture and inadequate rest periods  
• Inadequate procedures and training in proper handling of animals and birds, leading to injuries from kicks, bites and scratches  
• Improper design and maintenance of pens, gates and chutes, stables, hen houses, etc., leading to accidents from slippery surfaces, unguarded stairways, lofts, shafts, and ladders  
• Inappropriate provision or lack of use of PPE such as gloves and aprons  
• Inadequate training and qualification in operating farm machinery |
| **Chemical hazards** due to exposure caused by chemicals (including cleaning, disinfectants and pesticides) potentially affecting workers and wider community | • Inadequate training of workforce on storage, handling, mixing and use of chemicals, and on hygiene practices to avoid exposure of family members (e.g. pesticide residue)  
• Inadequate procedures and oversight for avoiding or minimizing use of banned or restricted chemicals (e.g. in dipping vats and sprayers)  
• Inadequate reviewing of less toxic alternatives  
• Inadequate provision of PPE (respiratory protection and impermeable clothing) to prevent dermal exposure and inhalation of chemicals  
• Inadequate training and oversight related to eating and drinking in contaminated environments |
| **Danger of confined space** including entrapment, engulfment, and hazardous atmospheric conditions in manure pits, silos, grain bins, water tanks | • Inadequate risk identification and evaluation of confined spaces, including testing for adequate oxygen concentration, combustible and toxic gases  
• Gaps in worker awareness and training on these issues  
• Inadequate venting of spaces to eliminate accumulation of dangerous gases  
• Incomplete access restriction to prevent personnel access without proper training and preparation  
• Poor system of oversight and control to prevent unauthorized entry |
<table>
<thead>
<tr>
<th>Common Hazards/Emergency Situations in Animal Production</th>
<th>Potential Causes</th>
</tr>
</thead>
</table>
| Exposure to **biological hazards** (organic dust, pathogens) with consequences for both workers and the wider community | • Ineffective oversight and management of hazards  
• exposure to organic dust, causing acute toxic alveolitis or organic dust toxic syndrome  
• exposure to pathogens such as Brucella, Campylobacter and Salmonella, causing foodborne disease, as well as skin and respiratory tract infections  
• Lack of appropriate PPE (air-supplied breathing apparatus, properly fitted masks, protective clothing and footwear) and local air extraction devices at dust generating equipment such as silos and grinders for feeding animals  
• Inadequate veterinary inspections and animal treatment and controls to minimize the risk of passing zoonoses (animal diseases transmitted to humans) to outside communities  
• Inadequate segregation and inappropriate disposal of animal mortality waste (dead animals) in pens or transport vehicles |
### Common Hazards/ Emergency Situations in Animal Production

<table>
<thead>
<tr>
<th>Potential Causes</th>
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<tbody>
<tr>
<td>• Poor segregation of wastewater due to inadequate separation of organic solids from wastewater through screening drains and collection systems, potentially contaminating surface and ground waters and community water supplies</td>
</tr>
<tr>
<td>• Emissions of ammonia and other gases from accumulated animal manure and bedding causing respiratory irritation</td>
</tr>
<tr>
<td>• Poor maintenance and protection of transport, feeding and storage systems, leading to spills and exposure to wind and rain</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Food safety impact from antibiotic resistant pathogenic bacteria or from unintentional consumption of antibiotic residues in food</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Inadequate veterinary pharmaceuticals controls, monitoring of application and lack of contingency planning in event of disease outbreaks</td>
</tr>
<tr>
<td>• Improper storage of antibiotics and use by unauthorized, untrained staff</td>
</tr>
<tr>
<td>• Inadequate assessment and oversight of use of manure and bedding materials for agricultural purposes without preliminary digestion or composting. These materials may contain hazardous chemical and bacterial constituents leading to crop contamination</td>
</tr>
</tbody>
</table>
Stakeholder Engagement

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.

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

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.

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

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

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

Little or no transparency with stakeholders.
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.
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.
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

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

For more information on how to develop and implement a Stakeholder Engagement Plan, refer to the Good Practice Handbook "Stakeholder Engagement," IFC (2007).
Section III: Practical Guidelines for Developing and Implementing your Environmental and Social Management System

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.

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.
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.

The frequency of this communication will be proportional to the scale of stakeholders’ concerns, but it should be at least annual. 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).

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.

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

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.

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.

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.

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

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

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

No monitoring of E&S performance.
Monitoring measures intent, implementation and effectiveness

<table>
<thead>
<tr>
<th>Intent:</th>
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<tbody>
<tr>
<td>1. Are the nine elements of the ESMS in place?</td>
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<tr>
<th>Implementation:</th>
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<tbody>
<tr>
<td>2. Are the action plans being carried out?</td>
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<td>3. Are procedures being followed?</td>
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<table>
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<tr>
<th>Effectiveness:</th>
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</thead>
<tbody>
<tr>
<td>4. Are you in compliance with laws and regulations?</td>
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<tr>
<td>5. Are you making progress toward your overall objectives and targets?</td>
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<tr>
<td>6. How is the environmental and social performance of the company in general?</td>
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</table>

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:

- water consumption;
- energy consumption;
- liquid effluents discharge;
- volume and nutrient content of animal waste (manure, urine);
- emissions to air;
- accidents (injuries, ill-health, property damage), incidents and near misses;
- lost time injury frequency, incidence, and severity rates;
- emergency response incidents;
- average working hours and wages paid;
- wage levels;
- incidences of child labor;
- incidences of disciplinary and discriminatory complaints; and
- employee demographics matching access to training, jobs, and wages.
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 GLOBALGAP good agricultural practices, which provides a list of indicators relevant to the animal production 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 water and energy conservation;
- 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.

Look at the Monitoring Plans in the Toolkit and Case Studies for more examples of key indicators common in the Animal Production industry.
### THE BASICS OF MONITORING

<table>
<thead>
<tr>
<th><strong>Visual observation</strong></th>
<th><strong>Interviews</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>physical walk-through of buildings and surrounding land. Examples of what you may observe: physical obstructions and blocked exits, storage of feed, medicines and hazardous materials, pest traps, stocking densities, housekeeping, management of animal waste, disposal of hazardous waste and animal mortality, soil cover, worker actions related to water use, hygiene, use of PPE, worker and manager body language and interactions.</td>
<td>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?</td>
</tr>
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<thead>
<tr>
<th><strong>Measuring and testing</strong></th>
<th><strong>Document review</strong></th>
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<tbody>
<tr>
<td>checking using equipment that is properly calibrated. Examples of what you might check: effluents levels, air emission, water consumption, ground and surface water quality, temperature and humidity in animal housing, dust levels around silos, grinders and bird houses, residue levels for controlled substances in animals.</td>
<td>looking through documents and records. Examples of what you might review: water meter logs, water and energy bills, records of purchased medicines and controlled substances, OHS records, inspection records, complaint logs, wage slips, time cards, policies and procedures, training records.</td>
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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 ongoing 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

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### 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