SUMMARY

The purpose of this note is to provide Centers with advice about good practice in terms of management of occupational health and safety (OH&S). A healthy and safe environment for Center staff, contractors and visitors, a compelling objective in its own right, is also essential for Centers to achieve their missions. OH&S risks are prominent in a number of Center enterprise risk assessments. The nature of OH&S risks will vary from Center to Center depending on the size and nature of its activities and its locations, but in all cases injuries, disease or death of staff, contractors or visitors, due to hazards in the Center’s working environment or practices, are unacceptable. Centers also have responsibilities to manage OH&S risks to meet the requirements of host country laws as well as international good practice. This note draws on the ILO Guidelines on Occupational Safety and Health Management Systems (OSH-MS) and some national standards on this topic, especially British Standards OHSAS 18000: 2007, as well as the OH&S policies, manuals and good practices of various Centers.

Although this Note focuses only on OH&S, there is a close link between OH&S management and the management of security, biosafety and environmental safety.

The Note proposes the following good practices, organized along the lines of the ILO Guideline:

Enabling elements: Culture, Policy and Organizing

Establishing a Safety Culture

- Periodically self-assess the overall safety culture of the Center, and implement remedial actions where the self-assessments identify shortfalls
Take a broad view of OH&S that encompasses all dimensions of well being for employees, contractors working on site and visitors

Extend the coverage of the Center OH&S management system to all Center locations

Make visible management interest in Center health and safety issues

**Setting OH&S Policy**

Articulate the Center’s overall OH&S policy and related procedures and ensure these are disseminated and kept readily available to all staff. These should be included in orientation materials for new staff, suitably tailored for categories of staff to the type of OH&S risks to which these categories are particularly exposed

**Establishing Roles, Responsibility, Accountability and Authority**

Assign a member of the Center’s senior management team with oversight responsibility for:

(a) the development, implementation, periodic review and evaluation of the OH&S management system

(b) periodic reporting to the senior management on the performance of the OH&S management system; and

(c) promoting the participation of all Center staff.

Appoint, either on a full-time or part time basis, a safety officer with responsibility, accountability and authority for:

(a) the development, implementation, periodic review and evaluation of the OH&S management system

(b) periodic reporting to the senior management on the performance of the OH&S management system; and

(c) promoting the participation of all Center staff.

Establish an OH&S committee for each major Center location, comprising management and worker representatives, that will provide support to, and promote participation in, the Center’s OH&S program

Give appropriate weight in staff job descriptions, new staff orientation and performance appraisals to compliance with, promotion of, and proactivity in relation to, OH&S. The weighting of OH&S factors in performance appraisals will vary in importance according to the type of work engaged in by the staff.

**Competence, Training and Awareness**

Define the OH&S competencies required for each staff position, based on the identification of the risks associated with each position
• For certain jobs involving hazardous operations or producing/repairing infrastructure or equipment which will be used by others, implement a requirement for staff concerned to obtain appropriate occupational certifications to engage in such operations safely and to produce safe products

• Implement a comprehensive health and safety training program for each workplace, that is tailored to the types of hazards relevant to the workplace. This should encompass orientation for new staff, ongoing training for others, and on-the-job supervision and mentoring in safety aspects

• Implement contractual requirements and orientation sessions so that contractor staff working in the Center are adequately certified and/or trained in safety practices relevant to their jobs in the Center, and are aware of the Center’s OH&S expectations relating to them

**Documentation**

• Implement a process whereby all key aspects of the OH&S system are documented, in terms of:
  (a) the policies and procedures;
  (b) roles and responsibilities;
  (c) hazard, risk and control analysis;
  (d) follow up action plans and progress reports thereon;
  (e) OH&S committee records, including those required by host country legislation;
  (f) incident and epidemiological surveillance records;
  (g) review, audit and evaluation reports

• Control the formats and version changes for OH&S procedural documentation, and ensure compliance with any format or content requirements established in applicable host country regulations

**Communication**

• Introduce communication channels with Center staff and contractors by which they can give their opinions and suggestions about health and safety issues in their workplace and encourage their use

• Consider the appropriate languages for communicating health and safety policy and procedures that the workforce can understand

**Planning and Implementation**

**Initial review**

• Maintain information on applicable national OH&S legal and other requirements for each of the locations in which the Center has a substantial permanent office/facility and is directly responsible for the operation of the office/facility

• Build into the Center’s OH&S systems the applicable features of host country OH&S legal and other requirements
For Centers establishing or re-establishing OH&S systems, conduct a baseline review of hazards, risks and controls, and past accident and health surveillance data, as the basis of developing the system and tracking future progress. This review should follow the methodology outlined in the hazard identification, risk assessment and control section of this Note.

As part of the initial review, identify specific areas for improvement of OH&S arrangements to meet the established policy, required actions, who is responsible, and realistic target dates for completion of tasks. This can form the basis of updated plans in subsequent review cycles.

**OH&S System Objective Setting**

As part of any OH&S action plan, set measurable OH&S objectives for each specific activity in the plan.

**Hazard Identification, Risk Assessment and Control**

- Adopt a systematic approach whereby OH&S hazards are identified for all Center workplaces; the risks relating to these are assessed, determining if the controls in place should be improved and how; and mitigating controls are periodically checked for effective implementation.
- For office/facility specific risks where Center offices/facilities are hosted in other organizations or are rented, be proactive in understanding the host’s or property owner’s OH&S systems relevant to its tenancy, monitor compliance, and report to the host any obvious exposures where risks do not seem to be adequately managed. Take additional measures to manage location-specific risks where the host/owner does not or cannot take these measures.
- Systematically identify with affected staff work-related hazards for all workplaces and document and communicate the results.
- Use a variety of sources for accumulation of information about potential or existing risks arising from identified hazards in every workplace.
- Integrate the assessment of OH&S risks into the overall Center risk management system.
- Establish an OH&S improvement action plan to address hazards for which risks have been identified, based on priorities identified in the risk analysis.
- Periodically review/audit the risks, controls and mitigation measures relating to all workplace hazards to ensure they remain relevant, in light of any changing conditions, and are effectively operating/in place.

**Management of Change**

- Where there are major changes in the types of operations, arising from internal organizational or programmatic changes or changes in the regulatory environment, complete a fresh hazard and risk assessment before any modification or introduction of new work methods, materials, processes or machinery is made.
Emergency Preparedness and Response

• Create an Emergency Management plan to handle accidents and incidents that may affect staff health and safety. This could be a sub-set of a broader emergency plan for Center business continuity

• Conduct periodic mock drills such as those relating to evacuation in case of fire or other contingencies to better prepare employees in terms of emergency

Procurement

• Require that procurement of chemicals, hazardous material, equipment and tools will be made from manufacturers who conform to relevant safety standards identified by the Center, and require that material technical and safety data sheets are obtained before acceptance of any deliveries

Non-occupational Diseases – Prevention and Management

• Include, in OH&S programs, services to employees to prevent and manage non-occupational diseases in order to promote a healthy and productive workforce

System Effectiveness Documentation and Review

• Maintain evidence of the operation of the OH&S system

Evaluation

• Performance Measurement

• Periodically measure and report on the performance against OH&S objectives established in action plans

Monitoring

Epidemiological Vigilance

• Monitor sick leave for patterns that might indicate workplace OH&S issues, or aid proactive attention to particular staff members health

• For employees engaged in intrinsically hazardous tasks exposing them to potential slowly-indicating diseases, implement periodic health checks which may detect early signs or symptoms of such diseases
Incident Reporting, Investigation and Response

- Maintain a standard OH&S incident reporting system applicable to all Center locations, that includes a cause analysis as well as details of the incident.
- Monitor corrective action ensures that appropriate procedures are implemented to prevent the recurrence of safety incidents

Audit

- Establish and maintain a programme and procedures for periodic OH&S audits to be carried out to find out whether or not their OH&S management system (a) conforms to planned arrangements and (b) has been properly implemented and maintained

Management Review

- Commission periodic reviews of the overall OH&S system, to evaluate its effectiveness in terms of comprehensiveness, implementation and responsiveness to changing conditions. This may be combined with periodic OH&S audits.

Action for Improvement

- Follow up, at senior management level, on preventive or corrective actions required when deficiencies are identified from OH&S system performance reporting, audits and reviews
- Benchmark against other organizations (in the same location, or other CGIAR Centers) to identify aspects of the OH&S system that could be improved

Acknowledgment

This note has been prepared solely for use by CGIAR Centers. The note draws heavily on the ILO Guidelines on Occupational Safety and Health Management Systems (OSH-MS) It also draws on the OH&S policies, manuals and good practices of various Centers and other external material researched by the IAU on this topic.
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INTRODUCTION

Occupational health and safety is a cross-disciplinary area concerned with protecting the safety, health and welfare of people engaged in work or employment. Since 1950, the International Labour Organization (ILO) and the World Health Organization (WHO) have shared a common definition of occupational health. It was adopted by the Joint ILO/WHO Committee on Occupational Health at its first session in 1950 and revised at its twelfth session in 1995. The definition, which is due for a revision to accommodate a more gender-neutral wording, reads: "Occupational health should aim at:

- the promotion and maintenance of the highest degree of physical, mental and social well-being of workers in all occupations;
- the prevention among workers of departures from health caused by their working conditions;
- the protection of workers in their employment from risks resulting from factors adverse to health;
- the placing and maintenance of workers in an occupational environment adapted to the physiological and psychological capabilities; and to summarize;
- the adaptation of work to man and of each man to his job”

To this employee-focused scope can be added the protection of health of contractors and visitors.

OH&S risks are prominent in a number of Center enterprise risk assessments. The nature of OH&S risks will vary from Center to Center depending on the nature of its activities and its locations. However in all cases, Centers recognize the importance of attention to OH&S management, and injuries, disease or death of staff, contractors and visitors, due to hazards in the Center’s working environment or practices, are considered unacceptable.

There are three key drivers for having an OH&S management system: moral, legal and financial. First the Centers have a moral duty of care to ensure the health and safety of its employees, contractors and visitors. The Centers’ stakeholders have placed trust in the Centers to operate within generally accepted ‘good business practice’ in this area. Second, most Centers are required to observe the OH&S laws and regulations of their host countries. Even where the Center’s privileges and immunities exclude it from such laws and regulations, it can be expected that the Center should fully comply in practice as a good member of the local community, and as a minimum expected from a public international organization.
Third, the high cost of insurance, medical treatment, disruptions to operations, poor reputation as an employer of choice and even loss of donors due to the reputational risk arising from careless attention to OH&S warrants the investment of time and financial resources into an OH&S management system. An OH&S management system is therefore a key component of a Center’s overall risk management system. In many organizations, the focus of OH&S programs in the past has centered on compliance with regulatory and statutory requirements, but the multitude of work-related hazards and risks facing organizations requires a comprehensive and systematic approach. A systems approach to workplace safety provides the means for organizations to determine the specific needs of their workplaces and employees as opposed to regulations that are designed in a broad and general fashion. A systems approach also helps ensure that OH&S is not tackled on an ad-hoc basis or in a fire-fighting manner, simply attacking each issue as it arises. This Note advocates good practices which form part of a systems approach to OH&S and serve as benchmarks for assessments of Center OH&S management systems. These practices are intended to help Centers reach and maintain, in a spirit of continuous improvement, the high standards for OH&S that all its stakeholders expect.

This note draws on the non-mandatory ILO Guidelines on Occupational Safety and Health Management Systems (OSH-MS), some national standards on this topic, especially British Standards OHSAS 18000: 2007, and the OH&S policies and guidelines of a number of CGIAR Centers. The Governing Body of the ILO approved the text of the ILO Guidelines for publication at its 281st Session in June 2001. There are no plans for a general ISO Standard on OH&S management systems, as there is currently no consensus among ISO members about the utility of an international certificate-based quality standard in this area. The pre-eminence of the ILO, as a tripartite body representing governments, employers and workers, in the development of guidance in this area was recognized.

This note is structured along similar lines to the ILO Guideline, as follows:

- Enabling elements: culture, policy and organizing
- Planning and implementation
- Evaluation
- Action for improvement

**ENABLING ELEMENTS: CULTURE, POLICY AND ORGANIZING**

**Establishing a Safety Culture**

A safety culture exists when the tacit assumptions, beliefs, values, attitudes, expectations, and behaviors that are widely shared and accepted in an organization support the establishment and maintenance of a healthy and safe work environment. A strong safety culture promotes employee compliance with OH&S requirements in their day to day actions, and supports peak performance and continual improvement in terms of OH&S measures.
Box 1 - What is safety culture?

“The safety culture of an organization is the product of individual and group values, attitudes, perceptions, competencies, and patterns of behavior that determine the commitment to, and the style and proficiency of, an organization’s health and safety management. Organizations with a positive safety culture are characterized by communications founded on mutual trust, by shared perceptions of the importance of safety and by confidence in the efficacy of preventive measures.”

ACSNI Human Factors Study Group: Third report - Organizing for safety, 1993

Good Practice

Periodically self-assess the overall safety culture of the Center, and implement remedial actions where the self-assessments identify unacceptable shortfalls.

A self assessment of the safety culture can help evaluate whether the Center’s OH&S policies and programs are working effectively. Useful questions to include in a self assessment exercise include:

- Are health and safety top priorities of the Center? Are health and safety measures adequately funded in Center budgets? Do job descriptions include expectations that employees will work in a safe and healthy manner, and do performance appraisal instruments contain criteria for evaluating the extent

1 taken from: Checking Your Culture, By Dr. David L. Goetsch, October 2007 issue, Occupational Health & Safety Magazine
to which this happens? Are the same requirements applied to contractors who are carrying out physical works and repairs in Center premises?

- Are personnel in Center recognized and rewarded for working in a safe and healthy manner, especially in those areas where OH&S risks are relatively high? For those staff in areas of significant hazard exposure, do performance appraisals give health and safety appropriate consideration?

- When major organizational decisions are made—for example about new equipment purchases, facility expansions, or re-engineering of processes involving operation of equipment or hazardous materials— are the potential effects on employee health and safety factored in the decision-making process?

- Does management make it clear that safe and healthy behaviors and attitudes are expected in all cases? Is this consistently demonstrated through their words, actions, examples, decisions, and resource allocations?

- Are employees encouraged to make any health or safety concern they may have about the work environment known to management?

- Does peer pressure in the organization support or undermine health and safety? Are employees working in areas of significant hazard exposure encouraged to "police" themselves and one another in ways that encourage healthy and safe work habits?

- Do widely accepted practices in the organization support or undermine health and safety? Are there cases of doing things the safe and healthy way when management is watching, but circumventing policies and procedures when unobserved?

- Does the pressure of deadlines cause OH&S practices to be put aside?

**Good Practice**

Take a broad view of OH&S that encompasses all dimensions of well being for employees, contractors working on site and visitors

For all Center staff, contractors and visitors, OH&S hazards will include physical hazards inherent to work settings in an office building or in a campus environment comprising internal roads, footpaths and landscape features. For all Centers, there are the added dimensions associated with official travel to and field research in hazardous locations. In many Centers hazards arise from physical layout of, and activities within, laboratories, mechanical and engineering workshops, experimental farms, cold stores and greenhouses. In a few cases Centers also must manage very specific risks associated with specialized areas of work, such as handling radioactive substances, working with animal diseases, and scuba diving.
Protection of staff who are working, or traveling on official duties, in locations experiencing civil disturbances, violent crime, war and terrorism is a related subject though not covered in this Good Practice Note.

**Good Practice**

Extend the coverage of the Center OH&S management system to all Center locations.

While the majority of Center staff may be based at the Headquarters site, many Centers have large workforces based in remote experimental stations and regional locations. A Center OH&S management system should encompass all locations. The actual OH&S policies, procedures and action plans will depend on the location, whether the Center stations/offices are hosted or not, and what responsibilities the host organization takes for OH&S of hosted staff.

**Good Practice Note**

Make visible management interest in Center health and safety issues.

Managers should be visible or should be seen to lead by example when it comes to health and safety. They can do this by participating in workplace discussions on health and safety with staff and contractors, by prompt follow up of suggestions or concerns about OH&S matters and physical participation in safety drills.
Setting OH&S Policy

Box 2 - ILO OSH-MS Guidelines on an Organization’s OH&S Policy

3.1.1. The employer, in consultation with workers and their representatives, should set out in writing an OSH policy, which should be:

(a) specific to the organization and appropriate to its size and the nature of its activities;
(b) concise, clearly written, dated and made effective by the signature or endorsement of the employer or the most senior accountable person in the organization;
(c) communicated and readily accessible to all persons at their place of work;
(d) reviewed for continuing suitability; and
(e) made available to relevant external interested parties, as appropriate.

3.1.2. The OSH policy should include, as a minimum, the following key principles and objectives to which the organization is committed:

(a) protecting the safety and health of all members of the organization by preventing work-related injuries, ill health, diseases and incidents;
(b) complying with relevant OSH national laws and regulations, voluntary programmes, collective agreements on OSH and other requirements to which the organization subscribes;
(c) ensuring that workers and their representatives are consulted and encouraged to participate actively in all elements of the OSH management system; and
(d) continually improving the performance of the OSH management system

Section 3.1 ILO Guidelines on Occupational Safety and Health Management Systems

Good Practice

Articulate the Center’s overall OH&S policy and ensure these are disseminated and kept readily available to all staff. The policy should be subject to periodic review.

An OH&S policy is meant to establish and communicate an overall sense of direction and define the principles of action for a Center’s OH&S system. It should set objectives, identify responsibility, establish targets for performance, establish monitoring and reporting mechanisms and demonstrate formal commitment. The ILO Guidelines Section 3.1.2 provides a useful set of objectives applicable to all Centers which could be included in the policy.
The policy should be issued at a high level - by the Board of Trustees, the Director General or Senior Management Group. This demonstrates the commitment of the organization to its importance.

The policy can then be supported with more detailed procedures concerning its implementation, which may need to be amended more frequently than the policy.

**Defining Roles, Responsibility, Accountability and Authority**

**Box 3 - ILO OSH-MS Guidelines on Responsibility and Accountability for OH&S within an organization**

3.3.1. The employer should have overall responsibility for the protection of workers’ safety and health, and provide leadership for OSH activities in the organization.

3.3.2. The employer and senior management should allocate responsibility, accountability and authority for the development, implementation and performance of the OSH management system and the achievement of the relevant OSH objectives. Structures and processes should be established which:

(a) ensure that OSH is a line-management responsibility which is known and accepted at all levels;

(b) define and communicate to the members of the organization the responsibility, accountability and authority of persons who identify, evaluate or control OSH hazards and risks;

(c) provide effective supervision, as necessary, to ensure the protection of workers' safety and health;

(d) promote cooperation and communication among members of the organization, including workers and their representatives, to implement the elements of the organization's OSH management system;

(e) fulfill the principles of OSH management systems contained in relevant national guidelines, tailored guidelines or voluntary programmes, as appropriate, to which the organization subscribes;

(f) establish and implement a clear OSH policy and measurable objectives;

(g) establish effective arrangements to identify and eliminate or control work-related hazards and risks, and promote health at work;

(h) establish prevention and health promotion programmes;

(i) ensure effective arrangements for the full participation of workers and their representatives in the fulfilment of the OSH policy;

(j) provide appropriate resources to ensure that persons responsible for OSH, including the safety and health committee, can perform their functions properly; and

(k) ensure effective arrangements for the full participation of workers and their representatives in safety and health committees, where they exist.

*Section 3.3 ILO Guidelines on Occupational Safety and Health Management Systems*
While the Board and senior management have overall responsibilities in relation to OH&S, there should be one member of the senior management team who has specific oversight responsibility to ensure that systems are put in place and maintained to a level established in the Center OH&S policy. This senior manager should take the lead with regard to organizing independent reviews and evaluations of the OH&S management system.

**Good Practice Note**
Assign a member of the Center’s senior management team with oversight responsibility for: (a) the development, implementation, periodic review and evaluation of the OH&S management system (b) periodic reporting to the senior management on the performance of the OH&S management system; and (c) promoting the participation of all Center staff.

**Good Practice**
Appoint, either on a full-time or part time basis, a safety officer with responsibility, accountability and authority for: (a) the development and implementation of the OH&S management system (b) periodic reporting to the senior management on the performance of the OH&S management system; and (c) promoting the participation of all Center staff.

To support the senior manager with overall responsibilities, there should be a focal point (“safety officer”) in the Center for the staff work involved in developing and implementing the OH&S management system. For “large infrastructure” Centers this focal point may be staffed on a full time basis, while for other Centers this might be part time.
Box 4 – Example of a Safety Officer Terms of Reference

The Safety Officer will be responsible for implementation and enforcement of all OH&S matters and will:

- Report directly to the Director Corporate Services (DCS) any omission and commissions
- Be the secretary to the OH&S Committee
- Maintain all statutory registers, reports, records, and ensure that the extracts of Acts or regulations are displayed as required by Law
- Co-ordinate all OH&S activities and review periodically for compliance and progress
- Implement OH&S Management systems, programs and procedures as described in our system manuals to achieve the OH&S Policy objectives and targets
- Identify and evaluate all existing and potential threats to our operations arising from environmental impacts, health and safety risks, disasters, political instability and crisis. Inform and recommend action to the Director responsible and develop and implement agreed internal control systems, procedures and solutions
- Review and formally report progress on dealing with issues to the Director/unit head responsible at least quarterly and contribute to our annual internal self-assessment of HSE progress and annual OH&S report for submission to the Board
- Investigate all serious accidents and environmental incidents and report formally to the DCS and or OH&S Committee.
- Organize and coordinate general or specialized OH&S training for existing staff at all levels
- Organize First Aid training for the first aid team
- Organize fire safety training, drills and practices on the procedures to be followed to evacuate the premises in an emergency
- Ensure all staff and contractors, fully understand the procedures they will follow to safeguard the environment, health and safety during their working activities
- Receive appropriate instruction and training in all aspects of OH&S management and policy requirements
- Implement procedures correctly and ensure they are properly supervised

Adapted from ICRAF Health and Safety Policy
Good Practice Note

Give appropriate weight in staff job descriptions, new staff orientation and performance appraisals to compliance with, promotion of, and proactivity in relation to, OH&S. The weighting of OH&S factors in performance appraisals will vary in importance according to the type of work engaged in by the staff.

Every employee is obliged to take reasonable care for their own health and safety, without detriment to themselves, and to their colleagues. Staff should also be expected to report any situation they observe which shall pose a threat to the well being of any other person. They should also be made to feel comfortable, if they are unsure on how to perform a certain task safely or if they think it would be dangerous to perform a specific job, to report this to their supervisor and to the safety officer if there is one. This should be conveyed in any new staff orientation. Job descriptions and performance appraisals should be used as instruments to promote an OH&S culture and compliance with OH&S requirements. This, of course, needs to be tailored to the type of work engaged in by the staff, being most significant for staff whose work must by nature involve exposure to significant OH&S hazards, or who produce/repair physical items or structures used by others. For such staff, their job descriptions might include the following:

**Employees in this position are expected to:**

- a) comply with the health and safety manual of the Center;
- b) work safely and encourage other to do so;
- c) assist supervisors and managers in identifying and mitigating potentially hazardous conditions; and
- d) help the Center maintain a healthy and safe work environment.

There would also be corresponding criteria in the performance appraisal used for employees in this position. If the employee did not succeed with the requirements, training should be identified and followed through to change the results.
Box 5 - ILO OSH-MS Guidelines on worker participation

3.2.1. Worker participation is an essential element of the OSH management system in the organization.

3.2.2. The employer should ensure that workers and their safety and health representatives are consulted, informed and trained on all aspects of OSH, including emergency arrangements, associated with their work.

3.2.3. The employer should make arrangements for workers and their safety and health representatives to have the time and resources to participate actively in the processes of organizing, planning and implementation, evaluation and action for improvement of the OSH management system.

3.2.4. The employer should ensure, as appropriate, the establishment and efficient functioning of a safety and health committee and the recognition of workers' safety and health representatives, in accordance with national laws and practice.

Section 3.2 ILO Guidelines on Occupational Safety and Health Management Systems

Good Practice Note

Establish an OH&S committee at each major Center location, comprising management and worker representatives that will provide support to, and promote participation in, the Center’s OH&S program.

Employee participation can also be promoted through a representative structure within the organization to oversee the identification, monitoring and mitigation of OH&S risks, including awareness and training activities. Health and safety committees, in which employees or staff association/unions are represented as well as key organizational units concerned with health and safety issues, are commonly promoted in national OH&S legislation and may be mandatory for Centers where such legislation is applicable. Even where not, the committee approach will promote Center employee participation and instill confidence in staff as to the attention to which OH&S is given in the Center. Committees should be established at each major location of the Center, and the frequency of meetings and their agendas will vary commensurate with the types of OH&S challenges and issues in the location.
Competence and Training

Box 6 - ILO OSH-MS Guidelines on OH&S competence and training within an organization

3.4.1. The necessary OSH competence requirements should be defined by the employer, and arrangements established and maintained to ensure that all persons are competent to carry out the safety and health aspects of their duties and responsibilities.

3.4.2. The employer should have, or should have access to, sufficient OSH competence to identify and eliminate or control work-related hazards and risks, and to implement the OSH management system.

3.4.3. Under the arrangements referred to in paragraph 3.4.1, training programmes should:

(a) cover all members of the organization, as appropriate;
(b) be conducted by competent persons;
(c) provide effective and timely initial and refresher training at appropriate intervals;
(d) include participants' evaluation of their comprehension and retention of the training;
(e) be reviewed periodically. The review should include the safety and health committee, where it exists, and the training programmes, modified as necessary to ensure their relevance and effectiveness; and
(f) be documented, as appropriate and according to the size and nature of activity of the organization.

3.4.4. Training should be provided to all participants at no cost and should take place during working hours, if possible.

Note - OSH competence includes education, work experience and training, or a combination of these.

Section 3.4 ILO Guidelines on Occupational Safety and Health Management Systems
machinery or procedures which have an impact on OH&S. Some groups, such as new personnel, and expectant mothers, and those with a disability, need special consideration. The Center should never expect employees to do anything safely when they have not been qualified (in the case of certain hazardous operations) or trained in the safety aspects of their jobs, and should not assume that new employees have the necessary training.

**Good Practice Note**

Define the OH&S competencies required for each staff position, based on the identification of the risks associated with each position.

**Good Practice Note**

For certain jobs involving hazardous operations, or producing/repairing infrastructure and equipment which will be used by others, implement a requirement for staff concerned to obtain appropriate occupational certifications to engage in such operations safely and to produce safe products.

Centers should identify and designate any staff positions which require occupational certifications for which the staff must have demonstrated an appropriate level of competence in the safety aspects of the work. Typical examples in Centers of such staff positions will be electricians, workshop and vehicle mechanics, laboratory technicians, farm equipment operators and drivers. Incumbent staff in such positions who do not have the certifications should receive support to obtain them as soon as possible, and certain tasks may need to be excluded from their responsibility until such certifications are obtained.

**Good Practice Note**

Implement a comprehensive health and safety training program for each workplace, that is tailored to the types of hazards relevant to the workplace. This should encompass orientation for new staff, ongoing training for others, and on-the-job supervision and mentoring in safety aspects.

Orientation of new personnel to the Center is an excellent opportunity to get them started on the right foot with regard to OH&S. All new staff should receive safety instructions during their induction. For staff whose work must by nature will involve exposure to significant OH&S hazards, such as those inherent to working in laboratories, workshops, property maintenance departments and experimental fields, or operating mechanical or transport equipment, the head of the appropriate unit should receive a
signed statement from the staff that the required orientation has been given. New contractor staff should be regarded, for the purpose of OH&S training, as the same as new staff.

The trainer should be competent to train their staff in the safety aspects of their jobs. They play an important role in helping the staff to understand, internalize and absorb the Center’s OH&S culture. Ideally they should be the supervisor or other experienced workplace colleague who can be a walking, talking example of what the organization expects in terms of health and safety and provide on-the-job follow up training through supervision. For certain specialized aspects, external trainers should be considered to conduct training.

Box 7 - ILO OSH-MS Guidelines on applying OH&S requirements to contractors

3.10.5.1. Arrangements should be established and maintained for ensuring that the organization's safety and health requirements, or at least the equivalent, are applied to contractors and their workers.

3.10.5.2. Arrangements for contractors working on site should:
(a) include OSH criteria in procedures for evaluating and selecting contractors;
(b) establish effective ongoing communication and coordination between appropriate levels of the organization and the contractor prior to commencing work. This should include provisions for communicating hazards and the measures to prevent and control them;
(c) include arrangements for reporting of work-related injuries, ill health, diseases and incidents among the contractors' workers while performing work for the organization;
(d) provide relevant workplace safety and health hazard awareness and training to contractors or their workers prior to commencing work and as work progresses, as necessary;
(e) regularly monitor OSH performance of contractor activities on site; and
(f) ensure that on-site OSH procedures and arrangements are followed by the contractor(s).

Section 3.10.5 ILO Guidelines on Occupational Safety and Health Management Systems
Implement contractual requirements and orientation sessions so that contractor staff working in the Center are adequately certified and/or trained in safety practices relevant to their jobs in the Center, and are aware of the Center’s OH&S expectations relating to them.

Contract staff who undertake repair and maintenance tasks, operate equipment, work in experimental fields or laboratories, provide transportation services or otherwise work in Center facilities on jobs for which OH&S considerations are significant, should be capable of applying the same safety standards as expected of Center staff doing the same job. The Center may require in the contract documents that the contract staff have relevant industrial certifications, or have undertaken a minimum amount of training relating to safety aspects of their jobs. In such cases the contractor may be requested to provide evidence of this. Contract staff should also undergo, when first beginning assignments at the Center, the same kind of OH&S orientation provided to staff doing the same or similar jobs. Contract staff working on long term arrangements, such as farm laborers and bird boys, should also receive refresher OH&S training relevant to their jobs.

There requirements should be monitored by the Center as part of the contract management arrangements.
Box 8 - ILO OSH-MS Guidelines on OH&S documentation

3.5.1. According to the size and nature of activity of the organization, OSH management system documentation should be established and maintained, and may cover:
(a) the OSH policy and objectives of the organization;
(b) the allocated key OSH management roles and responsibilities for the implementation of the OSH management system;
(c) the significant OSH hazards/risks arising from the organization's activities, and the arrangements for their prevention and control; and
(d) arrangements, procedures, instructions or other internal documents used within the framework of the OSH management system.

3.5.2. The OSH management system documentation should be:
(a) clearly written and presented in a way that is understood by those who have to use it; and
(b) periodically reviewed, revised as necessary, communicated and readily accessible to all appropriate or affected members of the organization.

3.5.3. OSH records should be established, managed and maintained locally and according to the needs of the organization. They should be identifiable and traceable, and their retention times should be specified.

3.5.4. Workers should have the right to access records relevant to their working environment and health, while respecting the need for confidentiality.

3.5.5. OSH records may include:
(a) records arising from the implementation of the OSH management system;
(b) records of work-related injuries, ill health, diseases and incidents;
(c) records arising from national laws or regulations dealing with OSH;
(d) records of workers’ exposures, surveillance of the working environment and workers’ health; and
(e) the results of both active and reactive monitoring.

Section 3.5 ILO Guidelines on Occupational Safety and Health Management Systems
Good Practice Note
Implement a process whereby all key aspects of the OH&S system are documented, in terms of (a) the policies and procedures; (b) roles and responsibilities; (c) hazard, risk and control analysis; (d) follow up action plans and progress reports thereon; (e) OH&S committee records, including those required by host country legislation; (f) incident and epidemiological surveillance records; (g) review, audit and evaluation reports.

Good Practice Note
Control the formats and version changes for OH&S procedural documentation, and ensure compliance with any format or content requirements established in applicable host country regulations.

The Center must determine and control procedural documents to facilitate their use and any internal or external inspection of the OH&S system. This documentation, in electronic or hard copy format, includes standard operating manuals, laboratory protocols, equipment safety testing log formats, staff OH&S improvement suggestion forms, OH&S system review checklists, incident reporting forms and periodic status reporting forms.

Box 9 - An effective OH&S documentation system should establish, implement and maintain procedures to:

- Approve OH&S documents for adequacy prior to use;
- Review and update them;
- Identify revisions;
- Make them available at point of use;
- Ensure they are legible, dated and properly maintained;
- Ensure compatibility with any relevant regulatory requirements, including those specifying document format or content;
- Archive them when out-of-date or obsolete.
Corrective action should be undertaken to address nonconforming documentation. The procedures implemented to control documents should be periodically reviewed and the efficiency with which the documentation system is maintained should be evaluated, and corrective actions implemented to ensure continuous improvement.

**Communication**

**Box 10 - ILO OSH-MS Guidelines on Communication**

3.6.1. Arrangements and procedures should be established for:
(a) receiving, documenting and responding appropriately to internal communications related to OSH;
(b) ensuring the internal communication of OSH information and functions of the organization; and
(c) ensuring that the concerns, ideas and inputs of workers and OSH matters are received, considered and responded to.

*Section 3.6 ILO Guidelines on Occupational Safety and Health Management Systems*

**Good Practice Note**

Introduce communication channels with Center staff and contractors by which they can give their opinions and suggestions about health and safety issues in their workplace and encourage their use.

The Center should encourage participation and support of its OH&S practices, policies and objectives from anyone who might be affected by the operations (both internally and externally). The Center should provide information about hazards, risks and preventive or mitigating measures to employees and contractors, through the intranet or other means accessible to staff and contractors. Giving public, positive recognition to organizational units or individual employees or contractor staff who promptly report new hazards or risks, weak controls or safety incidents will encourage use of the communication channels and reinforce the safety culture of the Center.
Good Practice Note
Consider the appropriate languages for communicating health and safety policy and procedures that the workforce can understand.

Centers being culturally and linguistically diverse organizations, management must ensure that the Center workforce can understand and discuss safety and health in their workplace. While many staff may be proficient in the main working language(s) of the Centers, there may be various parts of the permanent, casual or contractor workforce who operates mainly in other, local languages and who may be involved in jobs with significant OH&S considerations e.g. farm and workshop laborers. Management should ensure and check that the information is in a form that can be fully understood by their staff, either because it is “language-neutral” or available in the most well understood languages of the staff and contractors.
Box 11 – Considering Language Issues in OH&S Systems

Know your workforce
- Consult
- Build a language profile

Make a plan
- Set out procedures and budget
- Assess your health and safety information

Communicate for understanding
- Use appropriate forms of communication
- Use plain language
- Get translations
- Use standard picture safety signs
- Check that employees understand instructions

Provide language support
- Use bilingual staff to provide information and advice

Provide training
- Provide induction
- Provide ongoing training
- Teach common workplace terms

Adapted from: “Your health and safety guide to communicating across languages”, WorkSafe Victoria, an Australian state OH&S authority, which can be downloaded from

PLANNING AND IMPLEMENTATION

Initial Review

Box 12 - ILO OSH-MS Guidelines on Initial Review

3.7.1. The organization’s existing OSH management system and relevant arrangements should be evaluated by an initial review, as appropriate. In the case where no OSH management system exists, or if the organization is newly established, the initial review should serve as a basis for establishing an OSH management system.

3.7.2. The initial review should be carried out by competent persons, in consultation with workers and/or their representatives, as appropriate. It should:

(a) identify the current applicable national laws and regulations, national guidelines, tailored guidelines, voluntary programmes and other requirements to which the organization subscribes;

(b) identify, anticipate and assess hazards and risks to safety and health arising from the existing or proposed work environment and work organization; and

(c) determine whether planned or existing controls are adequate to eliminate hazards or control risks; and

(d) analyse the data provided from workers' health surveillance.

3.7.3. The result of the initial review should:

(a) be documented;

(b) become the basis for making decisions regarding the implementation of the OSH management system; and

(c) provide a baseline from which continual improvement of the organization's OSH management system can be measured.

Section 3.7 ILO Guidelines on Occupational Safety and Health Management Systems
Centers should be aware of, and understand any host country OH&S regulatory responsibilities applicable to its operations. These will often be derived from the ILO Guideline or particular ILO conventions as well as norms issued by national standard setting agencies. In many cases Centers are required to adhere to host country OH&S requirements, but even where not due to privileges and immunities, the Center should aspire to be fully compliant. In some cases these legal requirements may represent a minimum set of good practices, and the Center will want to supplement them with additional practices to meet international standards.

**Good Practice**

Maintain information on applicable national OH&S legal and other requirements for each of the locations in which the Center has a substantial permanent office/facility and is directly responsible for the operation of the office/facility.

**Good Practice**

Build into the Center’s OH&S systems the applicable features of host country OH&S legal and other requirements.

Host country regulations may address technical parameters regarding particular safety requirements that must be observed (such as specifications for building exits; fuel storage; chemical storage; handling radio-isotopes; equipment testing, labeling and operating protocols; and worker training). In addition they may require the establishment of health and safety committees within the organization, at each location. These are often stipulated in the context of ensuring worker or labor union participation/monitoring as a check and balance on employers, and can be quite specific about membership of such committees and the types of records that must be kept of this oversight function.

Reviews/audits of the OH&S management systems should include examinations of the degree of compliance with host country regulatory requirements.
For Centers establishing or re-establishing OH&S systems, conduct a baseline review of hazards, risks and controls, and past accident and health surveillance data, as the basis of developing the system and tracking future progress. This review should follow the methodology outlined in the hazard identification, risk assessment and control section of this Note.

Centers may wish to consider organizing any baseline review in terms of the following five elements:

- **Staff** – the knowledge, skills, both mental and physical, willingness to conform to the system, motivation, resistance to pressure to behave unsafely and job experience.

- **Machinery and equipment** – the safety specifications of machinery and equipment, including consideration of agronomic factors, and their maintenance.

- **Materials** – considerations of the correct sequence of operations with materials and products, and their safety in storage, use and disposal as waste products or by-products.

- **Environment** - temperature, lighting and ventilation, dust, fumes, vapors, radiation, chemical and biological hazards, and provision of safe access and egress, sound levels of welfare amenity and safe level of noise and vibration.

- **Place of work** - safety in terms of construction, means of fire protection, including means of escape in the event of fire, and layout.
OH&S System Planning

Box 13 - ILO OSH-MS Guidelines on System Planning

3.8.1. The purpose of planning should be to create an OSH management system that supports:
(a) as the minimum, compliance with national laws and regulations;
(b) the elements of the organization's OSH management system; and
(c) continual improvement in OSH performance.

3.8.2. Arrangements should be made for adequate and appropriate OSH planning, based on the results of the initial review, subsequent reviews or other available data. These planning arrangements should contribute to the protection of safety and health at work, and should include:
(a) a clear definition, priority setting and quantification, where appropriate, of the organization's OSH objectives;
(b) the preparation of a plan for achieving each objective, with defined responsibility and clear performance criteria indicating what is to be done by whom and when;
(c) the selection of measurement criteria for confirming that the objectives are achieved; and
(d) the provision of adequate resources, including human and financial resources and technical support, as appropriate.

3.8.3. The OSH planning arrangements of the organization should cover the development and implementation of all the OSH management system elements, as described in Chapter 3 of these guidelines and illustrated in figure 2.

Section 3.8 ILO Guidelines on Occupational Safety and Health Management Systems

Good Practice

As part of the initial review, identify specific areas for improvement of OH&S arrangements to meet the established policy, required actions, who is responsible, and realistic target dates for completion of tasks. This can form the basis of updated plans in subsequent review cycles.
OH&S System Objective Setting

Box 14 - ILO OSH-MS Guidelines on Objective Setting

3.9.1. Consistent with the OSH policy and based on the initial or subsequent reviews, measurable OSH objectives should be established, which are:

(a) specific to the organization, and appropriate to and according to its size and nature of activity;
(b) consistent with the relevant and applicable national laws and regulations, and the technical and business obligations of the organization with regard to OSH;
(c) focused towards continually improving workers' OSH protection to achieve the best OSH performance;
(d) realistic and achievable;
(e) documented, and communicated to all relevant functions and levels of the organization; and
(f) periodically evaluated and if necessary updated.

Section 3.9 ILO Guidelines on Occupational Safety and Health Management Systems

Good Practice

As part of any OH&S action plan, set measurable OH&S objectives for each specific activity in the plan.

Examples of OH&S objectives are:

- Completion of specific OH&S training activities for specific categories of staff, e.g. handling chemicals, safe driving, operating workshop machinery
- Re-organizing certain workspaces to improve conditions and eliminate identified hazards
- Completing safety orientation materials for new staff in required languages
- Replacing certain equipment deemed to be unsafe
- Establishing a (full time or part time) safety officer function and recruiting or training the person selected for this post
- Establishing a health and safety committee in a particular location, and training members
Re-organizing a laboratory or warehouse to address issues relating to storage of hazardous materials
Initiating a cycle of internal safety inspections
Purchasing additional protective clothing and accessories for field workers
Reviewing safety procedures with janitorial contractors

**Hazard Identification, Risk Assessment and Control**

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**Box 15 - ILO OSH-MS Guidelines on Hazard Prevention and Control**

3.10.1.1. Hazards and risks to workers' safety and health should be identified and assessed on an ongoing basis. Preventive and protective measures should be implemented in the following order of priority:

(a) eliminate the hazard/risk;
(b) control the hazard/risk at source, through the use of engineering controls or organizational measures;
(c) minimize the hazard/risk by the design of safe work systems, which include administrative control measures; and
(d) where residual hazards/risks cannot be controlled by collective measures, the employer should provide for appropriate personal protective equipment, including clothing, at no cost, and should implement measures to ensure its use and maintenance.

3.10.1.2. Hazard prevention and control procedures or arrangements should be established and should:

(a) be adapted to the hazards and risks encountered by the organization;
(b) be reviewed and modified if necessary on a regular basis;
(c) comply with national laws and regulations, and reflect good practice; and
(d) consider the current state of knowledge, including information or reports from organizations, such as labour inspectorates, occupational safety and health services, and other services as appropriate.

*Section 3.10.1 ILO Guidelines on Occupational Safety and Health Management Systems*
Good Practice

Adopt a systematic approach whereby OH&S hazards are identified for all Center workplaces; the risks relating to these are assessed, determining if the controls in place should be improved and how; and mitigating controls are periodically checked for effective implementation.

Centers typically comprise a variety of workplaces. All have typical office environments, most have campuses with landscaped grounds and systems of roads, and many also operate laboratories, workshops, experimental farms or ponds, and various warehouses and storage facilities. A safe workplace does not happen by chance or guesswork. It requires a systematic approach to identifying OH&S hazards for all workplaces, assessing the related risks relevant to each, and fixing exposures which may currently exist. The assessments should also take into account changes in conditions in workplaces, such as when locations are subject to activities relating to construction, refurbishments and repairs.

The Handbook for Workplaces – Controlling OHS Hazards and Risks, published by the WorkSafe Advisory Service, promotes the use of the following 4-step approach for the hazard identification process.
Centers should ascertain from their hosted organizations/landlords, and ensure that the focal point in Headquarters for OH&S is apprised, information about OH&S measures relevant to their tenancy. Compliance requirements expected from tenants under the host/owner’s OH&S systems should be fully
understood and action on this monitored on an ongoing basis. Weaknesses in the system, or inadequately managed risks which are identified should be promptly brought to the attention of the host/owner and remedial action followed up until completed. In some cases it may be necessary for the Center to invest in additional measures in order to ensure the risks are managed – examples include purchasing fire extinguishers and blankets, emergency flexible exit ladders for upper floors in buildings with inadequate exit routes, and additional lighting.

**Step 1 – Identifying Hazards in the Workplace**

**Good Practice Note**

Systematically identify with affected staff work-related hazards for all workplaces and document and communicate the results.

Identifying hazards involves finding all of the foreseeable hazards in the workplace and understanding the possible harm that the hazards may cause. Employers should consult with employees when identifying and assessing hazards or risks, and making decisions about risk control.

There are a number of methods for identifying hazards. The following are the most common:

- Physically inspecting the workplace
- Finding and applying available external information – useful sources include ILO directives and external publications on workplace safety, including those focusing on laboratories, mechanical workshops, farms and construction sites. Other CGIAR Centers may also be useful sources of specifically relevant information
- Inventorying and analyzing processes and activities
- Surveys of employees and others at the workplace
- Reviewing records and data
- Hazards for CGIAR Centers will vary from Center to Center but can arise from such sources as:
  - workplace building, pathway and internal road design, physical condition and locations
  - cleaning activities
  - vehicles operating within campus
  - storage and use of chemicals for laboratories
  - storage and use of fuel
  - storage and use of radioactive substances
  - storage and use of fertilizers and pesticides for experimental fields
• operation of silos and other crop production storage facilities
• ponds, dams, canals and drainage features on Center campuses
• trees on Center campuses which may lose limbs or fall due to age or disease
• operation of mechanical and electrical workshop machinery and tools
• campus maintenance and repair work requiring working at heights, heavy lifting, working on electrical equipment, or working with sharp tools
• maintenance and experimental field work requiring long periods of outdoor exposure
• travel by vehicles
• travel by air
• scuba diving and working in rivers and streams
• warehouse activities requiring heavy lifting
• food handling in institutional kitchens and cafeterias
• office work involving sustained repetitive activities or computer screen watching
• use of institutional sports facilities

In many of the above cases, the hazard analysis may be detailed according to particular tasks and sub-tasks involved in particular activities.

**Step 2. Assessing the risks**

**Good Practice Note**

Use a variety of sources for accumulation of information about potential or existing risks arising from identified hazards in every workplace.

The risk analysis should be specific to the hazards identified. Specialized sources of information should be consulted to assist with analyzing the risks. Examples of the human risks for Centers include:

• exposure to chemicals, pesticides, high or low temperature, microfibers, dust or loud noise
• contact with sharp or hot objects
• falls on slippery or uneven surfaces
• falls of objects
• explosions of chemical products or stored fuel
• radiation poisoning
• machinery accidents
• vehicular accidents on campus – due to unsafe speeding; dangerous obstacles or potholes on roads; inattention to / inattentive pedestrians
• burns and smoke inhalation from fires
• electrocution
• food poisoning
• wall or ceiling collapse due to inadequate protections during repairs and maintenance
• building collapse due to earthquake or other natural disasters
• repetitive strain and other ergonomically induced injury
• visual impairment
• sports injuries

As described in detail in the IAU’s Good Practice Note on Enterprise Risk Management, risk can be considered in terms of impact (severity of the outcome) and the likelihood (probability) of the event occurring. In current Center enterprise risk management systems, a 3x3 rating system (high, medium, low), or a 5x5 variation, is applied to these two elements to prioritize risk areas. In some Centers, likelihood is analyzed separately for inherent likelihood and an adjusted level of likelihood after considering current control. In others these are analyzed together and given one rating. The residual likelihood represents the currently assessed level of risk, on which conclusions about the adequacy of the current level of control and impact mitigation/response measures in place. The approach used to assess OH&S risks in detail should allow ready incorporation of summary results into overall Center risk assessments.

In the context of OH&S, controls may be preventive in nature (i.e. established to avoid a hazard materializing) or in the form of mitigating measures which reduce the damage if the hazard does materialize (e.g. emergency first aid equipment and kits).
Step 3. Controlling Hazards and Risks

Good Practice Note
Establish an OH&S improvement action plan to address hazards for which risks have been identified, based on priorities identified in the risk analysis.

Once workplace hazards have been analyzed and the risks assessed, there is a need to start immediately fixing any unacceptable gaps in preventive controls or impact mitigation measures that are identified. Removal of hazards should be the first option, in preference to workers adapting to the hazard. If the hazards are unavoidably integrated with/inherent to the work, then a hierarchy of risk reduction or preventive measures are necessary. These can be ranked from the highest level of protection and reliability to the lowest, as shown on Figure 2 below.

Figure 2
Step 4. Reviewing risk controls and checking that they work

Good Practice Note
Periodically review/audit the risks, controls and mitigation measures relating to all workplace hazards to ensure they remain relevant, in light of any changing conditions, and are effectively operating/in place.

Controlling OH&S hazards and risks is an ongoing process that needs to take into account changes in the workplace, in staff responsible for the controls, and the inevitable fact that over time controls may weaken unless subject to regular review (a manifestation of the “law of entropy” applicable to all control systems).

At a minimum, reviews of risk controls and mitigating measures should be done whenever:
- there are any changes are made to the workplace
- new health and safety information about the hazards and risks becomes available
- any injuries have occurred.

Controls may be of various types, such as:
- Displaying safety information in worksites relevant to the environment, or type of tasks or types of materials used, in the locations
- Layout of worksites to avoid proximity of activities which are incompatible with safety – e.g. welding in areas where they may be flammable gases or vapors.
- Layout of worksites to facilitate an orderly sequence of work without undue crossing of lanes and gangways, and without unnecessary manhandling of materials, but with easy movements between one part of the premises and another
- Storage facilities for inflammable or toxic material
- Ventilation, lighting, heat protection.
- Multiple, sign-posted unobstructed exits to worksites
- Sign-posted evacuation zones for earthquake prone location, and designated assembly points
- Protective clothing and accessories such as helmets, goggles, masks, gloves and safety footwear
- Periodic breaks for staff working intensively using computer screens
- Ergonomically-compliant office furniture
- Periodic inspection and testing of all electrical systems comprising transformers, switchgear, distribution wiring and end user equipment
- Building structural safety and fire protection measures
- Fire safety equipment and fire warden systems
- First aid equipment
- Resident medical and paramedical services
- Controls over visitors to worksites
- Traffic control systems
- Driver training
- Waste disposal systems

**Management of Change**

**Box 16 - ILO OSH-MS Guidelines on Management of Change**

3.10.2.1. The impact on OSH of internal changes (such as those in staffing or due to new processes, working procedures, organizational structures or acquisitions) and of external changes (for example, as a result of amendments of national laws and regulations, organizational mergers, and developments in OSH knowledge and technology) should be evaluated and appropriate preventive steps taken prior to the introduction of changes.

3.10.2.2. A workplace hazard identification and risk assessment should be carried out before any modification or introduction of new work methods, materials, processes or machinery. Such assessment should be done in consultation with and involving workers and their representatives, and the safety and health committee, where appropriate.

3.10.2.3. The implementation of a "decision to change" should ensure that all affected members of the organization are properly informed and trained.

*Section 3.10.2 ILO Guidelines on Occupational Safety and Health Management Systems*
**Good Practice Note**

Where there are major changes in the types of operations, arising from internal organizational or programmatic changes or changes in the regulatory environment, complete a fresh hazard and risk assessment before any modification or introduction of new work methods, materials, processes or machinery is made.

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**Emergency Preparedness and Response**

**Box 17 - ILO OSH-MS Guidelines on Emergency Prevention, Preparedness and Response**

3.10.3.1. Emergency prevention, preparedness and response arrangements should be established and maintained. These arrangements should identify the potential for accidents and emergency situations, and address the prevention of OSH risks associated with them. The arrangements should be made according to the size and nature of activity of the organization. They should:

(a) ensure that the necessary information, internal communication and coordination are provided to protect all people in the event of an emergency at the worksite;

(b) provide information to, and communication with, the relevant competent authorities, and the neighbourhood and emergency response services;

(c) address first-aid and medical assistance, firefighting and evacuation of all people at the worksite; and

(d) provide relevant information and training to all members of the organization, at all levels, including regular exercises in emergency prevention, preparedness and response procedures.

3.10.3.2. Emergency prevention, preparedness and response arrangements should be established in cooperation with external emergency services and other bodies where applicable.

*Section 3.10.3 ILO Guidelines on Occupational Safety and Health Management Systems*

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**Good Practice Note**

Create an Emergency Management plan to handle accidents and incidents that may affect staff health and safety. This could be a sub-set of a broader emergency plan for Center business continuity.
The Center should actively review possible accident and emergency responses, have plans to meet these possibilities and conduct dry-run drills to test the system's readiness.

Emergency plans covering accidents and incidents that could endanger health and safety should be in place for each Center location. The plans should include such items as who should take charge in an emergency, first aid procedures, details of actions required including medical evacuation, interface with external authorities where required and post-emergency procedures.

**Good Practice Note**

Conduct periodic mock drills such as those relating to evacuation in case of fire or other contingencies to better prepare employees in terms of emergency.

**Procurement – OH&S Dimensions**

**Box 18 - ILO OSH-MS Guidelines on Procurement**

3.10.4.1. Procedures should be established and maintained to ensure that:

Contracting

(a) compliance with safety and health requirements for the organization is identified, evaluated and incorporated into purchasing and leasing specifications;

(b) national laws and regulations and the organization's own OSH requirements are identified prior to the procurement of goods and services; and

(c) arrangements are made to achieve conformance to the requirements prior to their use.

*Section 3.10.4.1 ILO Guidelines on Occupational Safety and Health Management Systems*

**Good Practice**

Require that procurement of chemicals, hazardous material, equipment and tools will be made from manufacturers who conform to relevant safety standards identified by the Center, and require that material technical and safety data sheets are obtained before acceptance of any deliveries.
Technical specifications for personal protective equipment should identify the requirements in terms of fitness for purpose and resistance levels.

**Good Practice Note**

Include, in OH&S programs, services to employees to prevent and manage non-occupational diseases in order to promote a healthy and productive workforce.

**Non-Occupational Diseases: Prevention and Management**

Traditional OH&S systems have focused on occupation-related diseases, such as those arising from handling chemicals, pesticides, radioactive material or prolonged environments exposures such as to sun, smoke, dust, or carcinogenic materials. Employers are now increasingly concerned with the impact of non-occupational diseases, or those only indirectly related to occupation because they are more prevalent in locations in which employees live, are posted or travel. These can have significant health impacts on staff if they are contracted by them or their families. Two diseases which are communicable (human to human or animal to human) and of particular concern to Centers are HIV/AIDS and malaria. Other non-occupational non-communicable diseases or conditions of great interest to employers who want to promote a healthy and productive workforce, are those which may be prevented, contained or reversed with lifestyle modifications. These include heart disease, various types of cancer, diabetes, mental stress, depression and addictions. OH&S systems may include initiatives to inform staff about them and how these diseases and conditions can be mitigated, promote the active or healthy behaviors to enable staff to avoid or manage them, and provide access to testing or counseling so that they can be detected and treated or managed early.


**System Effectiveness Documentation and Review**

**Good Practice Note**

Maintain evidence of the operation of the OH&S system.
Box 19 Example of Records

- Hazard/risk/control audit reports
- Policy and procedure documents and awareness raising material
- Communications records, including complaints from interested parties
- Database of staff and contractor qualifications, skills, knowledge, competency and certifications;
- Induction and training materials and information on sessions held;
- Inspection and test reports; Incident reports/accident reports and investigations;
- Statistical analysis of OH&S data;
- OHS action plans;
- Safety equipment records;
- Hazardous substances and dangerous goods records;
- Design review;
- Risk management documentation

By maintaining these records in an orderly manner, the Center can quickly respond to the demands of regulators and certification auditors as well as control their operations more effectively through the identification of trends or inappropriate activities that result in non-conformances.
EVALUATION

Performance Measurement

Box 20 - ILO OSH-MS Guidelines on OH&S performance measurement

3.11.1. Procedures to monitor, measure and record OSH performance on a regular basis should be developed, established and periodically reviewed. Responsibility, accountability and authority for monitoring at different levels in the management structure should be allocated.

3.11.2. The selection of performance indicators should be according to the size and nature of activity of the organization and the OSH objectives.

3.11.3. Both qualitative and quantitative measures appropriate to the needs of the organization should be considered. These should:

(a) be based on the organization’s identified hazards and risks, the commitments in the OSH policy and the OSH objectives; and

(b) support the organization’s evaluation process, including the management review.

3.11.4. Performance monitoring and measurement should:

(a) be used as a means of determining the extent to which OSH policy and objectives are being implemented and risks are controlled;

(b) include both active and reactive monitoring, and not be based only upon work related injury, ill health, disease and incident statistics; and

(c) be recorded.

Section 3.11.1-4 ILO Guidelines on Occupational Safety and Health Management Systems

Good Practice Note

Periodically measure and report on the performance against OH&S objectives established in action plans.
MONITORING

3.11.5. Monitoring should provide:
(a) feedback on OSH performance;
(b) information to determine whether the day-to-day arrangements for hazard and risk identification, prevention and control are in place and operating effectively; and
(c) the basis for decisions about improvement in hazard identification and risk control, and the OSH management system.

3.11.6. Active monitoring should contain the elements necessary to have a proactive system and should include:
(a) monitoring of the achievement of specific plans, established performance criteria and objectives;
(b) the systematic inspection of work systems, premises, plant and equipment;
(c) surveillance of the working environment, including work organization;
(d) surveillance of workers' health, where appropriate, through suitable medical monitoring or follow-up of workers for early detection of signs and symptoms of harm to health in order to determine the effectiveness of prevention and control measures; and
(e) compliance with applicable national laws and regulations, collective agreements and other commitments on OSH to which the organization subscribes.

3.11.7. Reactive monitoring should include the identification, reporting and investigation of:
(a) work-related injuries, ill health (including monitoring of aggregate sickness absence records), diseases and incidents;
(b) other losses, such as damage to property;
(c) deficient safety and health performance, and OSH management system failures; and
(d) workers' rehabilitation and health-restoration programmes

Section 3.11.5-7 ILO Guidelines on Occupational Safety and Health Management Systems
Epidemiological Vigilance

**Good Practice Note**
Monitor sick leave for patterns that might indicate workplace OH&S issues, or aid proactive attention to particular staff members health.

**Good Practice Note**
For employees engaged in intrinsically hazardous tasks exposing them to potential but slowly-indicating diseases, implement periodic health checks which may detect early signs or symptoms of such diseases.

Notwithstanding preventive control measures being taken and confirmed by audits to be applied, the health of certain classes of employees, such as those working with chemicals, pesticides and radioisotopes, or those regularly exposed for long periods outdoors, should be carefully monitored. This will help workers recognize any early signs/symptoms of potential occupational diseases before they become permanent conditions, to assess their work environment, and to alert management to make changes to that environment before hazardous conditions can develop.
Incident Reporting, Investigation and Response

Box 22 - ILO OSH-MS Guidelines on OH&S incident investigations

3.12.1. The investigation of the origin and underlying causes of work-related injuries, ill health, diseases and incidents should identify any failures in the OSH management system and should be documented.

3.12.2. Such investigations should be carried out by competent persons, with the appropriate participation of workers and their representatives.

3.12.3. The results of such investigations should be communicated to the safety and health committee, where it exists, and the committee should make appropriate recommendations.

3.12.4. The results of investigations, in addition to any recommendations from the safety and health committee, should be communicated to appropriate persons for corrective action, included in the management review and considered for continual improvement activities.

3.12.5. The corrective action resulting from such investigations should be implemented in order to avoid repetition of work-related injuries, ill health, diseases and incidents.

3.12.6. Reports produced by external investigative agencies, such as inspectorates and social insurance institutions, should be acted upon in the same manner as internal investigations, taking into account issues of confidentiality.

Section 3.12 ILO Guidelines on Occupational Safety and Health Management Systems

Good Practice Note

Maintain a standard OH&S incident reporting system applicable to all Center locations, that includes a cause analysis as well as details of, any workplace accident, or sickness or disease that is linked to occupational factors. This analysis should be based on an investigation of each incident, the level of effort in each investigation being commensurate with the nature of the incident.

No OH&S risk management system is likely to eliminate all risks. Unidentified hazards, unanticipated control gaps and non-compliance, or new types of risks may result in accidents eventuating. Centers should have a procedure for reporting OH&S incidents, and this procedure should be made available to all staff. This might form part of a broader procedure for also reporting non-OH&S related incidents which may potentially result in loss to the Center, under the umbrella of the Center’s risk
management system. The OH&S incident reporting format should provide for detailed description of the incident, the identified or likely causes, and any initial suggestions for corrective, preventive and improvement action to avoid the incident in future. Incident classification methodology may need to be aligned with that established in host country OH&S regulations.

To promote the learning of lessons from OH&S incidents, information relating to these incidents should be shared with all Center staff. This will help raise the awareness of staff about actions to avoid similar OH&S hazards, encourage staff to report similar hazards when they see them so preventive action can be taken, and also increase the visibility of the management commitment to health and safety.

**Good Practice Note**

Monitor corrective action ensures that appropriate procedures are implemented to prevent the recurrence of safety incidents.

The health and safety focal point in the Center should follow up on the implementation of corrective action until it is complete, and this should be documented as part of the OH&S incident reporting system.
3.13.1. Arrangements to conduct periodic audits are to be established in order to determine whether the OSH management system and its elements are in place, adequate, and effective in protecting the safety and health of workers and preventing incidents.

3.13.2. An audit policy and programme should be developed, which includes a designation of auditor competency, the audit scope, the frequency of audits, audit methodology and reporting.

3.13.3. The audit includes an evaluation of the organization’s OSH management system elements or a subset of these, as appropriate.

3.13.4. The audit conclusion should determine whether the implemented OSH management system elements or a subset of these:

(a) are effective in meeting the organization’s OSH policy and objectives;
(b) are effective in promoting full worker participation;
(c) respond to the results of OSH performance evaluation and previous audits;
(d) enable the organization to achieve compliance with relevant national laws and regulations; and
(e) fulfill the goals of continual improvement and best OSH practice.

3.13.5. Audits should be conducted by competent persons internal or external to the organization who are independent of the activity being audited.

3.13.6. The audit results and audit conclusions should be communicated to those responsible for corrective action.

3.13.7. Consultation on selection of the auditor and all stages of the workplace audit, including analysis of results, are subject to worker participation, as appropriate.

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Establish and maintain a programme and procedures for periodic OH&S audits to be carried out to find out whether or not their OH&S management system (a) conforms to planned arrangements and (b) has been properly implemented and maintained.

The OH&S audits should be comprehensive enough to ensure that deficiencies with respect to the requirements of the standard are recognized. The audits should not only be limited to documentation review (compliance), but also include inspections to assess whether hazard analysis is complete, and that remedial actions arising from the hazard analysis or incident reporting have been implemented (effectiveness).

These periodic audits may be carried out by external OH&S auditors or, for less complex OH&S environments, appropriately experienced staff independent of the OH&S management system for the locations covered; or OH&S staff from another similar organization or another CGIAR Center. In some cases, such as for laboratories, fuel and chemical stores and experimental farms, good technical knowledge by the auditor of the OH&S hazards specific to these workplaces will be important for the audits to be effective.
Management Review

Box 24 - ILO OSH-MS Guidelines on Management Review

3.14.1. Management reviews should:
(a) evaluate the overall strategy of the OSH management system to determine whether it meets planned performance objectives;
(b) evaluate the OSH management system’s ability to meet the overall needs of the organization and its stakeholders, including its workers and the regulatory authorities;
(c) evaluate the need for changes to the OSH management system, including OSH policy and objectives;
(d) identify what action is necessary to remedy any deficiencies in a timely manner, including adaptations of other aspects of the organization’s management structure and performance measurement;
(e) provide the feedback direction, including the determination of priorities, for meaningful planning and continual improvement;
(f) evaluate progress towards the organization’s OSH objectives and corrective action activities; and
(g) evaluate the effectiveness of follow-up actions from earlier management reviews.

3.14.2. The frequency and scope of periodic reviews of the OSH management system by the employer or the most senior accountable person should be defined according to the organization’s needs and conditions.

3.14.3. The management review should consider:
(a) the results of work-related injuries, ill health, diseases and incident investigations; performance monitoring and measurement; and audit activities; and
(b) additional internal and external inputs as well as changes, including organizational changes, that could affect the OSH management system.

3.14.4. The findings of the management review should be recorded and formally communicated to:
(a) the persons responsible for the relevant element(s) of the OSH management system so that they may take appropriate action; and
(b) the safety and health committee, workers and their representatives.

Section 3.14 ILO Guidelines on Occupational Safety and Health Management Systems
Good Practice Note

Commission periodic reviews of the overall OH&S system, to evaluate its effectiveness in terms of comprehensiveness, implementation and responsiveness to changing conditions. This may be combined with OH&S audits.

An overall OH&S management system review may be done on behalf of management by an external expert. This can normally be done in conjunction with the detailed audit of hazards, risks and controls that is part of the implementation process discussed earlier in this note.

Internal audit would normally conduct a high level review of the operation of the OH&S system as part of its assessment of the Center risk management system. A more detailed OH&S system review, using this good practice note as the benchmark, may also be conducted by the Center’s internal auditor as part of the audit work program, though any technical assessments of specific OH&S measures will normally be outsourced to an external OH&S expert, or alternatively there will be some limit in the scope of the review. However done, the results of the OH&S system effectiveness reviews, including observations, conclusions and recommendations for necessary action, should be clearly documented.

The review should take into account:

- Responding to the findings of OH&S hazard/risk/control audits and previous OH&S system reviews
- Assessing the suitability of current OH&S objectives and targets and the overall safety performance of the organization
- The continuing suitability and effectiveness of the OH&S management system
- Concerns identified by interested parties

The review should be able to assess the impact on the OH&S management system of the following areas:

- Changing legislation
- Expectations of interested parties such as regulators, society at large, workforce attitudes etc
- Changes in products or activities of the organization
- Advances in science and technology
- Lessons learned from accidents and incidents
ACTION FOR IMPROVEMENT

Box 25 - ILO OSH-MS Guidelines on Preventive and Corrective Action

3.15.1. Arrangements should be established and maintained for preventive and corrective action resulting from OSH management system performance monitoring and measurement, OSH management system audits and management reviews. These arrangements should include:

(a) identifying and analysing the root causes of any non-conformities with relevant OSH regulations and/or OSH management systems arrangements; and (b) initiating, planning, implementing, checking the effectiveness of and documenting corrective and preventive action, including changes to the OSH management system itself.

3.15.2. When the evaluation of the OSH management system or other sources show that preventive and protective measures for hazards and risks are inadequate or likely to become inadequate, the measures should be addressed according to the recognized hierarchy of prevention and control measures, and completed and documented, as appropriate and in a timely manner.

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Good Practice Note

Follow up, at senior management level, on preventive or corrective actions required when deficiencies are identified from OH&S system performance reporting, audits and reviews.
Box 26 - ILO OSH-MS Guidelines on Continual Improvement

3.16.1. Arrangements should be established and maintained for the continual improvement of the relevant elements of the OSH management system and the system as a whole. These arrangements should take into account:

(a) the OSH objectives of the organization;
(b) the results of hazard and risk identifications and assessments;
(c) the results of performance monitoring and measurements;
(d) the investigation of work-related injuries, diseases, ill health and incidents, and the results and recommendations of audits;
(e) the outcomes of the management review;
(f) the recommendations for improvement from all members of the organization, including the safety and health committee, where it exists;
(g) changes in national laws and regulations, voluntary programmes and collective agreements;
(h) new relevant information; and
(i) the results of health protection and promotion programmes.

3.16.2. The safety and health processes and performance of the organization should be compared with others in order to improve health and safety performance.

Section 3.16 ILO Guidelines on Occupational Safety and Health Management Systems

Good Practice Note

Benchmark against other organizations (in the same location, or other CGIAR Centers) to identify aspects of the OH&S system that could be improved.
Bibliography

- “Checking Your Culture”, Dr. David L. Goetsch, Occupational Health & Safety Magazine October 2007 issue