Environmental Management System Guidance

ISO 14001:2015

Table of Contents

1 Introduction 3
2 Gap Analysis 4
3 Implementation & Development 6
4 About Your Organization 7
4.1 Organizational Context 7
4.2 Relevant Interested Parties 8
4.3 Scope of the EMS 9
4.4 EMS Processes 10
5.0 Leadership & Governance 12
5.1 Leadership & Commitment 12
5.2 EMS Policy 13
5.3 Roles, Responsibilities & Authorities 14
6.0 EMS Planning 15
6.1 General 15
6.1.1 Risks & Opportunity 15
6.1.2 Environmental Aspects 16
6.1.3 Compliance Obligations 19
6.1.4 Planning Action 19
6.2 EMS Objectives 20
6.2.1 Objectives 20
6.2.2 EMS Objectives & Planning to Achieve Them 22
7.0 Support 24
7.1 Resources 24
7.2 Competence 24
7.3 Awareness 25
7.4 Communication 26
7.4.1 General 26
7.4.2 Internal Communication 27
7.4.3 External Communication 29
7.5 Documented Information 30
7.5.1 General 30
7.5.2 Creating & Updating 30
7.5.3 Control of Documented Information 30
8.0 Operation 33
8.1 Operational Planning & Control 33
8.2 Environmental Emergency Situations 34
9.0 Performance Evaluation 37

9.1 Monitoring, Measurement, Analysis & Evaluation 37
9.1.1 General 37
9.1.2 Evaluation of Compliance 38
9.2 Internal Audit 38
9.2.1 General 38
9.2.2 Internal Audit Programme 39
9.2.3 Internal Audit Checklists 41
9.3 Management Review 41
9.3.1 General 41
9.3.2 Inputs 43
9.3.3 Outputs 43
10.0 Improvement 45
10.1 General 45
10.2 Non-conformity & Corrective Action 45
10.3 Continual Improvement 50

6.0 EMS Planning

6.1 General

6.1.1 Risks & Opportunity

Although risks and opportunities have to be determined and addressed, there is no requirement for a formal, documented risk management process. Confirm that your organization has a methodology in place that enables them to effectively identify risks and opportunities with respect to the planning of its EMS. If not, start using the 'Risk & Opportunity Register.docx' to document the risks and opportunities related to your organizations:

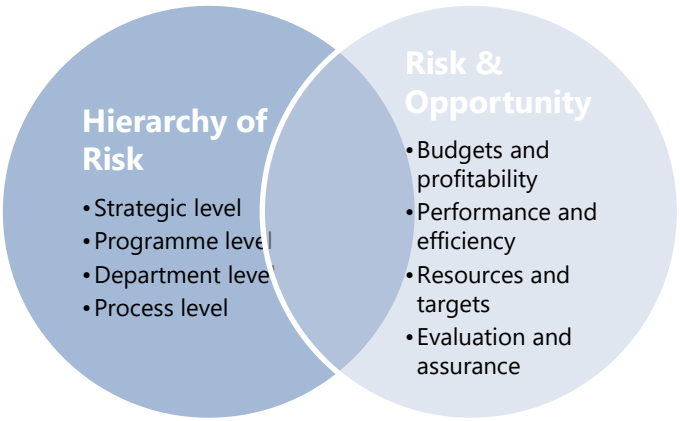
1. Context;
2. Interested Parties;
3. Environmental aspects;
4. Compliance obligations.

You should ensure that your organization has applied this risk identification methodology consistently and effectively. What process has been developed to identify risks and opportunities? In the absence of documented processes/procedures, you may need to use observations and interviews (and a review of the process output, which may contain documented evidence) to assess the processes that determine whether or not undocumented processes are being carried out as planned.

External and internal issues, and relevant needs and expectations of relevant interested parties may be sources of risks. Objective evidence may be in the form of a dedicated risk matrix, risks added to other forms such as an aspect register, corrective/preventive action log and forms, etc.

All of the processes of an EMS do not represent the same level of risk in terms of your organization's ability to meet its objectives. Due to this reason, the consequences of failures or non-conformities in relation to processes, systems, products and/or services will not be the same for all organizations.

Management of Risk & Opportunity



When deciding how to plan and control the EMS, including its component processes and activities, your organization needs to consider both the type and level of risk associated with them. Ensure that your organization is taking a planned approach to addressing risks and realizing opportunities, and that any actions taken have been recorded. Options to address risks and opportunities can include:

1. Avoiding risk;
2. Taking risk in order to pursue an opportunity;
3. Eliminating the risk source;

4. Changing the likelihood or consequences;
5. Sharing the risk;
6. Retaining risk by informed decision;
7. SWOT analysis by the organization as part of its business strategy to identify the external risk and opportunities and action plan to address them;
8. Formal business risk assessment performed by the organization talking into consideration its context, associated risk and opportunities and mitigation plan;
9. Use of process approach by organization to identify sources of input, activities, output, receiver of output, performance indicators to control and monitor processes, the risks and opportunities associated with them and action plan to address them.

6.1.2 Environmental Aspects

This is almost the same requirement as in the 2004 edition. Your organization must determine the environmental aspects, and their impacts, of its activities, products and services under its control and influence. Your organization has to establish criteria to determine which of these aspects have or can have a significant environmental impact. Using the 'Environmental Aspect & Impact Register.docx', begin to document and analyze your organization's environmental aspects and impacts.

Consideration of environmental aspects in the use of product and services (e.g. energy consumption, lifetime, disposal) plus, where known, the environmental aspects arising from sourcing of raw materials, should be identified. This is because the EMS is required to demonstrate life cycle thinking.

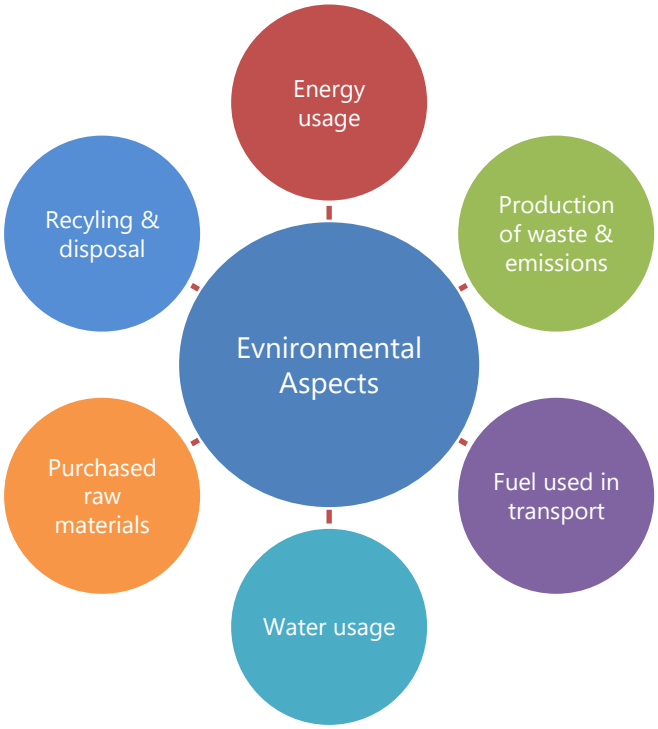
Environmental Aspect - 'is an element of an organization's activities, products or services that interacts or can interact with the environment'.

Environmental Impact - 'changes to the environment, whether adverse or beneficial, wholly or partly resulting from an organization's environmental aspects'.

Significant environmental aspects can result in risks and opportunities with associated adverse or beneficial impacts. Objective evidence must contain established criteria for evaluating significance of aspects (i.e., process or procedure).

A register or matrix of aspects and impacts may be presented as evidence. The new 'Life-cycle Perspective' consideration of environmental aspects and impacts has been broadened to include an identification and evaluation process to consider aspects associated with:

Types of Environmental Aspect



1. Natural resources uses (mining, water withdrawal);
2. Purchased raw materials;

1. Compliance obligations;
2. Other relevant requirements;
3. Permits and licences;
4. Record keeping requirements;
5. Pollution controls or treatment;
6. Best management practices;
7. Monitoring requirements.

An initial review of site information and baseline data (e.g. annual costs and quantities of energy use, water use, waste and raw materials) will help you to prepare a list of environmental aspects for your organization. The environmental aspects need to be regularly reviewed to establish whether the significance to the organization has changed and therefore whether it needs some form of control. Environmental aspects should be categorised as follows:

Normal - environmental aspects are those encountered as part of routine operations;

Abnormal - environmental aspects are from activities not normally encountered as part of day-to-day running of the business e.g. night operations or unscheduled maintenance of broken machinery;

Emergency - environmental aspects are encountered in emergency situations such as equipment failure, extreme weather or fire.

A change management process is usually beneficial to consider the possible consequences of proposed changes that may impact on environmental performance.

Environmental Impacts

The next step is to identify the environmental impact for each environmental aspect, list the environmental impact for each environmental aspect. As you complete this step, remember the cause-and-effect relationship discussed earlier. Please note that environmental impacts can be positive or negative.

Examples of negative impacts include increased air pollution, potential contamination of the ground, or depletion of natural resources. Positive impacts can include conservation of natural resources, improved wetlands area, decreased soil erosion, and conservation of natural habitat.

Significant Impacts

ISO 14001 does not provide a standard or method with which to determine the significant impacts. Part of the reason for not establishing a standard or method is that the significance of each impact can vary for each organization based on various factors and concerns. As and when changes, including planned or new developments, and new or modified activities, products and services change, the environmental aspects and significance will need to be reviewed.

The significance of each impact can vary for each organization based on the listed concerns. The standard lists several environmental and business related factors and concerns to consider when evaluating the significance of each environmental impact:

Environmental Concerns:

1. The scale of the impact;
2. The severity of an impact or a potential impact;

In ISO 14001:2004, the purpose of the internal audit is to 'determine whether the management system conforms to requirements and is effectively implemented and maintained', i.e. *to actually make the judgment*. In the 2015 version of the standards, the purpose of the internal audit is to simply '*provide information*' as to whether this is the case. Subsequent determination is now undertaken by relevant management, e.g. during management review meetings.

9.2.2 Internal Audit Programme

Planning the internal audit programme, whilst taking into account process status and importance, is one of the most disregarded requirements of ISO 14001. Use the '*Process Assessment*' worksheet in the EMS Action Tracker.xlsx to help determine which of your processes and practices should be audited more frequently than others by entering a score to rank various process attributes.

Process Assessment

Step 1	Enter the process name(s) in cells 'B27' to 'B48'.		Once you have entered the process name(s), they will copy through to the relevant sections of the remaining worksheets.
Step 2	Assess the criteria for ranking the status of processes.	1= Low 2 = Medium 3 = High 4 = Critical	All performance indicators, metrics, objectives, audit results, etc. show stability and consistently achieve targets; Minor problems exist, minor process or product changes planned; Poor performance/adverse trends, expected results not achieved; Metrics are non-conforming. Any process with major audit finding in past 12 months.
Step 3	Assess the criteria for ranking how well the process is performed.	1= Low 2 = Medium 3 = High 4 = Critical	Consistently applying documented practice, possible benchmark performer; Current practices conform but are not documented; Practices are applied inconsistently; Practices are non-conforming.
Step 4	Assess the criteria for ranking the importance of processes.	1= Low 2 = Medium 3 = High 4 = Critical	Little to no risk of adversely affecting the environment, reputation, delivery, or profitability; Minor adverse effect on the environment, reputation, delivery, or profitability; Likely have a significant adverse effect on the environment, reputation, delivery, or profitability; Likely to cause serious environmental issues or regulatory/compliance breach.
Step 5	Audit frequency indicators will transfer to the 'Audit Programme' and the 'Audit Findings Tracker' for reference.		An audit should be scheduled **at least once per year** unless otherwise justified; An audit should be scheduled **within 12 weeks** and an additional audit within 6 months; An audit should be scheduled **within 4 weeks** with an additional audit **after 12 weeks** and then reoccurring quarterly.

Audit Ref.	Process Name	Perceived Process Ranking (Critical 4, High 3, Medium 2, Low 1)			Perceived Effects on Ranking (Critical 4, High 3, Medium 2, Low 1)			Complaints	Any Known Co
		Status	Practices	Importance	Quality	Environment	H&S	Actual No. of Complaints	Internal CA (Audits/N/Cs)
								Quantity	Quantity
IA001	Environmental Management System	2	1	3	1	4	1	0	0
IA002	Document Control	1	1	2	2	1	1	0	0
IA003	Evaluation of Aspects & Impacts	2	2	2	1	3	1	0	0
IA004	Manufacturing	1	2	3	3	2	2	0	2
IA005	Customer Service	1	2	2	2	1	1	1	0
IA006	<enter process name/description>								
IA007	<enter process name/description>								

Introduction | PLAN - Process Assessment | PLAN - Audit Programme | DO - Audit Findings Tracker | CHECK - Audit Findings Charts | ACT - NC & CA Tracker

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Status

You should consider process status in terms of maturity and stability; a more established, proven process will be audited less frequently than a newly implemented or recently modified process and should receive a lower status score. Conversely; processes which are not performing to the planned arrangements, should be assigned a higher status score.

Practices

Consider how a failure in environmental attributes could affect your customers and stakeholders in terms of providing non-conforming product. In fact, why not ask your customers and stakeholders which attributes could affect them the most, as this method provides a great way to engage with them and to objectively justify the audit programme to Top management.

You should assess the criteria for ranking how well each process is performed. If the process consistently applies documented practice and is a possible benchmark performer, score it lower. If current practices conform but are not documented, or if practices are applied inconsistently or are non-conforming, this should score higher.

Importance

You should consider process importance as the degree of direct impact that process performance has on customer satisfaction; i.e. could the process provide the customer with non-conforming product? Support processes should be given a lower ranking than the manufacturing/service provision processes. In addition, the results of previous audits should be considered too. Processes that have been audited recently that have shown effectiveness and improvement should be audited less frequently.

Environmental, Quality and Health & Safety Ranking

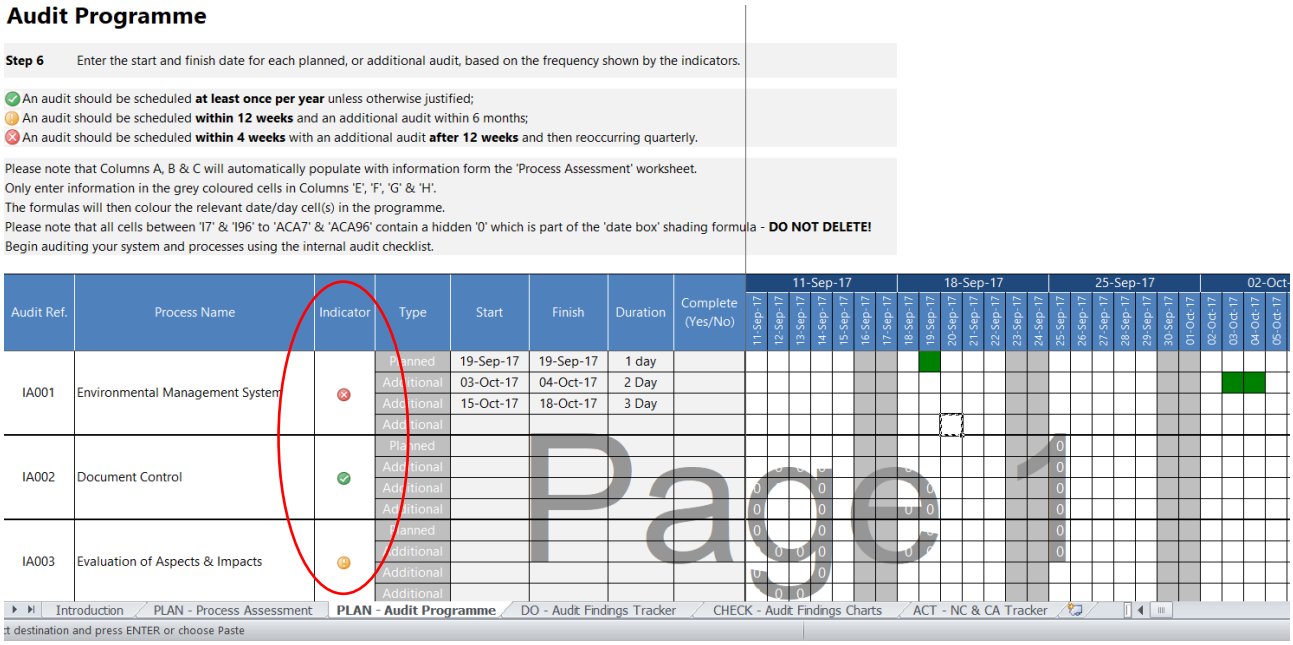
Consider how a failure in quality, environmental and health and safety attributes could affect your customers or stakeholder in terms of providing non-conforming product. In fact, why not ask your customers which attributes could affect them the most, as this method provides a great way to engage with them and to objectively justify the audit programme to Top management.

Complaints

Simply put, enter the actual number of complaints in the relevant cell that is related to the process. Complaints are ranked very highly in terms of seriousness and will elicit a red warning on the total score heat map to highlight that process as requiring greater audit scrutiny.

Corrective Actions

Include the number of open corrective actions in the relevant cell that is related to the process. The corrective actions should be included and must cover all those that were raised internally or externally. External corrective actions rank higher in terms of importance than internal corrective actions. External corrective actions might arise from customer audits, registrar audits or from other stakeholders.



The resulting scores are highlighted in the '*Audit Programme*' worksheet to indicate whether the process requires more frequent auditing based on its ability to affect the customer and how well it is performing. This is a great way to mathematically substantiate your audit schedule. You should then schedule processes with high, red scores for additional audits, perhaps or three or even more times per year.

9.2.3 Internal Audit Checklists

The audit checklist is just one of the many tools which are available from the auditor's toolbox that help ensure your audits address the necessary requirements. The checklist stands as a reference point before, during and after the audit, and will provide the following benefits:

1. Ensures the audit is conducted systematically;
2. Promotes audit planning;
3. Ensures a consistent audit approach;
4. Actively supports your organization's audit process;
5. Provides a repository for notes collected during the audit process;
6. Ensures uniformity in the performance of different auditors;
7. Provides reference to objective evidence.

We have provided you with three different audit checklists and each checklist allows you to determine the extent to which your management system conforms to the requirements by determining whether those requirements have been effectively implemented and maintained. The templates will help you to assess the status of your existing management system and identify process weakness to allow a targeted approach to prioritizing corrective action to drive improvement.

1. Audit checklist metrics dashboard graphically displays status attributes;
2. Quickly identify and target system weakness with heat maps;
3. Real time charts display audit result data - ideal for reports or presentations.

The dashboard provides fast and reliable access to system and process metrics, precluding the need to know where all performance data is stored, or for having to locate the metrics champion for current data. It also reduces the likelihood that data is lost when metrics owners change or leave the company and reduces the learning curve for new metrics owners.

1. Clearly illuminates under-performing metrics for prompt management attention;
2. Provides a unique management ally during internal and external audits;
3. Improves meeting efficiency by segregating metrics.

Auditors should not necessarily expect to find a documented internal audit procedure in place. However, they must be able to access documented information confirming the implementation of an audit programme by the organization. Documented information must also be available to evidence the results of audits. When designing the audit programme you should ensure that customer feedback, organizational changes, and risks and opportunities have been brought into consideration.

9.3 Management Review

9.3.1 General