

# ENVIRONMENTAL MANAGEMENT SYSTEM MATURITY FRAMEWORK

> 2020



RESOURCES  
EXAMPLES 



**IAEG**

INTERNATIONAL AEROSPACE  
ENVIRONMENTAL GROUP

# 1 INTRODUCTION

IAEG® has developed an Environmental Management System Maturity Framework to support the uptake of Environmental Management Systems by IAEG members and by entities throughout its members' value chains. It is available in the 'ISO14001 and EMS implementation' pages on [www.iaeg.com](http://www.iaeg.com). The 'Resources and Examples' provide information for each of the EMS elements, which can be used to assure status at an existing maturity level, or to evolve towards the next EMS maturity level. For example, a company at an 'Advanced EMS level' can use the resources and examples to evolve to the 'Leading EMS level'.



**Section Structures and Definitions**



**Engage Leadership and Organise**



**Monitor Compliance Obligations, Manage Risk and Control Impact**



**Manage Performance, Communicate and Train**



**Manage Compliance and Improve**



**Glossary**



# 1 INTRODUCTION

## SECTION STRUCTURES AND DEFINITIONS

Each section is broken into five specific categories to help you easily navigate the information. The below icons will help you distinguish each section throughout the corresponding chapters.



### REQUIREMENTS INCLUDING ISO14001 REFERENCES

Describe the EMS requirements per level, as per the EMS Maturity Framework and the references to relevant parts of ISO14001 Environmental management systems – Requirements with guidance for use.



### IAEG RESOURCES *(available on [www.iaeg.com](http://www.iaeg.com))*

- Documentation for EMS implementation according to ISO14001:2015 (Transitioning to ISO14001:2015)
- IAEG GHG Reporting Guidance (GHG Reporting Guidance for the Aerospace Industry – A Supplement to the GHG Protocol Corporate (Scope 1 and 2) and Value Chain (Scope 3) Accounting and Reporting Standards)
- IAEG resources for substance declaration (AD-DSL – Aerospace & Defence Declarable Substance List, AD-SRT – Aerospace & Defence Substance Reporting Tool, IPC 1754 Standard)



### ISO14004 REFERENCES

General guidelines on implementation provide information on chapters and help boxes of ISO14004 that contain guidance for EMS element implementation.



### ISO14005 REFERENCES

Guidelines for a flexible approach to phased implementation provide information on chapters and tables of ISO14005, which can be helpful for a step-by-step EMS implementation approach, in particular for small and medium sized companies.



### EXAMPLES

Brief reference examples are also listed under each requirement for additional context and support.



# 2 ENGAGE LEADERSHIP AND ORGANISE

## 2.1

**Environmental Policy / Statement**

## 2.2

**Leadership Commitment**

## 2.3

**Roles and Responsibilities**



# 2.1 Environmental Policy / Statement

## REQUIREMENTS

### Foundation Level EMS:

A publicly available statement on environmental commitment signed/endorsed by top management and prominently communicated within the company. The statement includes describing the operations and activities to which the EMS applies.

### Advanced Level EMS:

An environmental policy is established reflecting the company's significant environmental risks and aspects. This should be updated as the company's context (e.g., business, products, facilities) changes. Requirements as per ISO14001 §5.2 are fulfilled with the exception that §5.2 e) is not required at this EMS maturity level. The scope of the EMS should be established as per ISO14001 §4.3, §4.4.

### Leading Level EMS:

The Environmental Policy includes a commitment to continual improvement. Requirements as per ISO14001 §5.2 e) are fulfilled.

## EXAMPLES

Company X commits to fulfill environmental legal requirements and to protect the environment. It strives to minimize material environmental impacts from its operations.

The policy has company X manage its environmental requirements and impacts through a management system. Concrete strategic directions and initiatives to accomplish the objectives of the policy are described.

The policy has company X committed to continual improvement of its EMS and its environmental performance.

## IAEG

Transitioning to ISO14001:2015: Section 2. Leadership and Commitment; Section 4. Determining the Scope of the EMS.

### ISO14004

§4.3 Determining the scope of the environmental management system; §4.4 Environmental management system; Practical Help Box 5 – The environmental management system model; §5.2 Environmental Policy; Practical Help Box 7 – Protection of the environment and prevention of pollution; Practical Help Box 8 – Environmental policy and sustainability.

### ISO14005

ISO14005: §5.2 Leadership and commitment; Table A.1.

# 2.2 Leadership Commitment

## REQUIREMENTS

### Foundation Level EMS:

Top management ensures that resources are available to secure compliance to applicable legal requirements.

### Advanced Level EMS:

Leaders ensure resources are available and communicate the importance of an effective EMS. Requirements as per ISO14001 §5.1 a) through g) are fulfilled.

### Leading Level EMS:

Leaders promote continual improvement and support other management roles (as per ISO14001 §5.1 h) and i)).

## EXAMPLES

Financial resources for training, control measures and required external support are secured.

Financial resources for appropriate implementation of EMS elements (e.g., performance, communication and awareness/reporting, objectives) are secured.

Leaders communicate to staff about the importance of continual improvement regarding environmental management.

## IAEG

Transitioning to ISO14001:2015: Section 2. Leadership and Commitment – Appendix 1: Examples of integrating EMS requirements into business processes.

AD-DSL, ADSRT, IPC1754, GHG Reporting Guidance for the Aerospace Industry (documents available on [www.iaeg.com](http://www.iaeg.com)).

## ISO14004

§5.1 Leadership and commitment; Practical Help Box 6 – Integrating the environmental management system into business processes.

## ISO14005

§5.2 Leadership and commitment; Table A.1.

# 2.3 Roles and Responsibilities

## REQUIREMENTS

### Foundation Level EMS:

Identification of roles and responsibilities to ensure compliance with applicable legal requirements.

### Advanced Level EMS:

Top management ensures relevant roles and responsibilities for EMS elements are assigned and communicated (as per ISO14001 §5.3).

### Leading Level EMS:

There are no additional requirements compared to Advanced EMS Maturity level.

## EXAMPLES

Environmental responsibility is assigned to relevant roles within the company (e.g., activities affected by permits, waste management, water discharges).

Relevant job or role descriptions / company processes expressly include environmental responsibilities.

No example.

## IAEG

Transitioning to ISO14001:2015: Section 2. Leadership and Commitment.

### ISO14004

§5.3 Organizational roles, responsibilities and authorities; Practical Help Box 9 – Examples of roles and responsibilities.

### ISO14005

§5.7 Supporting activities and processes; Table A.1.

# 3 MONITOR COMPLIANCE OBLIGATIONS, MANAGE RISK AND CONTROL IMPACT

## 3.1

Identify, Monitor, Manage Environmental Compliance Obligations

## 3.2

Risk and Opportunity Management for Environmental Aspects and Compliance Obligations

## 3.3

Operational Planning and Control

## 3.4

Emergency / Incident Management





# 3.1 Identify, Monitor, Manage Environmental Compliance Obligations

## REQUIREMENTS

### Foundation Level EMS:

All applicable environmental legal compliance obligations are identified, documented and managed as compliance obligations (as per ISO14001 §6.1.3, §6.1.4 a) 2), §6.1.4 b)).

### Advanced Level EMS:

Identification of compliance obligations is expanded beyond legal requirements to include voluntary commitments made by the company (as per ISO14001 §4.2).

### Leading Level EMS:

Actions are integrated into processes and evaluated for effectiveness (as per ISO14001 §6.1.4 b)).

## EXAMPLES

Develop a legal registry by accessing online tool(s), regulatory services/consulting to obtain applicable legal survey/review. It may be more cost efficient to have a consultant support rather than purchase a tool.

Basic legal requirements would include permits, licenses, statutes, and regulations, orders as required or promulgated at local, state, regional or national levels. Basic legal requirements also include agreements with governmental enforcement authorities, customers, utilities, and waste transport and disposal companies. Review should be conducted periodically to identify any new or changed statute or regulation applicable to the company or its operation.

Identify all interested parties (see IAEG Transitioning to ISO14001:2015 Document – Appendix 3 for compliance obligation examples). Align requirements and needs to the identified interested parties and include them in an obligations registry.

The Company reaches out to suppliers/supply chain regarding particular compliance obligations that could impact their ability to demonstrate continuous improvement. The effectiveness can be demonstrated through measurement of KPIs/ performance.

## IAEG

Transitioning to ISO14001:2015: Section 6. Understanding the needs and expectations of interested parties; Appendix 3: Examples of aerospace interested parties, their needs and expectations and compliance obligations.

AD-DSL, ADSRT, IPC1754, GHG Reporting Guidance for the Aerospace Industry (documents available on [www.iaeg.com](http://www.iaeg.com)).

## ISO14004

§4.2 Understanding the needs and expectations of interested parties; Practical Help Box 4 – Examples of interested parties and their needs and expectations; §6.1.3 Compliance obligations; Practical Help Box 14 – Compliance obligations; §6.1.4 Planning action.

## ISO14005

§5.3 Context-based planning; Table A.1.

# 3.2 Risk and Opportunity Management for Environmental Aspects and Compliance Obligations

## REQUIREMENTS

### Foundation Level EMS:

Key Environmental Risks are assessed and managed: The most significant (material) environmental risks to the company's business are identified, documented, and mitigated/controlled (Examples: risks associated with environmental aspects and impacts, including consideration of environmental legal compliance obligations, and regarding subjects such as chemical storage, use of hazardous substances, energy use, water use, and waste generation/disposal).

### Advanced Level EMS:

A methodology is developed and used to fully identify, assess and document the company's activities, products and services, and their associated environmental aspects and impacts, to determine those that are significant. Risk management considers internal and external issues and interested parties (e.g. customers). Requirements as per ISO14001 §4.1 and §6.1.1 through §6.1.4 are fulfilled with the exception that consideration of opportunities and lifecycle perspective are not required at this EMS maturity level.

### Leading Level EMS:

The assessment is expanded to include both risks and opportunities, and a lifecycle perspective of activities, products and services (as per ISO14001 §6.1.1 and §6.1.2).

## EXAMPLES

The company maps inputs and outputs of its site/business operations to understand/identify material environmental risks and appropriate response plans. Response/action plans should consider appropriate resources/funding to ensure compliance.

Example 1: There can be a risk of factory shut down due to public opinion about chemicals storage, which, even if the company is compliant regarding regulatory requirements, could impact its operations due to public pressure. Example 2: When setting up a new paint shop, aspects and related risks have to be identified and mitigated through appropriate control measures. The methodology to determine the risk considers severity and likelihood as well as the sensitivity of the area/environmental conditions.

Opportunities are explored, in addition to risk, such as recycling/closed loop systems promoting circular economy or material substitution projects, working with suppliers and other partners to address natural resource scarcity.

## IAEG

Transitioning to ISO14001:2015: Section 3. Internal and External Issues; Section 5. Life Cycle Perspective; Appendix 2: Applying a life cycle perspective: Examples of activities, aspects, impacts, level of control or influence, risks and opportunities and actions; Section 7. Risks and Opportunities; Appendix 4: Examples of risks and opportunities, and actions relating to compliance obligations and other requirements; Appendix 5: Examples of risks and opportunities, and actions relating to internal and external issues

AD-DSL, ADSRT, IPC1754, GHG Reporting Guidance for the Aerospace Industry (documents available on [www.iaeg.com](http://www.iaeg.com)).

## ISO14004

§4.1 Understanding the organization and its context; Practical Help Box 1 – External issues; Practical Help Box 2 – Environmental conditions, including events; Practical Help Box 3 – Internal issues; §6.1.1 General [§6.1 Actions to address risks and opportunities]; Practical Help Box 10 – Examples of risks and opportunities affecting the organization that need to be addressed; Practical Help Box 11 – Examples of approaches to determine risks and opportunities that need to be addressed; §6.1.2 Environmental aspects; Practical Help Box 12 – Life cycle perspective; Practical Help Box 13 – Possible information sources for determining environmental aspects and environmental impacts; §6.1.4 Planning action; Table A.1 – Examples of activities, products and services and their associated environmental aspects and environmental impacts, risks and opportunities, and actions; Table A.3 – Examples of risks and opportunities that need to be addressed and actions to address them associated with compliance obligations; Table A.4 – Examples of risks and opportunities that need to be addressed and actions to address them associated with other issues and requirements.

## ISO14005

§5.3 Context-based planning; Table 1 – Determining the significance of environmental aspects; §5.4 Operation; Table A.1.

# 3.3 Operational Planning and Control

## REQUIREMENTS

### Foundation Level EMS:

Controls are identified and implemented for environmental legal compliance risks (as per ISO14001 §8.1 lines 1-9<sup>1</sup>).

### Advanced Level EMS:

Processes are in place to address significant environmental aspects, so as to control and minimise related impacts. Measures for such control or influence of outsourced processes are in place. Requirements as per ISO14001 §8.1 (lines 10-12<sup>2</sup>) are fulfilled.

### Leading Level EMS:

Environmental aspects and impacts are managed and controlled with a lifecycle perspective (as per ISO14001 §8.1).

## EXAMPLES

Controls include work instructions, sensors or other engineering controls.

Example 1: Surface treatment suppliers are made aware of REACH requirements, such as authorization requirements for the use of hexavalent chromium, and the associated impacts to the aerospace industry. Example 2: Energy management matures through use of a building management system and/or sensors.

Environmental requirements are included within supplier contracts, with supplier assessments as appropriate.

## IAEG

Transitioning to ISO14001:2015: Section 5. Life Cycle Perspective; Appendix 2: Applying a life cycle perspective: Examples of activities, aspects, impacts, level of control or influence, risks and opportunities, and actions; Appendix 4: Examples of risks and opportunities, and actions relating to compliance obligations and other requirements; Appendix 5: Examples of risks and opportunities, and actions relating to internal and external issues.

AD-DSL, ADSRT, IPC1754, GHG Reporting Guidance for the Aerospace Industry (documents available on [www.iaeg.com](http://www.iaeg.com)).

## ISO14004

§8.1 Operational planning and control; Table A.2 – Examples of activities, products and services and their associated environmental aspects, environmental objectives, targets, programmes, indicators, operational control, and monitoring and measurement.

## ISO14005

§5.4 Operation; Table 2 – Example of operational control; Table A.1.

# 3.4 Emergency / Incident Management

## REQUIREMENTS

### Foundation Level EMS:

Formal arrangements are in place to effectively respond to potential emergency situations, particularly those that pose significant risk of environmental impact.

### Advanced Level EMS:

Processes are in place to prepare for and respond to all likely emergency situations and to evaluate the effectiveness of emergency response. A schedule of test drills is established taking into account the likelihood and potential severity of impact, the drills are exercised, and the responses are improved upon as appropriate. Requirements as per ISO14001 §8.2 are fulfilled.

### Leading Level EMS:

There are no additional requirements compared to Advanced EMS Maturity level.

## EXAMPLES

Arrangements addressing emergency response and incident management include vendor agreements and spill response plans.

Emergency response and evaluation of its effectiveness are incorporated into processes such as training, work instructions, spill kits, and testing requirements. Included is the recording of all incidents.

No example.

## IAEG

Transitioning to ISO14001:2015: Section 6. Understanding the Needs and Expectations of Interested Parties; Appendix 3: Examples of aerospace interested parties, their needs and expectations and compliance obligations.

### ISO14004

§8.2 Emergency preparedness and response.

### ISO14005

§5.4 Operation; Table A.1.

# 4 MANAGE PERFORMANCE, COMMUNICATE AND TRAIN

## 4.1

Establish Environmental Objectives, Targets and Programs

## 4.2

Measure KPIs

## 4.3

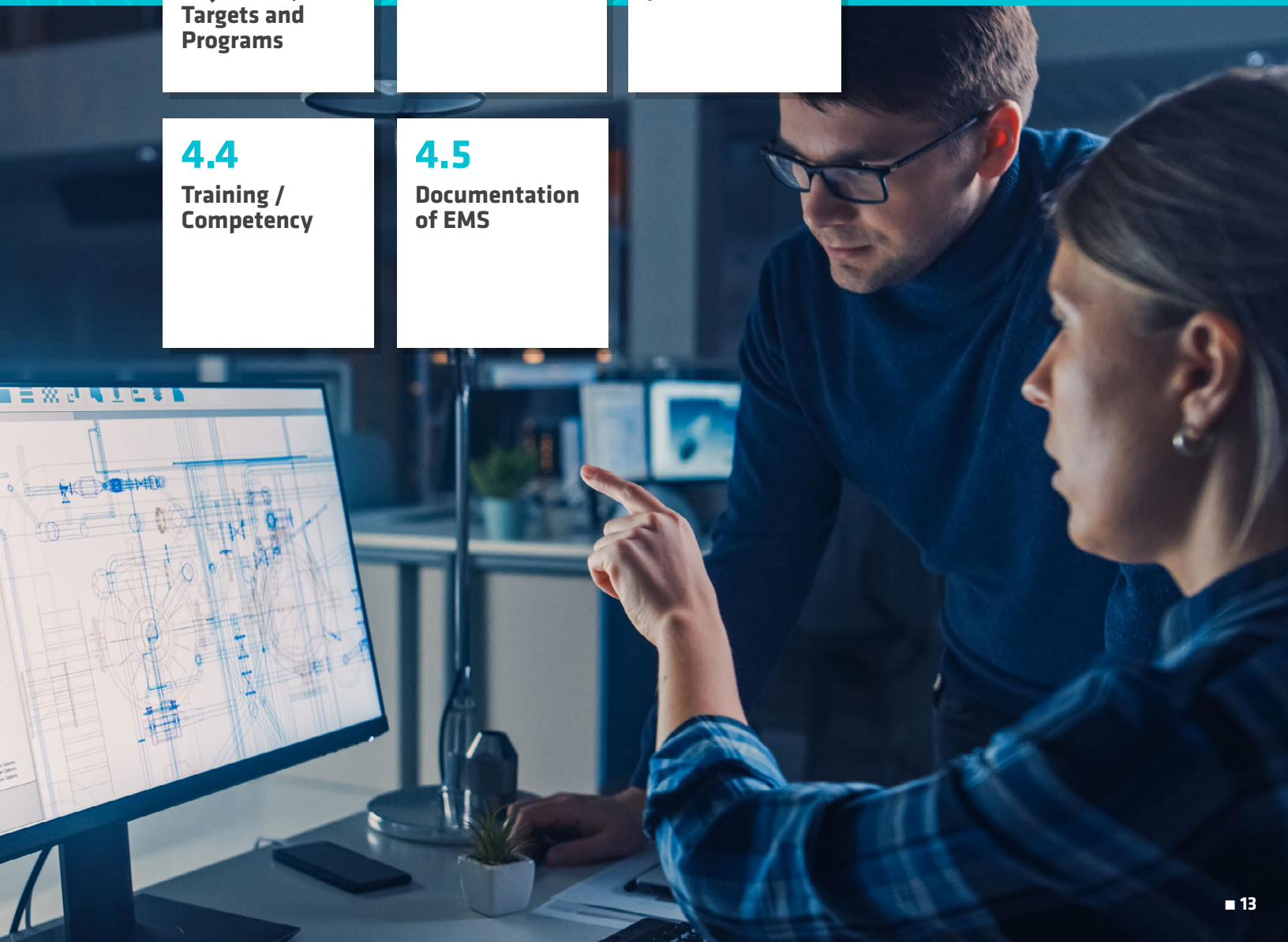
Environmental Communications / Awareness

## 4.4

Training / Competency

## 4.5

Documentation of EMS



# 4.1 Establish Environmental Objectives, Targets and Programs

## REQUIREMENTS

### Foundation Level EMS:

There are no specific requirements regarding environmental objectives in the foundational EMS, but increasing awareness about actual and potential environmental impacts can support maturing towards target setting and improvement actions.

### Advanced Level EMS:

Environmental objectives, performance targets, and actions to achieve them are developed for the environmental impacts identified as significant through the risk and environmental aspect assessment (as per ISO14001 §6.2).

### Leading Level EMS:

Environmental objectives, performance targets and actions to achieve them are developed from a lifecycle perspective.

## EXAMPLES

Awareness is addressed in the policy/commitment statement section, which may include an action plan.

The company policy provides the framework for defining objectives. Climate change is a significant environmental aspect for the company, which is considered in objective statements related to climate change mitigation, adaptation and resource use.

External goals and the industry/sector perspective typically includes longer-term outlook/targets, for example UN Sustainable Development Goals (SDGs) and global reduction targets in civil aviation.

## IAEG

Transitioning to ISO14001:2015: Section 2. Leadership and Commitment; Section 5. Life Cycle Perspective; 7. Risks and Opportunities; Appendix 2: Applying a life cycle perspective: Examples of activities, aspects, impacts, level of control or influence, risks and opportunities and actions; Section 8. Performance Evaluation.

## ISO14004

§5.1 Leadership and commitment; §6.1.2 Environmental aspects; Practical Help Box 12 – Life cycle perspective; §6.2 Environmental objectives and planning to achieve them; Practical Help Box 15 – Performance indicators; Table A.2 – Examples of activities, products and services and their associated environmental aspects, environmental objectives, targets, programmes, indicators, operational control, and monitoring and measurement.

## ISO14005

§5.3 Context-based planning; §5.4 Operation; §5.5 Performance evaluation; Table A.1.

# 4.2 Measure KPIs

## REQUIREMENTS

### Foundation Level EMS:

Monitoring and measuring performance against the foundational IAEG KPIs are in place (see section 7), addressing at a minimum energy/electricity usage, total waste generated, number of incidents (e.g., spills), notices of violations, fines and non-conformities to legal compliance obligations. See section 7 for details. Monitoring, measurement and analysis is undertaken in compliance with legal requirements, where applicable.

### Advanced Level EMS:

Performance against established environmental objectives and IAEG advanced level KPIs (see section 7) are measured, monitored and analysed. This includes GHG emissions (Scope 1 & 2). Requirements as per ISO14001 §9.1.1 are fulfilled.

### Leading Level EMS:

IAEG leading level KPIs (see section 7) are measured and monitored as relevant to the company's business activities.

## EXAMPLES

Basic KPIs are measured. Some objectives and targets can be defined. Collected types of data include annual energy data obtained from invoices/suppliers. KPIs and data collection are aligned with the company's material environmental impacts.

Refer to IAEG GHG Reporting guidance document for the calculation methodology for GHG emissions.

Refer to IAEG GHG Reporting guidance document for the calculation methodology for GHG emissions.

## IAEG

Transitioning to ISO14001:2015: Section 8. Performance Evaluation.

GHG Reporting Guidance for the Aerospace Industry (documents available on [www.iaeg.com](http://www.iaeg.com)).

### ISO14004

§6.2.4 Performance Indicators; Practical Help Box 15 – Performance indicators; §9.1.1 General [§9.1 Monitoring, Measurement, Analysis and Evaluation].

### ISO14005

§5.5 Performance evaluation; Table A.1.

# 4.3 Environmental Communications / Awareness

## REQUIREMENTS

### Foundation Level EMS:

Information relevant to the environmental management system is internally communicated. Top management is aware of EMS commitment and responsibilities.

### Advanced Level EMS:

Internal communication is expanded to include significant environmental aspects, performance and trends, and communication is extended to contractors. A communication process is established. Requirements as per ISO14001 §6.1.2 lines 10-11<sup>3</sup>, §7.3, §7.4.1, §7.4.2 are fulfilled.

### Leading Level EMS:

External communication relative to the EMS, including significant environmental aspects and performance, is conducted considering the needs and expectations of interested parties. Requirements as per ISO14001 §7.4.3 are fulfilled.

## EXAMPLES

An environmental policy/statement is published internally, communicated to all employees. Basic KPI performance is communicated internally and there are employee awareness campaigns.

Environmental rules that are applicable to all employees are communicated/extended to on-site contractors. A communication process is developed with employees to collect feedback/suggestions and to share performance and trends to encourage employee contributions to KPIs and continual improvement.

There are regular refresher trainings for all employees. Communication includes external reporting schemes (e.g., CDP, DJSI, sustainability/performance report) and publications on the company website. A process is established to collect and respond to feedback from community members and other relevant parties.

## IAEG

Transitioning to ISO14001:2015: Section 2. Leadership and Commitment.

### ISO14004

§4.2.1 General [4.2 Understanding the needs and expectations of interested parties]; §7.3 Awareness; §7.4 Communication; Practical Help Box 18 – Environmental management system communication; §8.2 Emergency preparedness and response; Annex A – Table A.3 Examples of risks and opportunities that need to be addressed and actions to address them associated with compliance obligations.

### ISO14005

§5.7 Supporting activities and processes; Table 3 – Example of an SME environmental communication strategy; Table A.1.



# 4.4 Training / Competency

## REQUIREMENTS

### Foundation Level EMS:

Employees responsible for activities affected by environmental legal requirements have the training and competence necessary to account for those requirements in performance of such responsibilities.

### Advanced Level EMS:

Employees with duties related to the EMS and significant environmental aspects are competent through education, training, and experience (as per ISO14001 §7.2).

### Leading Level EMS:

There are no additional requirements compared to Advanced EMS Maturity level.

## EXAMPLES

Employees responsible for activities affected by environmental legal requirements include employees managing hazardous waste storage and/or shipments, managing general Hazardous Material, engaged in activities regulated by permit, and managing emergency response.

Training needs analysis is conducted to ensure all affected roles and responsibilities have been trained, extending to functions such as, Legal, Procurement, Product Design/Engineering.

No example.

## IAEG

Transitioning to ISO14001:2015: Appendix 1: Examples of Integrating EMS Requirements into Business Processes at a Strategic, Functional and Departmental Level.

## ISO14004

Practical Help Box 14 – Compliance Obligations; §7.1 – Resources; Practical Help Box 16 – Human, physical and financial resources; §7.2 – Competence; Practical Help Box 17 – Examples of competence needs; §8.2 – Emergency preparedness and response; Annex A – Table A.2 Examples of activities, products and services and their associated environmental aspects, environmental objectives, targets, programmes, indicators, operational control, and monitoring and measurement.

## ISO14005

§5.7 Supporting activities and processes; Table 1 – Determining the significance of environmental aspects; Table A.1.

# 4.5 Documentation of EMS

## REQUIREMENTS

### Foundation Level EMS:

Documentation/record-keeping is in compliance with legal requirements. EMS-relevant documentation should be kept, such as records of performance measurement against foundational KPIs, copies of internal communications on EMS information, and training records of employees performing activities affected by environmental legal requirements.

### Advanced Level EMS:

Processes and controls are in place to document an effective EMS (as per ISO14001 §7.5).

### Leading Level EMS:

There are no additional requirements compared to Advanced EMS Maturity level.

## EXAMPLES

Documentation includes all record-keeping related to permits, such as maintenance records, training, waste transfer/manifests. The EMS documentation covers all EMS elements of the Foundation level.

Primary focus of documentation is on the implementation of an EMS and the environmental performance. It includes compliance registry, significant environmental aspects, evidence of operational control, management review presentation and minutes of meeting.

No example.

## IAEG

Transitioning to ISO14001:2015: Section 6.3 Considerations/options for implementation [Section 6 – Understanding the Needs and Expectations of Interested Parties].

### ISO14004

§6.1.3.4 Documented information [§6.1.3 Compliance obligations]; §7.4.1 General [§7.4 Communication]; §7.5 Documented information; Practical Help Box 19 – Documented information.

### ISO14005

§5.7 Supporting activities and processes; Table A.1.

# 5 **MANAGE COMPLIANCE AND IMPROVE**

## **5.1**

**Management Review**

## **5.2**

**Supplier EMS Engagement**

## **5.3**

**Non-Conformance and Corrective Action**

## **5.4**

**Compliance Evaluation and Internal Audit**

## **5.5**

**Improvement**



# 5.1 Management Review

## REQUIREMENTS

### Foundation Level EMS:

Environmental legal compliance status and basic KPI performance are regularly included in top management meeting agendas.

### Advanced Level EMS:

Leaders regularly undertake a review of their EMS compliance and environmental performance. Requirements as per ISO14001 §9.3 are fulfilled, with the exception that consideration of opportunities and continual improvement are not required at this EMS maturity level.

### Leading Level EMS:

Management reviews address both risks and opportunities, including opportunities for continual improvement. Requirements as per ISO14001 §9.3 are fulfilled.

## EXAMPLES

The regulatory compliance register is used as an input for compliance status report, focusing the review on non-conformities and actions.

The status of conformity is reported against EMS requirements, objectives and performance trends.

Cross-functional leaders are involved in the management review.

## IAEG

Transitioning to ISO14001:2015: Section 2. Leadership and Commitment; Section 8. Performance Evaluation.

### ISO14004

§9.3 Management review.

### ISO14005

§5.5 Performance evaluation; Table A.1.

# 5.2 Supplier EMS Engagement

## REQUIREMENTS

### Foundation Level EMS:

There are no specific requirements for supplier EMS engagement in the foundational EMS, but dialogue with suppliers around EMS can be initiated as the EMS matures.

### Advanced Level EMS:

Awareness/communication materials are used to educate suppliers on the value of Environmental Management Systems.

### Leading Level EMS:

Awareness/communication materials are used to encourage suppliers to implement an EMS.

## EXAMPLES

The dialogue is based on EMS communication material available on iaeg.com.

The dialogue is based on EMS communication material available on iaeg.com.

The dialogue is based on EMS communication material available on iaeg.com. Through supply chain management/procurement, suppliers are encouraged to develop an EMS to improve their environmental performance. Supplier surveys are performed to understand their environmental performance and communicate with them around the importance of an EMS.

## IAEG

Transitioning to ISO14001:2015: Section 5. Life Cycle Perspective.

ISO14001: 2015 Environmental Management System Implementation (Companies can use the EMS communication on www.iaeg.com to promote environmental management systems).

### ISO14004

No specific guidance in ISO14004.

### ISO14005

No specific guidance in ISO14005.

# 5.3 Non-Conformance and Corrective Action

## REQUIREMENTS

### Foundation Level EMS:

A process is in place to correct non-conformities with legal requirements, mitigate associated environmental impacts, and prevent future similar incidents. Documentation of the process and its application is retained. Requirements as per ISO14001 §10.2 a) are fulfilled.

### Advanced Level EMS:

A process is developed and implemented to conduct root cause analysis and to ensure a proactive approach to incident investigation and analysis. Any necessary corrective actions are taken and the EMS is revised as necessary. The effectiveness of corrective actions is reviewed. Requirements as per ISO14001 §10.2 are fulfilled.

### Leading Level EMS:

There are no additional requirements compared to Advanced EMS Maturity level.

## EXAMPLES

If permit levels are exceeded (for example, permitted air emissions), action is taken to correct the process and reduce emissions to within the required threshold. Report exceedances as required by the permit/regulation.

Root cause analysis methodologies appropriate for SMEs include 'Five Whys' and 'Fishbone' cause analysis. If a Quality Management System is in place, the process for handling non-conformities is used within the EMS to address environmental issues.

A non-conformance/event may occur at one facility and the lessons learned/ corrective actions are shared with all other facilities, as appropriate and relevant.

## IAEG

Transitioning to ISO14001:2015: Section 2. Leadership and Commitment; Section 8. Performance Evaluation; Appendix 1: Examples of Integrating EMS Requirements into Business Processes at a Strategic, Functional and Departmental Level.

### ISO14004

ISO 14004: §10.2 Nonconformity and Corrective Action; Table A.2 – Examples of activities, products and services and their associated environmental aspects, environmental objectives, targets, programmes, indicators, operational control, and monitoring and measurement.

### ISO14005

§5.4 Operation; §5.5 Performance evaluation; §5.6 Improvement; Table A.1.

# 5.4 Compliance Evaluation and Internal Audit

## REQUIREMENTS

### Foundation Level EMS:

Fulfillment of environmental legal requirements is regularly evaluated (as per ISO14001 §9.1.2).

### Advanced Level EMS:

In addition to legal requirements, EMS elements and other environmental compliance obligations are regularly evaluated.

### Leading Level EMS:

An internal audit program is established that reviews all elements of the EMS as well as focusing on material environmental impacts and areas of non-conformance (as per ISO14001 §9.2).

## EXAMPLES

Internal assessments to verify compliance are conducted through internal resources or by external consultants.

Consider requirements of interested parties such as IAEG customers and suppliers.

If a Quality Management System exists with an audit management program, this same process can be used to incorporate environmental audits.

## IAEG

Transitioning to ISO14001:2015: Section 8. Performance Evaluation; Appendix 1: Examples of Integrating EMS Requirements into Business Processes at a Strategic, Functional and Departmental Level.

### ISO14004

§9.1.2 Evaluation of Compliance; §9.2 Internal Audit; Table A.2 – Examples of activities, products and services and their associated environmental aspects, environmental objectives, targets, programmes, indicators, operational control, and monitoring and measurement; Table A.3 – Examples of risks and opportunities that need to be addressed and actions to address them associated with compliance obligations.

### ISO14005

§5.5 Performance evaluation; §5.6 Improvement; Table A.1.

# 5.5 Improvement

## REQUIREMENTS

### Foundation Level EMS:

The maturity of the EMS progressively increases.

### Advanced Level EMS:

The EMS and environmental performance are improved through establishing, and performance towards achieving, objectives and targets (as per ISO14001 §10.1).

### Leading Level EMS:

The organization continually improves the effectiveness of its EMS to enhance environmental performance from a lifecycle perspective (as per ISO14001 §10.3).

## EXAMPLES

The objective to further mature EMS elements in the coming year is set and followed up in the management review.

Targets are set to reduce energy and water consumption in the coming year and followed-up through regular performance monitoring.

Continual improvement focuses on opportunities to improve/enhance the KPI performance.

## IAEG

Transitioning to ISO14001:2015: Section 1. Introduction; Section 2. Leadership and Commitment; Section 8. Performance Evaluation; Appendix 1: Examples of Integrating EMS Requirements into Business Processes at a Strategic, Functional and Departmental Level.

### ISO14004

§5.1 Leadership and commitment; §9.3 Management review; §10.1 General; §10.3 Continual Improvement; Practical Help Box 20 – Examples of improvement.

### ISO14005

§5.2 Leadership and commitment; §5.5 Performance evaluation; §5.6 Improvement; §5.7 Supporting activities and processes; Table A.1.



# 6 GLOSSARY



# 6 Glossary

**AD-DSL** > Aerospace & Defence Declarable Substance List

**AD-SRT** > Aerospace & Defence Substance Reporting Tool

**EMS** > Environmental Management System

**GHG** > Greenhouse Gas

**IAEG** > International Aerospace Environmental Group

**IPC1754** > Standard for Material Declaration for Aerospace and Defence

**ISO** > International Organization for Standardization

**KPI** > Key Performance Indicator

**UN SDG** > United Nations Sustainable Development Goals

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