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Environmental Risks and Opportunities

Determine priorities, plan action and review effectiveness

EMS risks and opportunities extend beyond the significance rating of environmental aspects. They include potential adverse and beneficial effects related to aspects, compliance obligations and relevant context or interested party requirements. A useful process connects these sources to intended EMS outcomes, planned actions and evidence of effectiveness.

Definition

Clause 3.2.10 defines risks and opportunities as potential adverse effects and potential beneficial effects respectively. They concern possible effects; a failure that has already happened also needs correction and, where applicable, corrective action. An opportunity should identify a credible beneficial effect, not merely name a technology or list an activity.

Reference: 3.2.10; 6.1.4; related nonconformity topic 10.2.

Success factors and top management

Section 0.3 explains that commitment across functions, led by top management, supports EMS success. Management can integrate environmental management into business processes, strategy and decisions, align it with business priorities and incorporate environmental governance. Opportunities may help prevent adverse impacts or enhance beneficial impacts while also supporting strategic or competitive benefits.

The Introduction is explanatory, rather than a standalone shall requirement. Certification alone does not guarantee optimal environmental outcomes. The detail and complexity of an EMS depend on context, scope, obligations and activities. Leadership requirements should be read alongside this explanation.

Reference: 0.3; related leadership requirements 5.1; Annex A.5.1.

Source and reading guide

<https://oshisis.com/docs/iso-140012026-environmental-management-systems-requirements-with-guidance-for-use/>

1 The planning requirements in Clause 6.1

Clause	Requirement focus	Connection to risks and opportunities
6.1.1 General	Establish, implement and maintain processes for 6.1.2 to 6.1.5.	Document these processes to the extent needed for confidence that they operate as planned.
6.1.2 Aspects	Determine aspects, associated impacts and significant aspects; consider life cycle and relevant conditions.	Significant aspects can give rise to adverse or beneficial impacts and associated risks and opportunities.
6.1.3 Obligations	Determine and access obligations, determine applicability and account for them in the EMS.	Obligations can generate potential adverse or beneficial effects for the organization.
6.1.4 Risks and opportunities	Consider relevant issues, interested party requirements and scope; determine what needs addressing.	Protect intended outcomes, reduce undesired effects and achieve continual improvement; document the selected risks and opportunities.
6.1.5 Planning action	Plan actions for significant aspects, obligations and identified risks and opportunities.	Integrate actions into EMS or business processes and plan effectiveness evaluation.

Reference: 6.1.1–6.1.5; A.6.1.1–A.6.1.5.

Three related determinations are not interchangeable

- 1) Aspect significance evaluates environmental aspects on the basis of impacts.
- 2) Obligation applicability establishes which requirements apply.
- 3) Risks and opportunities determination considers possible effects on achieving EMS outcomes.

One process can cover all three, or separate linked processes can be used. The Annex prescribes neither a specific method nor a fixed number of steps.

Reference: A.6.1.1; 6.1.2; 6.1.3; 6.1.4.

Documentation without unnecessary forms

Make identified risks and opportunities that need addressing available as documented information. A combined register, linked planning record or other suitable format may work. The standard does not mandate a separate risk register, numerical scoring matrix or probability multiplied by severity formula.

Reference: 6.1.4 documentation statement; 6.1.1; A.6.1.1 and A.6.1.4.

Significance remains environmentally grounded

Environmental criteria are the primary and minimum basis in the Annex guidance. Legal requirements or interested party concerns may increase significance; they should not downgrade an aspect significant on environmental grounds. Business affordability is not a substitute for impact evaluation.

Reference: A.6.1.2 significance criteria; related action planning considerations in 6.1.5.

2 Sources and determination of priorities

Compliance obligations

Identify and access obligations related to environmental aspects, explain applicability and take them into account throughout the EMS. The scope includes applicable legal requirements and other requirements the organization must or chooses to adopt. Examples include permits, licences, court decisions, relevant contracts, community agreements, organizational requirements and adopted voluntary commitments.

Reference: 6.1.3(a–c) and Note; A.6.1.3.

Potential adverse effects can include legal action, damaged reputation or loss of authorization when obligations are not met. Potential beneficial effects can arise from implementing relevant improvements or commitments. These are organizational effects; separately describe associated environmental impacts. An obligation remains applicable even if a business risk score is low.

Reference: 6.1.3 Note; A.6.1.4 examples; A.3. Last sentence is an implementation interpretation of 6.1.3 and 6.1.5.

What to consider during planning

Clause 6.1.4 requires consideration of external and internal issues under 4.1, relevant interested party needs and expectations under 4.2 and the EMS scope under 4.3. Determine risks and opportunities related to aspects, obligations and other relevant issues or requirements that need addressing to assure intended outcomes, prevent or reduce undesired effects and achieve continual improvement.

External environmental conditions affecting the organization are expressly included. For example, drought can impair emission control equipment; flooding can affect assets and mobilize chemicals. Internal capability, resource constraints and worker understanding can also threaten effective controls.

Reference: 6.1.4(a–c) and intended purposes; A.6.1.4.

Source	Illustrative risk	Illustrative opportunity
Aspect and impact	Chemical release contaminates water and undermines environmental performance.	Process redesign prevents release and reduces material loss.
Obligation	Permit requirements are misunderstood and reporting is missed.	Better access and applicability review improves compliance reliability.
Environmental condition	Drought restricts water needed for pollution control.	Suitable water efficiency measures improve resilience.
Internal issue	Language barriers lead to incorrect transfer practice.	Task demonstrations and understandable instructions improve competence.
Interested party requirement	An adopted customer commitment cannot be met by the current process.	Product redesign improves performance and supports the commitment.

Reference: Trainer illustrations based on 6.1.4 and A.6.1.4; confirm actual applicability and evidence.

3 Planning actions and environmental objectives

What action planning must cover

Plan actions addressing significant aspects, compliance obligations and risks and opportunities determined under 6.1.4. Plan how to implement them in EMS processes or integrate them into other business processes and how to evaluate their effectiveness. Consider technological options and financial, operational and business requirements.

Reference: 6.1.5(a–b) and closing paragraph; A.6.1.5.

Prioritization is permitted but needs justification

The Annex explains that not all risks and opportunities require immediate action at once. Prioritize what to do and when based on business needs and environmental goals. This flexibility does not cancel applicable obligations or excuse unmanaged significant aspects. Time critical legal duties and emergency needs still require appropriate arrangements.

Reference: A.6.1.5 prioritization guidance; 6.1.5(a); 6.1.3. Interpretation on obligations and urgency is trainer guidance.

Integrate action into the work that controls the issue

Actions may involve objectives, resources, competence, awareness, communication, documentation, operational controls, emergency response and monitoring. They can also be integrated into design, procurement, human resources, sales or other management systems. The Annex mentions considering best available techniques where economically viable, cost effective and appropriate; it does not require environmental cost accounting.

Reference: A.6.1.5, EMS processes, business integration and technology discussion; 6.1.5(b).

Consideration when setting objectives

Establish objectives at relevant functions and levels, taking into account significant aspects and related obligations and considering risks and opportunities. Objectives must align with policy, be measurable if practicable, monitored, communicated, updated appropriately and documented. Plan actions, resources, owners, completion and evaluation indicators.

The Annex gives significant aspects high priority but does not require one objective per significant aspect. Likewise, a separate objective for every risk or opportunity is not prescribed; suitable controls, competence or emergency arrangements may address some issues. Explain the selected response and how effectiveness will be assessed.

Reference: 6.2.1(a–f); 6.2.2(a–e); A.6.2; A.6.1.5.

Example of an effectiveness test

For spill risk arising from misunderstood instructions, revise instructions and verify task competence. Completion evidence is the revised instruction and assessment record. Effectiveness evidence is correct observed practice and performance of relevant controls. Training attendance alone demonstrates participation, not that the cause of the risk has been controlled.

Reference: Trainer application of 6.1.5(b)(2), 7.2 and 9.1; A.6.1.4 worker language example.

4 Review by top management

Management review inputs

Top management reviews the EMS at planned intervals for continuing suitability, adequacy and effectiveness. Inputs include previous review action status and changes in context, interested party requirements including obligations, significant aspects and risks and opportunities. They also include objective achievement, environmental performance trends, resources, relevant communications including complaints and improvement opportunities.

Reference: 9.3.1; 9.3.2(a–g), especially 9.3.2(b)(4) and 9.3.2(g); A.9.3.

Review effectiveness rather than only register completeness

Ask whether circumstances changed, planned actions were implemented and the actions achieved the intended result. Consider monitoring results, compliance status, audit findings and corrective action trends alongside resource adequacy. A list of risks reviewed is insufficient if management cannot judge what changed or what action is needed.

Reference: 9.3.2(c–g); 6.1.5(b)(2); 9.1.1; A.9.3. Review questions are trainer recommendations.

Required results of the review

Results include conclusions on EMS suitability, adequacy and effectiveness; decisions on improvement opportunities and necessary changes including resources; actions where objectives are not achieved; opportunities for business process integration if needed; and implications for strategic direction. Documented evidence of review results must be available.

Reference: 9.3.3(a–f) and evidence statement.

How Annex A.9.3 explains the review

Suitability concerns how the EMS fits the organization and its business. Adequacy concerns meeting requirements and appropriate implementation. Effectiveness concerns achieving desired results. Review may be integrated into routine management activities and carried out over time; it need not be a separate meeting covering every detail at once. Timing should support effective and timely action.

Reference: A.9.3.

Review question	Decision or evidence to seek
Has water scarcity increased since the previous review?	Updated exposure assessment and appropriate control or resilience action.
Did the language related competence action work?	Observed task performance and further action if competence remains inadequate.
Is a proposed technology opportunity feasible?	Reasoned decision, resources and evaluation plan where selected.
Have obligations or significant aspects changed?	Updated applicability or aspect determination and relevant planning changes.
Were objectives missed or actions ineffective?	Management decisions on changes, resources and follow up.

Reference: Training questions applying 9.3.2–9.3.3, 6.1.4–6.1.5 and A.9.3.

5 Annex guidance and implementation exercise

Relevant Annex connections

Annex reference	Guidance relevant to risks and opportunities
A.3	Clarifies terminology, removes the earlier standalone risk definition and distinguishes environmental impacts from organizational effects.
A.4.1 and A.4.2	Context, environmental conditions and relevant interested party requirements provide sources of risks and opportunities.
A.5.1	Leadership connects the EMS to business processes and organizational direction.
A.6.1.1	Allows one integrated process or linked processes; no prescribed method or fixed steps.
A.6.1.2 and A.6.1.3	Significant impacts and obligations can generate risks and opportunities; applicability and impact significance remain distinct.
A.6.1.4	Expands sources, examples, method flexibility and inputs to actions and objectives.
A.6.1.5 and A.6.2	Explains prioritization, integration, technological options and objective selection.
A.6.3 and A.8.1	Change and external provision can alter exposure and the type or extent of controls.
A.9.3 and A.10.1	Management review and performance evidence guide decisions and improvement.
A.10.2	Explains the EMS preventive role through context and risks and opportunities planning.

Expanded examples in Annex A.6.1.4

Beneficial examples include circular economy redesign, improved land management and biodiversity, employee engagement, analytics and real time data, partnerships, regulatory developments and pollution reduction technology supported by grants. Adverse examples include language barriers, climate related events, inadequate resources, water scarcity affecting pollution controls, supply constraints, changing environmental conditions and noncompliance consequences. These are illustrative sources, not a mandatory checklist for every organization.

Reference: A.6.1.4 examples and method discussion.

Participant exercise and trainer checks

Select one aspect, one obligation and one context issue. For each, describe the source, possible adverse or beneficial effect, affected EMS outcome and why action is needed. Propose an action, responsible role, timing and effectiveness test. Identify what management should review if the issue or results change.

Trainer checks: reject entries that only name a hazard, technology or task without explaining the effect. Check that opportunities are credible, significance and legal applicability are not replaced by business scoring, and action effectiveness is more than completion. Suggested register fields are a design choice, not prescribed columns.

Reference: 6.1.4; 6.1.5; 6.2; 9.3.2–9.3.3; A.6.1.1 and A.6.1.4–A.6.1.5