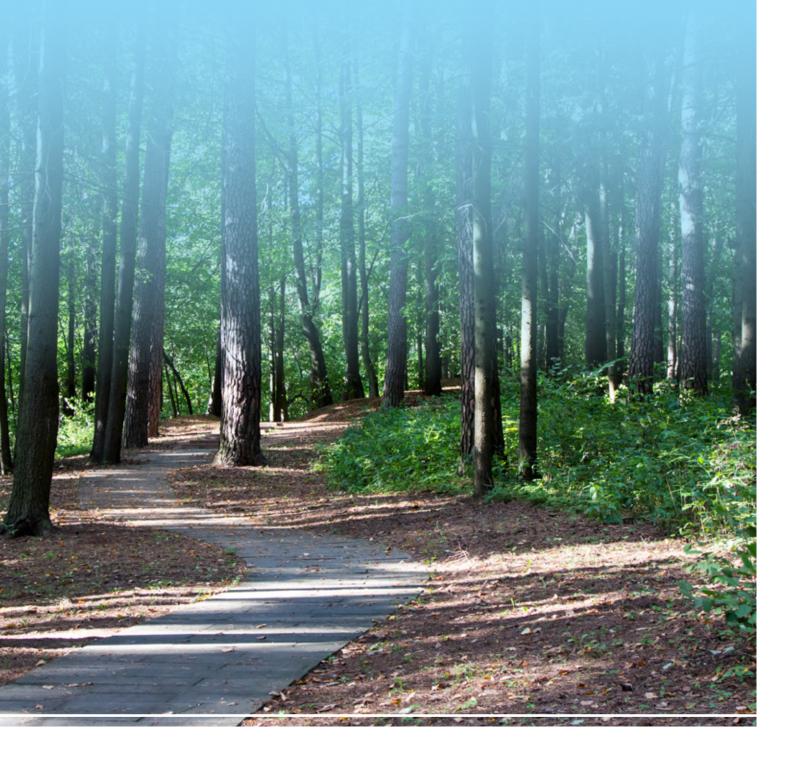# ISO 14001:2015 ENVIRONMENTAL MANAGEMENT SYSTEMS – REQUIREMENTS

Guidance Document

Introduction

This DNV GL guidance document aims to give a basic overview of the changes to ISO 14001, resulting from the review and revision of the 2004 standard. It is not intended to give an exhaustive and in-depth explanation of all requirements in the new standard.

ISO standards are reviewed and revised on a regular cycle, typically every 5-10 years, and 2015 sees ISO 14001:2004 reaching the end of that review process. A draft international standard (DIS) was published, and after extensive review the final draft international standard (FDIS) was published in July. The ISO 14001:2015 standard was published in September 2015.

The ISO organization has developed a common Higher Level Structure (HLS) for management system standards, issued under an ISO Directive;

http://www.iso.org/sites/directives/directives.html

That directive has a series of annexes, of which we are interested in "Annex SL – Proposals for management systems standards". This annex states that all management system standards will use a consistent structure, common text and terminology, and this is enacted through "Appendix 2 – High level structure, identical core text, common terms and core definitions".

Some revised and new standards have already implemented this requirement – for example ISO 27001:2013 Information Security Management Systems (revised) and ISO 55001:2014 Asset Management Standard (new).

ISO 14001 has therefore been revised in accordance with the new HLS, but it also contains additional content.

A whole range of country-level committees feed into the overall ISO committees which meet to decide on the revisions. The committee for ISO 14001 is TC 207. If you are a member of IEMA, or a trade federation, you can access the latest version(s) of the draft Standard(s) and even comment on the content.

After the new standards are published, there will be a transition period for fully complying with them. This period will be 3 years, but it is strongly recommended that you start thinking now about how it will impact you, and review what changes might be needed.

How we can help

We are here to support you during the transition, through;

- direct contact, e.g. with your lead auditor as part of scheduled audits
- open webinars and transition training
- classroom transition training courses, tailored to your needs
- gap analysis, either as a separate activity or combined with scheduled audit activity
- combination of training and gap analysis
- "Questions on the ISO 9001:2015 and ISO 14001:2015 revisions" – LinkedIn discussion group

Layout of ISO 14001:2015

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1. Scope

This section explains the scope of the standard – i.e. what it is for and what it encompasses. It introduces the requirements of an environmental management system which supports the fundamental 'environmental pillar' of sustainability, together with the key intended outcomes of a management system including:

n   enhancement of performance;
n   conforming to compliance obligations;
n   fulfilment of objectives

This section also makes clear that any organization claiming compliance with the revised standard should have incorporated all requirements of the standard within their environmental management system.

2. Normative references

As with ISO 14001:2004 there are no normative references associated with ISO 14001:2015. The clause is included simply in order to maintain consistent alignment with the ISO High Level Structure (HLS).

3. Terms and definitions

This clause lists the terms and definitions that apply to the standard – these are referenced where necessary back to other ISO 14001 standards (e.g. ISO 14031:2013). The ISO 14001:2015 standard extends the list of terms and definitions from the ISO 14001:2004 standard, combining the mandated HLS terms and definitions together with the more specific terms and definitions associated with environmental management systems.

4. Context of the organization

This clause sets out the requirements for an organization to take a high level overview of the business, considering the key internal and external factors which impact it, and how it should respond in the form of a defined management system.

4.1 Understanding the organization and its context

This clause requires the organization to consider a wide range of potential factors which can impact on the management system, in terms of its structure, scope, implementation and operation.

The areas for consideration quoted in the Annex A guidance of the standard are wide-ranging, including;

a) environmental conditions related to climate, air quality, water quality, land use, existing contamination, natural resource availability and biodiversity, that can either affect the organization's purpose, or be affected by its environmental aspects;

b) the external cultural, social, political, legal, regulatory, financial, technological, economic, natural and competitive circumstances, whether international, national, regional or local;

c) the internal characteristics or conditions of the organization, such as its activities, products and services, strategic direction, culture and capabilities (i.e. people, knowledge, processes, systems).

4.2 Understanding the needs and expectations of interested parties

Clause 4.2 requires the organization to determine the need and expectations of "interested parties", both internal and external. Previous versions of the draft standard also contained the term "stakeholder", which many organizations will be more familiar with – the terms are synonymous and there is no need to consider them to be any different. Interested parties could include;

n   Employees
n   Contractors
n   Clients/Customers
n   Suppliers
n   Regulators
n   Shareholders
n   Neighbours
n   Non-Governmental Organizations (NGOs)
n   Parent organizations

What is clear is that whilst the consideration of context and interested parties needs to be relevant to the scope and the standard, the assessment needs to be appropriate and proportionate.

What is also clear is that the output from clauses 4.1 and 4.2 is a key input to the assessment and determination of risks and opportunities required in clause 6. There are various methods and approaches which can be used to capture these inputs. As with any significant revision to standards, hopefully there will be the development of a range of methods and examples for this. Some current examples include;

Internal and External Issues

n Key economic and market development which can impact an organization. Your organization is probably acutely aware of what is happening in its markets but this may be undertaken in a very ad-hoc way,
n Technological innovations and developments is also an area critical to your business success and is also probably being monitored and discussed at numerous levels,
n Regulatory developments - there is a whole range of external regulations being monitored by your organization; if you miss them then it could seriously damage your business, or if you capture early intelligence on them you can more effectively manage any risks,
n Political and other instabilities - if for example you rely on raw materials from one particular country which experiences major instability, your whole business could be jeopardized; or if there are major environmental concerns regarding a source of materials or goods this could have significant reputational consequences,
n Organizational culture and attitudes - an effective and motivated workforce will give you positive impacts, and many organizations canvas feedback from employees.

Internal and External Parties

n Stakeholder engagement exercises are already widely used to consult with interested parties and map out concerns and issues. More often used by larger organizations engaging with corporate social responsibility initiatives,
n Consultation meetings with neighbourhoods and NGOs on environment, planning and development issues are often used by major industrial plants with significant HSE risks,
n Meetings and other interactions with regulators can encompass, for example, critical issues on product specifications and conformity from an environmental perspective, as well as issues with regulators on compliance and developing compliance against emerging requirements and standards,

n Employee meetings, consultations and feedback activities - this should be happening already, but maybe this will prompt more efforts to improve an area which has been at risk of "lip service" to ISO 14001:2004,
n Supplier reviews and relationship management- many organizations are trying to get much more mutual benefit from the supplier-client relationships which are critical to mutual success.
n Client/customer reviews and relationship management - of course this is a fundamental pillar of all standards and a key to success.

It may be that when you reflect on how you capture key issues, and how many interested parties you engage with already, you may be pleasantly surprised. It may be that you only engage with a limited number of internal and external parties, but now is the time to start thinking about whether that is enough, and whether you are missing some good opportunities.

There will be many ways in which to capture this – and hopefully some improved and new approaches might emerge as this part of the standard is considered.

Approaches could include;

n Summary information from the range of existing approaches used as listed above (e.g. a brief report),
n Information summarised as part of inputs to risk and opportunity registers (e.g. for ISO 14001 this could be an additional process in the identification of environmental aspects and impacts),
n Recorded in a simple spreadsheet,
n Logged and maintained in a database,
n Captured and recorded through key meetings.

These clauses are asking organizations to think clearly and logically about what can internally and externally affect their management systems, and to be in a position to show that this information is being monitored and reviewed. It also requires organizations to elevate the discussions to the highest levels, since capturing the above range of information is hard to achieve without a high level approach.

4.3 Determining the scope of the environmental management system

This clause should be familiar to most organizations, since ISO 14001:2004 clause 4.1 clearly requires the definition of the scope of the management system. For ISO 14001:2015 the scoping requirements have become clearer, stronger and require the organization to consider the inputs from 4.1 and 4.2, along with the products and services being delivered.

This should encourage a clearer and more logical approach to scoping, driven by external and internal requirements - it should not be used to exclude activities, processes or locations which have significant environmental aspects and impacts and should not be used to avoid areas with clear compliance obligations. The Annex A guidance uses the term 'credibility' in relation to the setting of the scope of an organization's environmental management systems. The scope should be clearly documented and made publicly available.

These clearer requirements on scoping will drive clarity in the thinking of organizations in scoping the management system. Certification bodies will, as before, look at how an organization has defined its scope, ensuring that this is both appropriate and is reflected accurately by the management system and also in the scope of any certificate issued.

4.4 Environmental management system

This clause basically states that the organization needs to establish, implement, maintain and continually improve a management system in order to achieve its intended outcomes, including enhancement of environmental performance. This should also be familiar to organizations which implement management systems in order to deliver compliance and improvement.

This clause is also more focused in requiring organizations to understand more about the range of processes relevant to the scope of the management system. The term process is defined as; "a set of interrelated or interacting activities which transforms inputs into outputs".

For those who are committed to a management system which is at the core of your business then this will probably be an integral part of your management system. You may however need to review how effectively you connect those processes and understand the influence and impact of those processes on each other and on the business. This should also elevate the system in terms of its importance and value to the business, because it should drive more meaningful analysis of the key business processes and critical aspects of those processes. In practical terms it will require an organization to more fully analyse its processes and ensure that there is good understanding of how they interact with each other - and not operate as isolated procedures without overlap.

Clause 4 introduces some significant innovations to the management system world, and could represent a challenge to some organizations who have not viewed the management system as essential to the business, focused as it is on raising management systems to a higher level and to be more central to the way an organization works – an approach which is entirely correct and logical.

5. Leadership

This clause includes a good proportion of content which will be familiar from ISO 14001:2004 but also introduces some significant changes on overall leadership and commitment and the expectations for top management to engage more fully with the critical aspects of the quality management system.

5.1 Leadership and commitment

This clause encompasses a range of key activities which top management need in order to "demonstrate leadership and commitment with respect to the management system".

Therein lies one of the innovations delivered by the common HLS – top management must show leadership of the management system rather than just demonstrate commitment to it. The standard is driving the oversight of the management system to the highest level of management and making it a key component of the organization and its core business processes and activities.

It doesn't mean that the leadership has to be able to regurgitate the policy or recite the objectives and targets – what it means is that an internal or external interested party should feel entitled to have a discussion with leadership about core and critical aspects of the business, because these are at the heart of the management system.

This sub-clause is a significant innovation to the structure of management systems, but should be viewed as a 'positive challenge' to organizations and an opportunity to enhance the role of the environmental management system and place it at the centre of the business.

5.2 Environmental policy

The Environmental Policy is an important document because it acts as the driver for the organization. It provides the direction and formally establishes goals and commitment.

Top management should ensure that the policy is appropriate, compatible with the strategic direction and not a bland statement that could apply to any business. It should provide clear direction to allow meaningful objectives to be set that align with it.

The new standard focuses on commitment to "protection of the environment" rather than solely addressing "prevention of pollution" in the 2004-edition. This indicates a broader environmental view and more in line with current and future environmental challenges. Commitments to protect the environment can, in addition to prevention of pollution, also include climate change mitigation and adaptation, sustainable resource use and protection of biodiversity and ecosystems.

The policy needs to be communicated to all employees and they need to understand the part they have in its deployment. The policy must be documented and available externally.

5.3 Organizational roles, responsibilities and authorities

For a system to function effectively, those involved need to be fully aware of what their role is. Top management must ensure that key responsibilities and authorities are clearly defined and that everybody involved understands their roles.

Defining roles is a function of planning, ensuring awareness can then be achieved through communication and training. It is common for organizations to use job descriptions or procedures to define responsibilities and authorities.

In ISO 14001:2015 top management are more directly identified as being responsible for ensuring that these aspects of the system are properly assigned, communicated and understood.

The specific role of a Management Representative has been removed – the standard still contains all of the key activities and responsibilities of that previously identified role, but these now lie more directly within the core structure of the organization - including top management. This has a positive implication for the environmental management system- there is a clear expectation for consistent and appropriate ownership from top-to-bottom within an organization.

Clause 5 contains much familiar content, but with greater emphasis on leadership and commitment, and the expectation that top management will be more actively engaged with the management system.

6. Planning

This clause is an excellent addition to ISO 14001:2015, introducing the concept of risk (and opportunity) via the HLS. DNV GL has been in the "risk" business for a very long time – in the field of certification also, since we have been delivering Risk Based Certification since 2004. The approach is based on the audit being built around areas of risk to the organization's business, and auditing in depth to assess whether the organization is managing that risk effectively.

6.1 Actions to address risks and opportunities

In basic terms, this clause requires the organization to;

- n Consider in planning the EMS the context of the organization and the scope of the system 6.1.1;
- n Determine risk and opportunities relating to environmental aspects 6.1.2, compliance obligations 6.1.3 and other issues and requirements identified in 4.1 and 4.2. (6.1.1);
- n Also consider potential emergency situations which could arise and constitute risk (6.1.1)
- n In addition, and as required already by ISO 14001:2004, determine the range of environmental aspects and impacts and determine those impacts which are of significance to the organization within the defined scope (6.1.2);
- n Consider all compliance obligations applicable to the organization and how these may present threats or opportunities (6.1.3);
- n The organization then needs to consider appropriate actions to address the significant aspects/impacts (6.1.2), compliance obligations (6.1.3) and risks and opportunities identified (6.1.1).

The ISO 14001 standard also introduces the concept of "considering a life cycle perspective" for its products, services and activities. This makes the previous concepts of the upstream and downstream aspects clearer, and also introduces language now in common use across other standards as well as Corporate Social Responsibility (CSR) and product assessment standards.

The overall strength of this clause lies in both introducing the principles of risk and opportunity to management systems standards via the HLS, and by connecting it very clearly to the processes defined under Clause 4.

A well-established approach to managing this range of inputs, risk analysis and prioritisation already implemented by many organizations is the use of risk registers, which if properly managed and implemented can effectively identify and assess risks and opportunities across a wide range of areas and issues. There will also be other approaches which result from the various relevant clauses of 14001 (e.g. the results from clause 4.1 and 4.2 and the requirements of 6.1.1, 6.1.2, 6.1.3 and 6.1.4) along with management of change, with an overall analysis and review resulting in objectives, targets and plans.

The depth and complexity of approach will depend significantly on the size and complexity of the organization, as well as other factors which could include level of external regulation, existing requirements for public reporting, shareholder interests, public profile, numbers and types of customers, range and types of suppliers.

Hence there will be a range of approaches that will be appropriate for the wide spectrum of organizations.

6.2 Environmental objectives and planning to achieve them

This clause requires the organization to establish environmental objectives and plans, ensuring that these are clear, measurable, monitored, communicated, updated and resourced.

As part of the planning process, top management needs to set environmental objectives driven by the outputs from the analysis of risks arising from threats and opportunities (i.e. the range of activities undertaken in 6.1), with the aim of delivering compliance, performance improvement and effective risk management. Objectives should be consistent with the Environmental Policy and be capable of being measured.

Documented information needs to kept in relation to objectives and there will need to be evidence regarding monitoring of achievement.

7. Support

An effective environmental management system cannot be maintained or improved without adequate resources. As a function of planning, such resources should be determined and provided. This clause gathers together in one place all the areas relating to the "people, place and procedural" aspects of the management systems. The basic HLS clauses cover the following;

- n 7.1 Resources
- n 7.2 Competence
- n 7.3 Awareness
- n 7.4 Communication
- n 7.5 Documented Information

7.1 Resources

The main intention behind this general requirement is that the organization must determine and provide the resources needed for the establishment, implementation, maintenance and continual improvement of the environmental management- covering all aspects of people and infrastructure.

Whilst not contained in the ISO 14001 standard, the ISO 9001 standards contains a very interesting additional requirement termed "organizational knowledge", which relates to ensuring that the organization understands internal and external knowledge needs and can demonstrate how this is managed. This could also include knowledge management of resources, and ensuring that there is effective succession planning for personnel, and processes for capturing individual and group knowledge. It isn't a documented requirement of ISO 14001 but it is relevant and useful as a general principle.

7.2 Competence

In order to determine competence, competence criteria needs to be established for each function and role relevant to the environmental management system. This can then be used to assess existing competence and determine future needs. Where criteria are not met, some action is required to fill the gap.

Training or reassignment may even be necessary. Retained documented information is required to be able to demonstrate competence. Recruitment and induction programmes, training plans, skills tests and staff appraisals often provide evidence of competence and their assessment. Competency requirements are often included in recruitment notices and job descriptions.

The standard is clear that documented information is required as evidence of competence.

7.3 Awareness

Personnel need to be made aware of the environmental policy, significant aspects and impacts of relevance to their activities, how they contribute to the environmental objectives, environmental performance and compliance obligations, and the implications of failures in compliance.

7.4 Communication

Effective communication is essential for a management system. Top management need to ensure that mechanisms are in place to facilitate this. It should be recognised that communication is two-way and will not only need to cover what is required, but also what was achieved.

With ISO 14001:2015 the importance of internal communications and external communications are emphasized. This is a natural legacy of the existing ISO 14001:2004 and the importance of interested parties in environment issues.

This sub clause also makes very clear the importance of ensuring in relation to environmental reporting and associated communications that the organization shall "ensure that environmental information communicated is consistent with information generated within the environmental management system, and is reliable".

This is an excellent addition and consistent with other corporate reporting standards. It also emphasizes the need to plan and implement a process for communications along the familiar 'who, what, when how' principles.

7.5 Documented information

Most of the ISO 14001:2015 text will be familiar, being similar to the requirements of ISO 14001:2004, but there is some logical broadening to encompass electronic and web- based media. It is worth emphasising here that the standard no longer specifies the need for documented procedures – it is up to the organization to decide what is needed. However, it does specify on a number of occasions the need to maintain or retain documented information, in order to give structure, clarity and evidence of the system being maintained and effective. The term "documented information" now replaces the previously used terms "documented procedure" and "records".

In most areas this clause will not require significant changes, but there are some of the additional requirements which will require some updated thinking. The changes introduced with the HLS in terms of not specifically requiring documented procedures is in reality not a significant issue – organizations still need to look at where documented information (e.g. processes, procedures, data, records) is critical for the management system and its effective operation.

8. Operation

This clause basically represents the operational control and emergency planning parts of the current standard
– the 'engine house' of production and control. For those familiar to ISO 14001:2004 it closely aligns with clauses 4.4.6 and 4.4.7.

8.1 Operational planning and control

The overall purpose of operational planning and control is to ensure that processes are in place to meet the environmental management system requirements and to implement actions identified in 6.1 and 6.2.

There are some clearer and stronger requirements relating to outsourced processes and control of changes. In addition, requirements around the life cycle perspective approach are defined in more detail, covering the key elements of:

- n Environmental requirements for procurement of products and services
- n Establishing controls to ensure environmental requirements are addressed in the design and development phase
- n Communicating environmental requirements to providers (including suppliers, contractors and others)
- n Providing key environmental information on products and services in the context of the life cycle (e.g. end-of-life information).

The organization needs to determine and evaluate the level of control and influence over the different life cycle elements, based on the context of the organization and the consideration of significant environmental aspects, compliance obligations and risks associated with threats and opportunities.

Overall ISO 14001:2015 requires a structured approach to all aspects of the products and services with a strong reference point to life cycle perspective.

As discussed under Clause 7.5, there is no specific requirement for documented procedures in ISO 14001:2015, but there is a clear requirement for ensuring that there is documented information to provide assurance that the processes are in place and implemented effectively. That requirement could cover process maps, procedures, specifications, forms, records, data and other information across any media.

8.2 Emergency Preparedness and Response

This clause is clear in requiring the organisation to establish, implement and maintain processes needed to handle potential emergency situations identified in 6.1.1.

The more detailed requirements cover the need to ensure:
- n That the organization plans actions to mitigate or prevent environmental consequences;
- n The organization responds to actual emergency situations;;
- n Takes action to prevent or mitigate the consequences of emergency situation;
- n Periodic testing of any procedures, plans and response mechanisms;
- n Periodic reviews and updates of procedures and plans based on experience;
- n Provision of relevant information and training to relevant interested parties.

9. Performance evaluation

9.1 Monitoring, measurement, analysis and evaluation

This sub-clause encompasses two key areas:

n Monitoring, measurement, analysis and evaluation of environmental performance and the effectiveness of the system;
n Evaluation of compliance with all legal and other obligations.

The range of monitoring and measurement required needs to be determined for those processes and activities which relate to significant environmental aspects/impacts, environmental objectives, key areas of operational control and processes, and also for evaluating the meeting of compliance obligations.

For the monitoring and measurement determined as required, the organization also needs to determine key criteria and requirements, including:

n Methods for monitoring, measurement, analysis and evaluation;
n Key performance indicators and performance evaluation metrics;
n When, where, how and by whom the monitoring, measurement, evaluation and analysis is carried out;
n Specification, management and maintenance of key monitoring equipment and data handling processes.

The output from these activities provide key inputs for a range of other elements of the environmental management system, including management review, and in determining the internal and external communications required on the environmental management system and its performance.

The other key aspect of this sub-clause is the organization will need to demonstrate how it evaluates compliance with other requirements.

Most organizations fulfil this clause via their internal audit processes, but other compliance audits, checks and reviews can be used.

The organization should define its processes for evaluating compliance with legal and other requirements and must maintain documented information relating to these activities. The process must cover:

n Frequency of evaluation
n Evaluation approach
n Maintain knowledge on compliance status

This area is similar to the requirements under ISO 14001:2004, but with clearer and more detailed requirements. As with ISO 14001:2004, this is not about reviewing which compliance obligations are applicable to the organization, it is about evaluating actual compliance with the range of compliance obligations applicable to the organization.

9.2 Internal audit

Internal audits have always been a key element of ISO 14001 in helping to assess the effectiveness of the environmental management system.

An audit programme needs to be established to ensure that all processes are audited at the required frequency, the focus being on those most critical to the business. To ensure that internal audits are consistent and thorough, a clear objective and scope should be defined for each audit.

This will also assist with auditor selection to ensure objectivity and impartiality. To get the best results, auditors should have a working knowledge of what is to be audited, but management must act on audit results. This is often limited to corrective action relating to any nonconformities that are found, but there also needs to be consideration of underlying causes and more extensive actions to mitigate or eliminate risk.

Follow up activities should be performed to ensure that the action taken as a result of an audit is effective.

This clause is largely the same as ISO 14001:2004.

9.3 Management review

The main aim of management review is to ensure the continuing suitability, adequacy and effectiveness of the quality management system. Only through conducting the review at sufficient intervals (remember, management review does not have to be just one meeting, held once per year), providing adequate information and ensuring the right people are involved can this aim be achieved.

The standard details the minimum inputs to the review process. Top management should also use the review as an opportunity to identify improvements that can be made and/or any changes required, including the resources needed.

The input to management review should include information on;

- n Status of previous actions from management reviews;
- n Changes in internal/external inputs, significant aspects/impacts and compliance obligations;
- n Achievement and progress on environmental objectives;
- n Information on environmental performance;
- n Communications from external interested parties;
- n Opportunities for continual improvement;
- n Adequacy of resources for the environmental management system.

The output from the management review should include any decisions and actions related to;

- n Conclusions on the suitability, adequacy and effectiveness of the system;
- n Continual improvement opportunities,
- n Changes to the environmental management system, including resources;
- n Actions relating to objectives not achieved;
- n Implications for the strategic direction of the organization.

Documented information pertaining to the management review is required to be retained.

This clause is largely the same as ISO 14001:2004, but with some broader topics and alignment with the new language of risks and opportunities, and the context of the organization.

10. Improvement

10.1 General

This states that the organization shall determine opportunities for improvement and implement necessary actions to achieve intended outcomes.

10.2 Nonconformity and corrective action

The main aim of the corrective action process is to eliminate the causes of actual problems so as to avoid recurrence of those problems. It is a reactive process, in that it is triggered after an undesired event (e.g. a pollution event). In essence, the process uses the principles of root cause analysis. A basic approach to problem solving is "cause" and "effect", and it is the cause that needs to be eliminated. Action taken should be appropriate and proportionate to the impact of the nonconformity. As part of the corrective action process, the effectiveness of action taken must be checked to ensure it is effective.

For this clause on nonconformity and corrective action, much of the content is familiar and similar to ISO 14001:2004 but the term "preventive action" has now been completely deleted from the standard. This is because the new HLS is built on the fundamental principles of risk management, which embodies the need to identify risk and manage those risks, with the ultimate goal of risk elimination. The overall approach is one of mitigating and where possible eliminating risk, with the use of corrective action to deal with the impacts of realised risks.

10.3 Continual improvement

This sub-clause of ISO 14001:2015 effectively summarises the key aim of an environmental management system: to continually improve the suitability, adequacy and effectiveness of the environmental management system to enhance environmental performance. This was also embodied in ISO 14001:2004 but is separately stated in ISO 14001:2015. Improvement does not have to take place in all areas of the business at the same time.

Focus should be relevant to risks and benefits. Improvement can be incremental (small changes) or breakthrough (new technology). In reality both methods will be used at some point in time.

ABOUT DNV GL - BUSINESS ASSURANCE

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DNV GL is a leading provider of classification, certification, verification and training services. With our origins stretching back to 1864, our reach today is global. Operating in more than 100 countries, our 16,000 professionals are dedicated to helping our customers make the world safer, smarter and greener. As a world-leading certification body, DNV GL helps businesses assure the performance of their organizations, products, people, facilities and supply chains through certification, verification, assessment, and training services.

We also deliver deep insight and pragmatic support to major companies enabling them to build effective sustainability strategies. Partnering with our customers, we build sustainable business performance and create stakeholder trust.