

ISO 14001:2015 Updates
(Based on Draft International Standard, DIS)

ISO/DIS 14001:2014
comparison with
ISO 14001:2004

Please take note that you are advised to obtain a copy of the standards for this analysis. Some terms have been replaced here to preserve copyright of the ISO. The comparison here only highlights key changes and does not analyse minor grammatical editorial changes.

ISO/DIS 14001:2014	ISO 14001:2004
<p>0.1 Background Introduces the need for environmental management due to the concept of 'three pillars' of sustainable development.</p>	<p>0 Introduction 1st paragraph</p>
<p>0.2 Aim of an environmental management system The DIS provides clear systematic framework and clear aim of the system.</p> <p>The systematic framework is as follows:</p> <ul style="list-style-type: none"> - developing and implementing an environmental policy and objectives; - identifying aspects of its activities, products and services that can result in significant environmental impacts; - establishing systematic processes which consider its context, and take into account its significant environmental aspects, risk associated with threats and opportunities and its compliance obligations; - increasing awareness of its relationship with the environment; - establishing operational controls to manage its significant environmental aspects and compliance obligations; - evaluating environmental performance and taking actions, as necessary. <p>The aim of the system is to contribute to sustainable development by:</p> <ul style="list-style-type: none"> - protecting the environment by preventing or reducing adverse impacts on the environment; - mitigating the potential adverse impact of environmental conditions on the organization; - assisting in conforming to compliance obligations; - enhancing environmental performance; - controlling or influencing the way the organization's products and services are designed, manufactured, distributed, consumed and disposed by using a life cycle perspective that can prevent environmental burdens from being inadvertently shifted elsewhere within the cycle; - achieving financial and operational benefits that can result from implementing environmentally sound alternatives that strengthen the organization's market position; - communicating environmental information to relevant interested parties. 	<p>0 Introduction 2nd & 3rd paragraph</p>

ISO/DIS 14001:2014	ISO 14001:2004
<p>0.3 Success factor New addition - The success of an environmental management system depends on commitment from all levels and functions of the organization, led by top management. Top management can leverage opportunities to reduce or eliminate environmental impacts by:</p> <ul style="list-style-type: none"> - integrating environmental management into its business processes, - strategy and decision making, - aligning them with other business priorities, - and incorporating environmental governance into its overall management system. 	<p>0 Introduction 10th, 11th, 12th & 13th paragraph</p>
<p>0.4 Plan-Do-Check-Act cycle A new model has been introduced which reference the clause numbers 4 to 10 in the DIS. This new model incorporates the PDCA concept.</p>	<p>0 Introduction 4th paragraph</p>
<p>0.5 Contents of this International Standard DIS adopts the "high level structure" of Annex SL (specified in the procedures specific to ISO) in management system standards which will result in improve alignment between these standards. The body of DIS, Clause 1 through 10, contains the requirements used to assess conformity.</p>	<p>0 Introduction 5th, 6th, 7th, 8th & 9th paragraph</p>
<p>1 Scope Similar with the version 2004, the DIS does not state specific environmental performance criteria. Compared with version 2004</p> <ul style="list-style-type: none"> - the DIS does not state the option of certification or self-declaration - the DIS clearly identified the intended outcomes of an environmental management system, which include: <ul style="list-style-type: none"> - enhancement of environmental performance; - conforming to compliance obligations; - fulfilment of environmental objectives. 	<p>1 Scope</p>
<p>2 Normative reference Identical to version 2004, no normative reference is stated.</p>	<p>2 Normative reference</p>
<p>3 Terms and definitions The DIS has <u>amended</u> some terms specific to the environment notably,</p> <ul style="list-style-type: none"> - environmental management system (with emphasis on risk and conformity to compliance obligations) - environmental policy (with emphasis on environmental performance) <p>Some new terms have been added such as environmental condition; life cycle; compliance obligation, documented information, indicator, monitoring, performance, risk and outsource.</p> <p>Relevant terms from ISO 9000 have been included, such as conformity, process, effectiveness, etc.</p> <p>With the more detailed explanations on the terms used in the DIS, interpretation of the requirements is improved.</p>	<p>3 Terms and definitions</p>

ISO/DIS 14001:2014	ISO 14001:2004
4 Context of the organization New clause title	Nil
4.1 Understanding the organization and its context This is a new requirement whereby an organization need to determine external and internal issues (environmental conditions) that may affect the performance of its system. Most organizations do conduct this analysis at management level but now they may have to show evidence of this to auditors.	Nil
4.2. Understanding the needs and expectations of interested parties This is a new requirement. Organizations need to determine the requirements of customers, communities, suppliers, regulators, nongovernment, organizations, investors, and employees etc., which are relevant to its environmental management system. Of the above identified requirements, the organizations need to determine which ones are compliance obligations.	Nil
4.3 Determining the scope of the environmental management system Scope determination is made clearer with consideration of a) external and internal issues (in 4.1 above); b) the compliance obligation (in 4.2 above); c) its activities, products and services; d) its authority and ability to exercise control and influence Definition 3.3 Management System included a note to explain that the scope may include the whole organization, specific functions, specific sections or one or more functions across a group of organizations. Scope is required to be documented and be available to interested parties. The significant environmental aspects (in 6.1.2) within the scope shall be included in the system.	4.1 General requirements
4.4 Environmental management system The provision on how to fulfil the requirements of the environmental management system is made clearer in DIS, where the organization need to consider the processes needed and their interactions. Also, the organization shall consider the knowledge of its context when establishing and maintaining the environmental management system.	4.1. General requirements
5. Leadership New clause title	Nil

ISO/DIS 14001:2014	ISO 14001:2004
<p>5.1. Leadership and commitment Besides ensuring the availability of essential resources, additional commitment from top management shall be demonstrated in DIS, i.e.:</p> <ul style="list-style-type: none"> - taking accountability for the effectiveness of the environmental management system; - ensuring the environmental policy and objectives are compatible with the strategic direction and the context of the organization; - ensuring the integration of the environmental management system requirements into organization's business processes; - communicating the importance of effective environmental management system and of conforming to the environmental management system requirements; - ensuring that the environmental management system achieves its intended outcome(s); - directing and supporting persons to contribute to the effectiveness of the environmental management system; - promoting continual improvement; and - supporting other relevant management roles to demonstrate their leadership as it applies to their areas of responsibility. 	<p>4.4.1 Resources, roles, responsibility and authority 1st paragraph</p>
<p>5.2 Environmental Policy Additional requirement to ensure that the policy is appropriate to the purpose of the organization and commitment to enhance environmental performance.</p> <p>There are some minor editorial changes to enhance clarity and alignment to the new terminology such as:</p> <ul style="list-style-type: none"> - ensuring the policy is available to relevant interested parties instead of public; - includes a commitment to conform to compliance obligations instead of legal requirements and other requirements; - communicated within the organization, including persons doing work under the organization's control instead of communicated to all persons working for or on behalf of the organization. 	<p>4.2 Environmental Policy</p>
<p>5.3 Organizational roles, responsibilities and authorities There is no requirement for appointing a "management representative"; however the responsibilities and authorities still remain. This means that the responsibilities and authorities previously held by a management representative can now be assigned to more than one person.</p>	<p>4.4.1 Resources, roles, responsibility and authority - 2nd & 3rd paragraph</p>
<p>6 Planning</p>	<p>4.3 Planning</p>
<p>6.1. Actions to address risk associated with threats and opportunities New clause title</p>	

ISO/DIS 14001:2014	ISO 14001:2004
<p>6.1.1 General</p> <p>This is a new requirement. The organization shall plan and implement a process to meet the requirements in 6.1, i.e.</p> <ul style="list-style-type: none"> - significant environmental aspects - compliance obligations - risk associated with threats and opportunities - action plan resulting from the above three factors. <p>The planning of the system shall also consider the issues relating to the organization's context and the requirements of interested parties.</p> <p>The output of this planning process is required to be documented.</p> <p>This provides opportunities to incorporate best practices or those practices that provide "competitive edge" to an organization rather than following set rules.</p>	<p>Nil</p>
<p>6.1.2 Significant environmental aspects</p> <p>Identification of environmental aspects and associated environmental impacts needs to take into account of abnormal and potential emergency situation and life cycle perspective.</p> <p>Additional requirement to communicate its significant environmental aspects among the various levels and functions of the organization (previously only awareness of these is required).</p> <p>The following information required to be documented and maintained:</p> <ul style="list-style-type: none"> - criteria used to determine its significant environmental aspects; - environmental aspects and associated environmental impacts; - significant environmental aspects. <p>This clause included a note to explain that significant environmental aspects can result in risk associated with either adverse environmental impacts (threats) or <i>beneficial</i> environmental impacts (<i>opportunities</i>).</p>	<p>4.3.1 Environmental aspects</p>
<p>6.1.3 Compliance obligations</p> <p>Basically there is no major change as compared with 2004 version except the term "legal and other requirements" have been changed to "compliance obligation". This clause included a note to explain that the compliance obligation can have the potential to result in risk associated with either <i>adverse impacts</i> (<i>threats</i>) or <i>beneficial impacts</i> (<i>opportunities</i>) to the organization.</p> <p>The compliance obligation is required to be documented.</p>	<p>4.3.2 Legal and other requirements</p>

ISO/DIS 14001:2014	ISO 14001:2004
<p>6.1.4 Risk associated with threats and opportunities This is new requirement where an organization is required to determine the risk associated with threats and opportunities (in addition to the identification of significant environmental aspects) The purpose is of the determination is to:</p> <ul style="list-style-type: none"> - give assurance that the environmental management system can achieve its intended outcome(s); - prevent, or reduce, undesired effects, including the potential for external environmental conditions to affect the organization; - achieve continual improvement. 	Nil
<p>6.1.5 Planning to take action Besides taking actions to address the significant environmental aspect (in 6.1.2) and the compliance obligations (in 6.1.3), organization also need to take actions addressing the risk associated with threats and opportunities (in 6.1.4).</p> <p>Addition requirement to integrate and implement the actions into environmental management system processes and to evaluate the effectiveness of the actions taken.</p> <p>With the addition of risks/opportunities determination, the requirement on "preventive action" in version 2004 has been deleted.</p>	4.5.3 Nonconformity, corrective action and preventive action
<p>6.2 Environmental objectives and planning to achieve them 6.2.1 Environmental objectives The term "environmental targets" has been removed and a new term, indicator has been introduced in DIS. Besides considering the significant aspects and compliance obligations, organizations need to consider its risks when setting objectives.</p> <p>Although in version 2004, it is implied that the environmental objectives need to be communicated, monitored and measured, the new version is explicit on these requirements.</p> <p>6.2.2 Planning actions to achieve environmental objectives Additional requirement in planning actions (previously programmes), include planning how the results will be evaluated and the indicators for monitoring progress toward achievement of its objectives.</p> <p>Also, the organization shall consider how the actions to achieve environmental objectives can be integrated into the organization's business processes.</p>	4.3.3 Objectives, targets and programmes
<p>7 Support New clause title</p>	Nil
<p>7.1. Resources Compared to version 2004, the examples of resources, i.e. human resources and specialized skills, organizational infrastructure, technology and financial resources have been removed. Thus, the resources needed should not be limited to these items.</p>	4.4.1 Resources, roles, responsibility and authority

ISO/DIS 14001:2014	ISO 14001:2004
<p>7.2. Competence Extension of competency of those whose "tasks have potential to cause a significant environment impacts" to include all who "affect its environmental performance".</p> <p>As per version 2004, organizations have a choice to conduct training or take other actions. A note is included to explain these actions include mentoring, reassignment, hiring or contracting out competent persons.</p>	<p>4.4.2. Competence, training and awareness</p>
<p>7.3. Awareness This clause is separated from competency and training. Expansion of awareness of</p> <ul style="list-style-type: none"> - "the potential consequences of departure from specified procedures" to "the implications of not conforming with the environmental management system requirements including compliance obligations" and - "the environmental benefits of improved personal performance" to "the benefits of enhanced environmental performance" 	<p>4.4.2. Competence, training and awareness</p>
<p>7.4 Communication 7.4.1 General More prescriptive on the internal and external communication process whereby organizations need to determine what, when, how and with whom. When planning its communications process, the organization shall:</p> <ul style="list-style-type: none"> - take into account its compliance obligations; - ensure that environmental information communicated is consistent with information generated within the environmental management system, and is reliable. <p>Organization shall retain documented information as evidence of its communication process.</p> <p>7.4.2 Internal communication Additional requirement to ensure its communication process enables any person doing work under the organization's control to contribute to continual improvement.</p> <p>7.4.3 External communication In version 2004, organization shall decide whether to communicate externally about its significant environmental aspects. The DIS requires the organization to externally communicate information relevant to the environmental management system, as determined by its communication process and as required by its compliance obligations.</p>	<p>4.4.3 Communication</p>

ISO/DIS 14001:2014	ISO 14001:2004
<p>7.5 Documented information 7.5.1 General 7.5.2 Creating and updating 7.5.3 Control of documented information</p> <p>There is no more distinction between "documents" and "record", the new standard uses the term "documented information".</p> <p>That means that organizations have greater freedom on the type of document they need as long as the format is appropriate.</p> <p>The new requirements have been re-worded to make them applicable to any type of media especially in this age of information technology.</p> <p>Other than those highlighted above, there is little change on the control of documented information compared to "control of document" and "control of records".</p>	<p>4.4.4 Documentation 4.4.5 Control of documents 4.5.4 Control of records</p>
8 Operation	4.4 Implementation and operation

ISO/DIS 14001:2014	ISO 14001:2004
<p>8.1 Operational planning and control The term "procedure" / "documented procedure" has been replaced with "process". Additional requirements are:</p> <ul style="list-style-type: none"> - to include actions to address risk associated with threats and opportunity (in 6.1) - to include actions to achieve environmental objectives (in 6.2) - implementing control of processes to prevent deviation from compliance obligation - to address control of planned changes and to review consequences of unintended changes, including taking actions to mitigate adverse effects where necessary. <p>This clause included a note to explain that controls can include engineering controls, procedures, documented procedure, etc. They can be implemented following a hierarchy (e.g. elimination, substitution, administrative) and can be used singly or in combination.</p> <p>Goods and services provided by suppliers and contractors are termed as "outsourced processes" in DIS. The type and degree of control or influence to be applied to these processes shall be defined within the environmental management system.</p> <p>Consistent with a life cycle perspective, the organization shall:</p> <ol style="list-style-type: none"> a) determine environmental requirements for the procurement of products and services, as appropriate; b) establish controls to ensure that environmental requirements are considered in the design process for the development, delivery, use and end-of-life treatment of its products and services, as appropriate; c) communicate relevant environmental requirement(s) to external providers, including contractors; d) consider the need to provide information about potential significant environmental impacts during the delivery of the products or services and during use and end-of-life treatment of the product. <p>Documented information shall be maintained as evidence of control.</p>	<p>4.4.6 Operational control</p>
<p>8.2 Emergency preparedness and response Generally, the essence of this clause is unchanged except some minor grammatical amendment:</p> <ul style="list-style-type: none"> - "mitigate associated adverse environmental impacts" has been revised to "take action to reduce the consequences of environmental emergency situations, appropriate to the magnitude of the emergency or accident and the potential environmental impact" - "prevent adverse environmental impact" has been revised to "take action to prevent the occurrence of environmental emergency situations and accidents" 	<p>4.4.7 Emergency preparedness and response</p>
<p>9 Performance evaluation Previous requirements in clauses 4.5 and 4.6 have been rearranged between clauses 9 and 10.</p>	<p>4.5 Checking 4.6 Management review</p>

ISO/DIS 14001:2014	ISO 14001:2004
<p>9.1 Monitoring, measurement, analysis and evaluation 9.1.1 General The new DIS has been expanded to include</p> <ul style="list-style-type: none"> - What, how, when to monitor and measure - Criteria for evaluating performance, using appropriate indicators - analysis and evaluation. <p>Compared to version 2004, organizations now need to show that they have evaluated the environmental performance and the effectiveness of the environmental management system.</p> <p>The organization shall communicate information relevant to its environmental performance both internally and externally, as determined by its communication process and as required by its compliance obligations.</p> <p>Result of monitoring, measurement, analysis and evaluation is required to be documented.</p>	<p>4.5.1 Monitoring and measurement</p>
<p>9.1.2 Evaluation of compliance Although in version 2004, it is implied that action need to be taken if needed as a consequence of the evaluation, the new version is explicit on the need for actions.</p> <p>Besides that, the DIS requires organization to</p> <ul style="list-style-type: none"> - determine the frequency that compliance will be evaluated; - maintain knowledge and understanding of its status of conforming with compliance obligations. 	<p>4.5.2 Evaluation of compliance</p>
<p>9.2. Internal audit The requirement for documented procedure has been deleted; otherwise the requirements are essentially the same except audit programme shall be planned taking into account of risk associated with threats and opportunities (other than environmental importance of the processes concerned and the results of previous audits).</p>	<p>4.5.5 Internal Audit</p>
<p>9.3. Management review The new DIS is more explicit on the consideration of items to be reviewed:</p> <ul style="list-style-type: none"> - changes including external and internal issues relevant to the environmental management system and its significant environmental aspects and risk associated with threats and opportunities - adequacy of resources <p>The output of review shall include any implications for the strategic direction of the organization.</p>	<p>4.6 Management review</p>

ISO/DIS 14001:2014	ISO 14001:2004
<p>10 Improvement Previous requirements in clauses 4.5 and 4.6 have been rearranged between clauses 9 and 10.</p> <p>The version 2004 "<u>preventive action</u>" has been <u>deleted</u> because the DIS has included actions on risks associated with threats and opportunities instead, which in essence is addressing potential nonconformities.</p>	<p>4.5 Checking 4.6 Management review</p>
<p>10.1 Nonconformity and corrective action This clause has two parts – first part on reaction to nonconformity and the second on preventing recurrence using corrective action process.</p> <p>More explicit as compared with version 2004, organization shall take the following actions whichever applicable, i.e.</p> <ul style="list-style-type: none"> - take immediate action to control and correct it - mitigate adverse environmental impacts; - deal with the consequences <p>For the second part, additional requirements include:</p> <ul style="list-style-type: none"> - determine if similar nonconformities exist or could happen - make changes to the environmental management system, if necessary (version 2004 stated changes to the documentation). 	<p>4.5.3 Nonconformity, corrective action and preventive action</p>
<p>10.2 Continual improvement Besides improving effectiveness of the environmental management system, organizations also need to continually improve its suitability and adequacy to enhance its environmental performance.</p>	<p>Nil</p>