



**CSA
Group**

PLUS 14001

**The ISO 14001 essentials — A practical
guide to implementing the ISO 14001
Standard**



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Preface

This is the first edition of PLUS 14001, *The ISO 14001 essentials — A practical guide to implementing the ISO 14001 Standard*. The primary objective of this implementation handbook is to provide both novice and experienced quality practitioners with a concise, user-friendly guide to understanding and implementing the requirements of the CAN/CSA-ISO 14001 environmental management Standard. This updated handbook replaces earlier versions of some PLUS products published by CSA Group, including PLUS 14000, PLUS 1117, and PLUS 1113.

This handbook uses the latest Standard approved for Canada, CAN/CSA-ISO 14001-2016, as a reference. The content of CAN/CSA-ISO 14001-2016 does not differ significantly from that of the more widely known ISO 14001:2015.

CSA Group would like to acknowledge Nelson Lee and Green Sky Sustainability Consulting for their contribution to ensuring the accuracy and applicability of these tools. This handbook is meant to act as an aid in navigating the Standard and in supporting organizations, large or small, in the successful implementation of the Standard's requirements.

Notes:

- 1) *Use of the singular does not exclude the plural (and vice versa) when the sense allows.*
- 2) *Although the intended primary application of this handbook is stated in its Introduction, it is important to note that it remains the responsibility of the users of the handbook to judge its suitability for their particular purpose.*
- 3) *All inquiries regarding this handbook should be addressed to CSA Group, 178 Rexdale Boulevard, Toronto, Ontario, Canada M9W 1R3.*

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1 Introduction

Background

In 1996, the word “environment” had gained recognition through negative incidents such as the deadly Bhopal disaster, the Exxon Valdez oil spill, and the toxic waste dump in Love Canal. Environmental laws had been in place for decades in western nations, but business leaders were only beginning to understand that environmental impacts could cost their organizations dearly in terms of money (from fines and remediation) and reputation. Before 1996, the wait for environmental approvals could delay projects and was regarded as a substantial cost of doing business. Consequently, ISO 14001, launched in 1996, soon became a valuable tool, but one that only really flourished in Europe and Asia (though it gained some traction in the automotive and forest products sectors in North America). ISO 14001 enabled businesses to manage their environmental impacts effectively and more efficiently, while leveraging their certification as a competitive differentiator for their brand and reputation. Today, there are over 300 000 active certificates, and nearly 1000 have already met the requirements the 2016 edition.

Today, zero waste is within the grasp of governments and industry, though 20 years ago the idea of recycling belonged only to dreamers. Going “beyond compliance” and being “green” were themes that leading management consultants were peddling with only limited success to the multinational companies, such as those in the chemical industry, who had a lot at stake. Their voluntary industry-wide responsible care initiative (designed to improve the environment, health and safety, and emergency response and communications) quite possibly saved the industry in the west from the “not in my backyard” (NIMBY) syndrome. Leaders understood that the accidents of one “bad apple” could tarnish the reputation of all. Most businesses now have a designated environmental or sustainability representative. Some of these representatives sit at the highest levels of their organizations. The realization that the environment and society must be considered when economic development is planned has become widespread.

This new edition of the ISO 14001 implementation handbook can help organizations move toward sustainability using the “Plan-Do-Check-Act” approach that has proven successful for decades in many sectors.

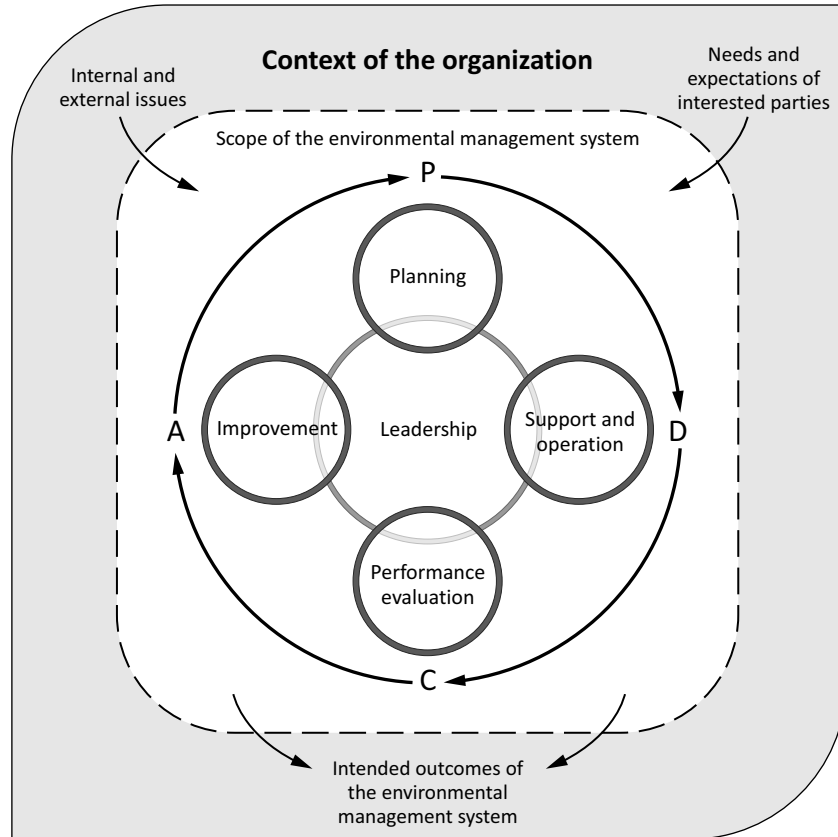
How to use this handbook

This implementation handbook is intended to be used alongside CAN/CSA-ISO 14001, which is available through the CSA Group website <http://shop.csa.ca/en/canada/page/home>.

This handbook recognizes that many organizations will be managing their environmental aspects either through an existing EMS or just as a requirement of doing business. Consequently, each chapter begins with a handy list to remind you of what your organization might already have in place to help you get started in developing or enhancing your EMS.

This handbook contains tips and tools that refer to most clauses of CAN/CSA-ISO 14001, which are intended to be helpful aids and to stimulate thinking about useful approaches.

The bulk of the handbook describes CAN/CSA-ISO 14001 requirements to better illustrate the intent of the Standard.



CAN/CSA-ISO 14001 — 2016 edition

The 2016 edition of CAN/CSA-ISO 14001 describes how the “Plan-Do-Check-Act” (PDCA) model has been adapted for its most recent publication. There are several aspects to consider:

- motivations for, and influences on, the EMS — Clause 4
- the impact of leadership on all elements of the EMS — Clause 5
- Plan-Do-Check-Act (PDCA)
- planning — Clause 6
- support and operation — Clauses 7 and 8
- performance evaluation — Clause 9
- improvement — Clause 10
- results or outcomes of the EMS on the organization, society, and the environment

Other business management systems

The revision of ISO 14001 was not accomplished in a vacuum. Rather, those responsible for what are termed “management systems standards” worked together to develop a common framework that would improve management systems and make integration much easier. Now each management system shares the same framework for terms and definitions, the context of the organization, leadership, planning, support, operation, performance evaluation, and improvement structure. ISO 9001

(Quality) has also been released. Work is under way for a new health and safety management system (ISO 45001). Eventually, the energy management system (ISO 50001) will be revised. These four standards cover many of the requirements that businesses must fulfill to move towards sustainability. With the common framework, it should be a relatively straightforward process to integrate these requirements when expanding the scope of management systems. The Plan-Do-Check-Act model remains, as does the commitment to auditing, management reviews, and continual improvement. Investing in ISO management systems standards through CSA Group just became smarter and more powerful! Proceed with confidence.

Layout of this handbook

The handbook is divided into four sections that cover most of the CAN/CSA-ISO 14001 requirements. This handbook, together with the CAN/CSA-ISO 14001 Annex, should give even a newcomer to EMS a solid grasp of what is intended and how to achieve an organization's intended outcomes. In this handbook, extracted text from the 2016 edition of CAN/CSA-ISO 14001 will be presented in shaded boxes, as shown:

Extracted text of CAN/CSA-ISO 14001

2 Building the foundation

What do you already have in place?

- Are you aware of the relationship between environmental management systems and your organization?
- Have you identified organizational champions and sponsors of environmental management, and ensured they have adequate time and resources available?
- Have you looked for other internal resources and expertise (e.g., those with experience in management systems)?
- Have you secured commitment from senior leadership?
- Have you identified resources pertaining to your industry from associations or governments?
- Have you developed and communicated an organizational policy on environmental management?
- Does your organization have roles and responsibilities for all personnel defined by function and level?

Let's get started

In this chapter, we discuss the first of the four aspects of our EMS implementation and development model. This chapter will help you build a firm foundation that includes gaining support and commitment from workplace stakeholders and understanding the broader involvement of interested parties. This happens through thoughtful consideration and articulation of why and how you will develop an EMS.

Considering an environmental management system (EMS)

At its most basic, an EMS enables organizations to track, monitor, report on, and minimize the impact they have on the environment. It includes considerations ranging from the emissions of a manufacturing plant to recycling programs in an office. A consideration of life cycle impacts has been added in the 2016 edition. The following table illustrates typical impacts:

Impacts on the environment

Activities	Impacts	Consequences
Industry and utilities	Air pollutants	Health impacts, contributions to the ozone layer, acid rain, smog, climate change
Destruction of forests	Air emissions, removal of important habitats, carbon sinks, damage to local climate ecosystems	Health and food impacts, changes to water and rain availability, loss of soil, pollution of water bodies
Food products and consumables sector	Impacts associated with raw materials, packaging, spoilage or poor quality, one-time use/ disposables	Landfills, incinerators, composting, consumption, scarcities
Tourism	Impacts associated with raw materials, packaging	Landfills, incinerators, consumption, scarcities
Transportation	GHG emissions, some air pollutants from fossil fuel combustion in aviation, motoring, and shipping	Climate change, ocean acidification, smog, ground-level ozone
Commercial, institutions, offices	GHG emissions, some air pollutants from fossil fuel combustion for heating or electricity	Climate change, ocean acidification, smog, ground-level ozone
Agriculture	Degradation of soil, impact on water bodies, fixing nutrients, degrading soil, releasing toxic and persistent chemicals	Dead zones in lakes and seas, harm to fish and birds, algal blooms, competition for water
Resource extraction	Consumption and contamination of water and groundwater, consumption of energy for water and wastewater treatment	Competition for water; harm to fish, birds, and animals, GHG emissions

Terms and concepts

<p>management system — set of interrelated or interacting elements of an organization (3.1.4) to establish policies and objectives (3.2.5) and processes (3.3.5) to achieve those objectives.</p> <p>Note 1 to entry: A management system can address a single discipline or several disciplines (e.g., quality, environment, occupational health and safety, energy, financial management).</p> <p>Note 2 to entry: The system elements include the organization's structure, roles and responsibilities, planning and operation, performance evaluation and improvement.</p> <p>Note 3 to entry: The scope of a management system can include the whole of the organization, specific and identified functions of the organization, or one or more functions across a group of organizations.</p>
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FAQs

What does environmental management mean?

At environmentally sustainable organizations, senior management is responsible to ensure the EMS meets the intent of CAN/CSA-ISO 14001 and is established, implemented, maintained, and continually