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Handbook

Managing environment-related risk

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PREFACE

This Handbook was prepared by the Joint Standards Australia/Standards New Zealand Task Group, Environmental Risk Management, operating under and with guidance from Committee OB-007, Risk Management, to supersede HB 203:2006.

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The Handbook was initially published in 2000, revised for reissue in 2004 and in 2006.

These three editions referred to AS/NZS 4360, *Risk management*, which subsequently formed the bases of ISO 31000:2009, *Risk management—Principles and guidelines*. The International Standard was then adopted as AS/NZS 31000:2009.

AS/NZS ISO 31000 ('the Standard') describes the principle framework and process for managing risk effectively. The Standard recommends that managing risk should be integrated within an organization's processes for overall governance, management, reporting etc. This Handbook expands on and explains these elements and provides advice about applying the standard to activities involving environment-related risk.

The vocabulary in this Handbook is aligned with defined terms in the Standard, and other terms in ISO Guide 73, *Risk management—Vocabulary*. The Handbook uses some specific terms from AS ISO 14050, *Environmental management—Vocabulary*, and these are attributed in the text. These, and other terms, are defined in the Glossary (Appendix B).

The Handbook contains illustrative examples. Care is needed in directly applying these to particular situations or risk management activities where the context of their intended use should be carefully considered and, where appropriate, modifications or adjustments made to these tools.

This Handbook is intended to help individuals and organizations to—

- develop a clear understanding of environment-related risks;
- manage environment-related risk effectively and in a manner that is integrated with other risks across the organization;
- make well informed decisions associated with environment-related risks; and
- provide a consistent terminology when discussing the environment, environment-related risk and risk management.

The audience for this Handbook includes organizations that may have very different environment-related objectives:

- Organizations with defined responsibilities for protecting the environment, typically government regulators and planning organizations. The scope of what is included in the environment for these bodies will be defined by legislation.
- Commercial and other organizations whose activities may have an impact on the environment.

- Organizations whose activities necessarily create environmental impacts.
- Communities of people who wish to protect the environment in which they live.
- Groups that take on roles to protect the environment or part of it.
- Organizations that may be affected by the environment.

This Handbook also aims to communicate with the very large population of regulators, scientists, environmental scientists and environmental engineers who use a different risk paradigm and a different language from the one in the Standard. Many of them operate within the risk-based frameworks of the United States Environmental Protection Agency, the European Registration, Evaluation, Authorisation and Restriction of Chemical Substances (REACH) Regulation, the World Organization for Animal Health (OIE) Standards, the International Plant Protection Convention (IPPC) and the Codex Alimentarius Commission (CODEX) Standards, amongst others. This document uses language that will be understood by these practitioners while still conveying the structure and overall message of the Standard. Appendix D contains a comparison with terminology used in these jurisdictions.

Section 1 introduces fundamental concepts and principles for managing risk effectively. It explains the meaning of 'environment' as used in this Handbook, outlines the distinctive characteristics of environment-related risk that impact on decision making in organizations and criteria that need to be considered during decision making.

Section 2 discusses the risk management principles outlined in the Standard and how they apply to managing risks related to the environment. It also describes the 'Framework' needed to reflect these principles and provide the internal capability to consistently apply the risk management process.

Section 3 describes how to apply the risk management process specified in the Standard where the organization has environment-related objectives or where the environment represents a source of risk.

This Handbook contains a glossary of terms as part of a series of Informative Appendices.

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Handbook**Managing environment-related risk**

SECTION 1 INTRODUCTION

1.1 THE ENVIRONMENT, RISK AND RISK MANAGEMENT

The approach for managing risk on which this Handbook relies is that adopted internationally in ISO 31000:2009 and its Australian/New Zealand adoption as AS/NZS ISO 31000:2009 (the Standard). This Handbook discusses how the Standard can be used to help an organization* manage environment-related risks, which include risks to the environment and from the environment.

Meaning of 'environment'

There are different meanings and sources of definition of 'environment', some of which are expressed in law or in standards and reflect the purpose of those documents (see Appendix C for some examples). When managing environment-related risk, the organization should select and record the definition of 'environment' that reflects its objectives (including any statutory or other obligations) and apply this when—

- designing, monitoring, reviewing or improving the risk management framework (see 2.4, 2.5, 2.6); and
- establishing the context in the risk management process (see 3.3.1).

The Handbook uses some specific terms from ISO 14050:2004, *Environment management—vocabulary*, and these are attributed in the text. These, and other terms, are defined in the Glossary (Appendix B). The definition of environment in ISO 14050 is [the] 'surroundings in which an organization operates, including air, water, land, natural resources, flora, fauna, humans and their interrelations'

NOTE: 'Surroundings' in this text extend from within an organization to the global system.

This definition of environment is very broad, and includes, for example, human social issues, as well as well as matters relating to ecology and sustainability. The Standard applies to the management of all risks, therefore this Handbook is applicable to all risks arising from the organization's definition of environment.

Managing environment-related risk may require consideration of impacts on the environment as well as impacts on the organization arising from its interactions with the environment.

Impact on the environment

Human activities can impact flora and fauna; human health and wellbeing; human, social and cultural welfare; earth, air and water resources; energy and climate.

* 'Organization' – any public, private or community enterprise, association, group or individual.