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**Adventure tourism — Safety  
management systems —  
Requirements**

*Tourisme d'aventure — Systèmes de management de la sécurité —  
Exigences*



Reference number  
ISO 21101:2014(E)

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Case postale 56 • CH-1211 Geneva 20  
Tel. + 41 22 749 01 11  
Fax + 41 22 749 09 47  
E-mail [copyright@iso.org](mailto:copyright@iso.org)  
Web [www.iso.org](http://www.iso.org)

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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is Technical Committee ISO/TC 228, *Tourism and related services*.

## Introduction

### 0.1 Adventure tourism

Adventure tourism is a global industry growing in importance. Whether provided on a commercial, not-for-profit or charitable basis, adventure tourism activities involve an accepted, inherent element of risk and challenge. Taking risks brings rewards but also brings dangers. In order to maximize the rewards, adventure tourism activity providers need to operate as safely as practicable.

This International Standard, ISO/TR 21102 and ISO 21103 provide a basis for adventure tourism activity providers to plan, communicate about, and deliver adventure tourism activities as safely as practicable.

Effective implementation of this International Standard, ISO/TR 21102 and ISO 21103 will help consumers make informed choices about activities and providers.

### 0.2 Adventure tourism standards

The purpose of adventure tourism standards is to set out the minimum requirements for safety management systems and communication to participants. They are independent entities since they apply to different aspects of adventure tourism.

- this International Standard specifies how the adventure tourism organization manages its operations in terms of safety;
- ISO/TR 21102 provides data on the minimum competence of adventure tourism activity leaders;
- ISO 21103 specifies the minimum information to be communicated to participants and potential participants before, during and after the activity to ensure safety.

### 0.3 Purpose of this International Standard

The purpose of this International Standard is to set out the minimum requirements for a safety management system for adventure tourism activity providers.

A risk management process is an integral part of a safety management system. A safety management system provides the framework for continual improvement and contributes to the delivery of safe adventure tourism activities.

The safety management system approach encourages providers to analyse their adventure tourism activities, understand participants' requirements, define the processes that ensure safety, and keep these processes under control.

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# Adventure tourism — Safety management systems — Requirements

## 1 Scope

This International Standard outlines the requirements of a safety management system for adventure tourism activity providers.

A provider can use this International Standard for the following:

- a) to enhance safety performance;
- b) to meet expectations for participant and staff safety;
- c) to demonstrate safe practice;
- d) to support compliance with applicable legal requirements.

This International Standard can be used by all types and sizes of providers, operating in different geographic, cultural and social environments.

## 2 Normative references

There are no normative references.

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

### 3.1

#### **organization**

person or group of people that has its own functions with responsibilities, authorities and relationships to achieve its *objectives* (3.9)

Note 1 to entry: The concept of organization includes, but is not limited to, sole-trader, company, corporation, firm, enterprise, authority, partnership, charity or institution, or part or combination thereof, whether incorporated or not, public or private.

### 3.2

#### **interested party**

person or *organization* (3.1) that can affect, be affected by, or perceive itself to be affected by a decision or activity

### 3.3

#### **requirement**

need or expectation that is stated, generally implied or obligatory

Note 1 to entry: “Generally implied” means that it is custom or common practice for the organization and interested parties that the need or expectation under consideration is implied.

Note 2 to entry: A specified requirement is one that is stated, for example, in documented information.

## 3.4 management system

set of interrelated or interacting elements of an *organization* (3.1) to establish *policies* (3.7) and *objectives* (3.9) and *processes* (3.13) to achieve those objectives

Note 1 to entry: A management system can address a single discipline or several disciplines.

Note 2 to entry: The system elements include the organization's structure, roles and responsibilities, planning, operation, etc.

Note 3 to entry: The scope of a management system may include the whole of the organization, specific and identified functions of the organization, specific and identified sections of the organization, or one or more functions across a group of organizations.

## 3.5 top management

person or group of people who directs and controls an *organization* (3.1) at the highest level

Note 1 to entry: Top management has the power to delegate authority and provide resources within the organization.

Note 2 to entry: If the scope of the *management system* (3.4) covers only part of an organization, then top management refers to those who direct and control that part of the organization.

## 3.6 effectiveness

extent to which planned activities are realized and planned results achieved

## 3.7 policy

intentions and direction of an *organization* (3.1), as formally expressed by its *top management* (3.5)

## 3.8 safety policy

policy of an *organization* (3.1) in regard to its safety performance

Note 1 to entry: The safety policy provides a structure for action and definition of its safety objectives.

## 3.9 objective

result to be achieved

Note 1 to entry: An objective can be strategic, tactical, or operational.

Note 2 to entry: Objectives can relate to different disciplines (such as financial, health and safety, and environmental goals) and can apply at different levels (such as strategic, organization-wide, project, product and *process* (3.13)).

Note 3 to entry: An objective can be expressed in other ways, e.g. as an intended outcome, a purpose, an operational criterion, as an adventure tourism safety objective, or by the use of other words with similar meaning (e.g. aim, goal, or target).

Note 4 to entry: In the context of adventure tourism safety management systems, adventure tourism safety objectives are set by the organization, consistent with the adventure tourism safety policy, to achieve specific results.

## 3.10 risk effect of uncertainty

Note 1 to entry: An effect is a deviation from the expected — positive or negative.

Note 2 to entry: Uncertainty is the state, even partial, of deficiency of information related to, understanding or knowledge of, an event, its consequence, or likelihood.



Note 3 to entry: Risk is often characterized by reference to potential *events* (3.38) and *consequences* (3.39), or a combination of these.

Note 4 to entry: Risk is often expressed in terms of a combination of the consequences of an event (including changes in circumstances) and the associated *likelihood* (3.41) of occurrence.

### 3.11

#### **competence**

ability to apply knowledge and skills to achieve intended results

### 3.12

#### **documented information**

information required to be controlled and maintained by an *organization* (3.1) and the medium on which it is contained

Note 1 to entry: Documented information can be in any format and media and from any source.

Note 2 to entry: Documented information can refer to:

- the *management system* (3.4), including related *processes* (3.13);
- information created in order for the organization to operate (documentation);
- evidence of results achieved (records).

### 3.13

#### **process**

set of interrelated or interacting activities which transforms inputs into outputs

### 3.14

#### **performance**

measurable result

Note 1 to entry: Performance can relate either to quantitative or qualitative findings.

Note 2 to entry: Performance can relate to the management of activities, *processes* (3.13), products (including services), systems or *organizations* (3.1).

### 3.15

#### **outsource** (verb)

make an arrangement where an external *organization* (3.1) performs part of an organization's function or *process* (3.13)

Note 1 to entry: An external organization is outside the scope of the *management system* (3.4), although the outsourced function or process is within the scope.

### 3.16

#### **monitoring**

determining the status of a system, a *process* (3.13) or an activity

Note 1 to entry: To determine the status, there may be a need to check, supervise or critically observe.

### 3.17

#### **measurement**

*process* (3.13) to determine a value

**3.18  
audit**

systematic, independent and documented *process* (3.13) for obtaining audit evidence and evaluating it objectively to determine the extent to which the audit criteria are fulfilled

Note 1 to entry: An audit can be an internal audit (first party) or an external audit (second party or third party), and it can be a combined audit (combining two or more disciplines).

Note 2 to entry: "Audit evidence" and "audit criteria" are defined in ISO 19011.

**3.19  
conformity**

fulfilment of a *requirement* (3.3)

**3.20  
nonconformity**

non-fulfilment of a *requirement* (3.3)

**3.21  
correction**

action to eliminate a detected *nonconformity* (3.20)

**3.22  
corrective action**

action to eliminate the cause of a *nonconformity* (3.20) and to prevent recurrence

**3.23  
continual improvement**

recurring activity to enhance *performance* (3.14)

**3.24  
incident**

*event* (3.38) leading to an accident or having the potential to lead to an *accident* (3.25)

Note 1 to entry: The term "incident" includes "almost accident" and "*accident* (3.25)".

Note 2 to entry: An incident in which no disease, injury, damage or any other loss takes place is also called "almost accident".

**3.25  
accident**

*incident* (3.24) resulting in death, disease, injury or other damage

**3.26  
hazard**

source of potential harm

Note 1 to entry: Hazard can be a risk source.

[SOURCE: ISO Guide 73:2009, 3.5.1.4]

**3.27  
hazard identification**

process of recognizing the existence of a *hazard* (3.26) and defining its characteristics

**3.28  
risk identification**

process of finding, recognizing and describing *risks* (3.10)

Note 1 to entry: Risk identification involves the identification of risk sources, *events* (3.38), their causes and their potential *consequences* (3.39).

Note 2 to entry: Risk identification can involve historical data, theoretical analysis, informed and expert opinions, and the needs of *interested parties* (3.2).

### 3.29

#### **risk assessment**

overall process of *risk identification* (3.28), *risk analysis* (3.30) and *risk evaluation* (3.32)

[SOURCE: ISO Guide 73:2009, 3.4.1]

### 3.30

#### **risk analysis**

process to comprehend the nature of *risk* (3.10) and to determine the *level of risk* (3.31)

Note 1 to entry: Risk analysis provides the basis for *risk evaluation* (3.32) and decisions about *risk treatment* (3.33).

Note 2 to entry: Risk analysis includes risk estimation

[SOURCE: ISO Guide 73:2009, 3.6.1]

### 3.31

#### **level of risk**

magnitude of a *risk* (3.10) or combination of risks, expressed in terms of the combination of *consequences* (3.39) and their *likelihood* (3.41)

[SOURCE: ISO Guide 73:2009, 3.6.1.8]

### 3.32

#### **risk evaluation**

process of comparing the results of *risk analysis* (3.30) with risk criteria to determine whether the *risk* (3.10) and/or its magnitude is acceptable or tolerable

Note 1 to entry: Risk evaluation assists in the decision about *risk treatment* (3.33).

[SOURCE: ISO Guide 73:2009, 3.7.1]

### 3.33

#### **risk treatment**

process to modify *risk* (3.10)

Note 1 to entry: Risk treatment can involve:

- avoiding the risk by deciding not to start or continue with the activity that gives rise to the risk;
- taking or increasing risk in order to pursue an opportunity;
- removing the risk source;
- changing the *likelihood* (3.41);
- changing the *consequences* (3.39);
- sharing the risk with another party or parties including contracts and risk financing; and
- retaining the risk by informed decision.

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Note 2 to entry: Risk treatments that deal with negative consequences are sometimes referred to as “risk mitigation”, “risk elimination”, “risk prevention” and “risk reduction”.

Note 3 to entry: Risk treatment can create new risks or modify existing risks.

[SOURCE: ISO Guide 73:2009, 3.8.1]

### **3.34 safety**

state in which the *risk* (3.10) of harm (to persons) or damage is limited to an acceptable level

### **3.35 adventure tourism activity**

adventure activity for tourism purposes that involves a degree of instruction or leadership and a deliberate accepted element of *risk* (3.10)

Note 1 to entry: An accepted element of risk means that the participant has a minimum understanding about the risk involved.

### **3.36 adventure tourism activity provider**

individual or *organization* (3.1) having overall responsibility for all aspects of the provision of *adventure tourism activities* (3.35)

Note 1 to entry: Adventure tourism activities can be provided free of charge or in return for payment

### **3.37 participant**

person taking part in an *adventure tourism activity* (3.35) but not a member of the leadership team

Note 1 to entry: A participant might also be referred to as “client”, “customer” or similar.

Note 2 to entry: A leadership team comprises several leaders.

### **3.38 event**

occurrence or change of a particular set of circumstances

Note 1 to entry: An event can be one or more occurrences, and can have several causes.

Note 2 to entry: An event can consist of something not happening.

Note 3 to entry: An event can sometimes be referred to as an “*incident* (3.24)” or “*accident* (3.25)”.

Note 4 to entry: An event without *consequences* (3.39) can also be referred to as a “near miss”, “*incident* (3.24)”, “near hit” or “close call”.

[SOURCE: ISO Guide 73:2009, 3.5.1.3]

### **3.39 consequence**

outcome of an *event* (3.38) affecting *objectives* (3.9)

Note 1 to entry: An event can lead to a range of consequences.

Note 2 to entry: A consequence can be certain or uncertain and can have positive or negative effects on objectives.

Note 3 to entry: Consequences can be expressed qualitatively or quantitatively.

Note 4 to entry: Initial consequences can escalate through knock-on effects.

[SOURCE: ISO Guide 73:2009, 3.6.1.3]

### 3.40 probability

measure of the chance of occurrence expressed as a number between 0 and 1, where 0 is impossibility and 1 is absolute certainty

Note 1 to entry: See definition [3.41](#), Note 2.

[SOURCE: ISO Guide 73:2009, 3.6.1.4]

### 3.41 likelihood

chance of something happening

Note 1 to entry: In *risk* ([3.10](#)) management terminology, the word “likelihood” is used to refer to the chance of something happening, whether defined, measured or determined objectively or subjectively, qualitatively or quantitatively, and described using general terms or mathematically [such as a *probability* ([3.40](#)) or a frequency over a given time period].

Note 2 to entry: The English term “likelihood” does not have a direct equivalent in some languages; instead, the equivalent of the term “probability” is often used. However, in English, “probability” is often narrowly interpreted as a mathematical term. Therefore, in risk management terminology, “likelihood” is used with the intent that it should have the same broad interpretation as the term “probability” has in many languages other than English.

[SOURCE: ISO Guide 73:2009, 3.6.1.1]

### 3.42 procedure

specified way to carry out an activity or a *process* ([3.13](#))

Note 1 to entry: Procedures can be documented or not.

Note 2 to entry: When a procedure is documented, the term “written procedure” or “documented procedure” is frequently used. The document that contains a procedure can be called a “procedure document”.

[SOURCE: ISO 9000:2005, 3.4.5]

### 3.43 emergency

serious situation requiring immediate action

### 3.44 third party provider

external *organization* ([3.1](#)) or individual that provides services to the *adventure tourism activity provider* ([3.36](#))

## 4 Context of the organization

### 4.1 Understanding the organization and its context

The organization shall determine external and internal issues that are relevant to its purpose and that affect its ability to achieve the intended outcomes of its adventure tourism safety management system.

### 4.2 Understanding the needs and expectations of interested parties

The organization shall determine:

- the interested parties that are relevant to the adventure tourism safety management system, and
- the requirements of these interested parties.

### 4.3 Determining the scope of the adventure tourism safety management system

The organization shall determine the boundaries and applicability of the adventure tourism safety management system to establish its scope.

When determining this scope, the organization shall consider:

- the external and internal issues referred to in [4.1](#); and
- the requirements referred to in [4.2](#).

The scope shall be available as documented information.

### 4.4 Adventure tourism safety management system

The organization shall establish, implement, maintain and continually improve an adventure tourism safety management system, including the processes needed and their interactions, in accordance with the requirements of this International Standard.

## 5 Leadership

### 5.1 Leadership and commitment

Top management shall demonstrate leadership and commitment with respect to the adventure tourism safety management system by:

- a) ensuring that the adventure tourism safety policy and safety objectives are established and are compatible with the strategic direction of the organization;
- b) ensuring the integration of the adventure tourism safety management system requirements into the organization's business processes;
- c) ensuring that the resources needed for the adventure tourism safety management system are available;
- d) communicating the importance of effective safety management and of conforming to the adventure tourism safety management system requirements;
- e) ensuring that the adventure tourism safety management system achieves its intended outcome(s);
- f) directing and supporting persons to contribute to the effectiveness of the adventure tourism safety management system;
- g) promoting continual improvement;
- h) supporting other relevant management roles to demonstrate their leadership as it applies to their areas of responsibility.

NOTE Reference to "business" in this International Standard can be interpreted broadly to mean those activities that are core to the purposes of the organization's existence.

### 5.2 Policy

Top management shall establish an adventure tourism safety policy that:

- a) is appropriate to the purpose of the organization;
- b) provides the framework for setting adventure tourism safety objectives;
- c) includes a commitment to satisfy applicable requirements; and

- d) includes a commitment to continual improvement of the adventure tourism safety management system.

NOTE Applicable requirements in this context include legislation and standards.

The adventure tourism safety policy shall:

- be available as documented information;
- be communicated within the organization;
- be available to interested parties, as appropriate.

### 5.3 Organizational roles, responsibilities and authorities

Top management shall ensure that the responsibilities and authorities for relevant roles are assigned and communicated within the organization.

Top management shall assign the responsibility and authority for:

- a) ensuring that the adventure tourism safety management system conforms to the requirements of this International Standard;
- b) reporting on the performance of the adventure tourism safety management system to top management.

NOTE Relevant roles are those which impact on safety, including adventure tourism activity leaders.

## 6 Planning

### 6.1 Actions to address risks and opportunities

#### 6.1.1 General

When planning for the adventure tourism safety management system, the organization shall consider the issues referred to in [4.1](#) and the requirements referred to in [4.2](#) and determine the risks and opportunities that need to be addressed to:

- ensure the adventure tourism safety management system can achieve its intended outcome(s);
- prevent, or reduce, undesired effects;
- achieve continual improvement.

The organization shall plan:

- a) actions to address these risks and opportunities; and
- b) how to:
  - integrate and implement the actions into its adventure tourism safety management system processes;
  - evaluate the effectiveness of these actions.

#### 6.1.2 Adventure tourism risk management process

The organization shall establish and implement a systematic risk management process for its adventure tourism activities.

The risk management process shall establish the context of the activities, assess the risks, address the risks and be documented.

The risk management process shall be an integral part of the organization's adventure tourism safety management system.

See [Annex A](#) for further details.

### 6.1.3 Legal requirements

The organization shall establish, implement and maintain procedures for identifying relevant legal and other requirements.

The organization shall conform to relevant legal and other requirements.

The organization shall communicate relevant information on legal requirements and other requirements to its employees, suppliers, participants in activities and other interested parties.

## 6.2 Adventure tourism safety objectives and planning to achieve them

The organization shall establish adventure tourism safety objectives at relevant functions and levels.

The safety objectives shall:

- a) be consistent with the safety policy;
- b) be measurable (if practicable);
- c) take into account applicable requirements;
- d) be monitored;
- e) be communicated; and
- f) be updated as appropriate.

When establishing safety objectives, top management should consider:

- a) potential benefits;
- b) hazards and risks;
- c) technical equipment and application;
- d) methods of communicating;
- e) financial, operational and business requirements;
- f) the views of interested parties.

The organization shall retain documented information on the adventure tourism safety objectives.

When planning how to achieve its adventure tourism safety objectives, the organization shall determine:

- what will be done;
- what resources will be required;
- who will be responsible;
- when it will be completed;
- how the results will be evaluated.



The plans to achieve the adventure tourism safety objectives shall be reviewed regularly. They shall be updated to address changes in activities or operational conditions.

Risk treatment documentation shall be considered as part of the planning to achieve the adventure tourism safety objectives.

## 7 Support

### 7.1 Resources

The organization shall determine and provide the resources needed for the establishment, implementation, maintenance and continual improvement of the adventure tourism safety management system.

### 7.2 Competence

The organization shall:

- a) determine the necessary competence of person(s) doing work under its control that affects its adventure tourism safety performance;
- b) ensure that these persons are competent on the basis of appropriate education, training, or experience;
- c) where applicable, take actions to acquire the necessary competence, and evaluate the effectiveness of the actions taken; and
- d) retain appropriate documented information as evidence of competence.

NOTE Applicable actions can include, for example, the provision of training to, the mentoring of, or the re-assignment of currently employed persons; or the hiring or contracting of competent persons.

Nationally recognized qualifications should be used where relevant.

### 7.3 Awareness

Persons doing work under the organization's control shall be aware of:

- a) the adventure tourism safety policy;
- b) their contribution to the effectiveness of the adventure tourism safety management system, including the benefits of improved safety performance;
- c) the implications of not conforming with the adventure tourism safety management system requirements.

Persons with safety-related roles shall demonstrate their commitment to continual improvement of the performance of the adventure tourism safety management system.

### 7.4 Communication

#### 7.4.1 General

The organization shall determine the need for internal and external communications relevant to the adventure tourism safety management system, including:

- a) on what it will communicate;
- b) when to communicate;

- c) with whom to communicate;
- d) how to communicate.

#### **7.4.2 Communication and consultation with persons involved in provision of adventure tourism activities**

The organization shall establish a process for communicating and consulting with staff and other persons involved in the provision of adventure tourism activities to ensure that they are:

- a) engaged in the development and review of safety management policies and procedures;
- b) consulted when there are any changes that affect their safety in delivering adventure tourism activities;
- c) represented on safety issues; and
- d) informed about who represents them on safety issues and who represents top management.

This process shall be documented.

#### **7.4.3 Communication and consultation with participants**

The organization shall establish a process for communicating and consulting with participants to ensure that:

- safety information is communicated to the participants; and
- participants are asked to provide the organization with information that can affect safety management.

This process shall be documented.

NOTE Further guidance is given in ISO 21103.

### **7.5 Documented information**

#### **7.5.1 General**

The organization's adventure tourism safety management system shall include:

- a) documented information required by this International Standard;
- b) documented information determined by the organization as being necessary for the effectiveness of the adventure tourism safety management system.

NOTE 1 The extent of documented information for an adventure tourism safety management system can differ from one organization to another due to:

- the size of organization and its type of activities, processes, products and services,
- the complexity of processes and their interactions, and
- the competence of persons.

The organization shall establish and maintain documented information for:

- describing the main elements of the adventure tourism safety management system and the interaction among them; and
- guidance on the related documented information.

NOTE 2 Documented information includes documented procedures and records.

### 7.5.2 Creating and updating

When creating and updating documented information, the organization shall ensure appropriate:

- a) identification and description (e.g. a title, date, author, or reference number);
- b) format (e.g. language, software version, graphics) and media (e.g. paper, electronic);
- c) review and approval for suitability and adequacy.

### 7.5.3 Control of documented information

Documented information required by the adventure tourism safety management system and by this International Standard shall be controlled to ensure:

- it is available and suitable to users, where and when it is needed;
- it is adequately protected (e.g. from loss of confidentiality, improper use, or loss of integrity).

For the control of documented information, the organization shall address the following activities, as applicable:

- a) distribution, access, retrieval and use;
- b) storage and preservation, including preservation of legibility;
- c) control of changes (e.g. version control);
- d) retention and disposition.

Documented information of external origin determined by the organization to be necessary for the planning and operation of the adventure tourism safety management system shall be identified as appropriate, and controlled.

NOTE Access implies a decision regarding the permission to view the documented information only, or the permission and authority to view and change the documented information, etc.

The retention terms shall be consistent with the organization's adventure tourism safety management system and any contractual, legal or other obligations. Retention terms shall be documented.

## 8 Operation

### 8.1 Operational planning and control

The organization shall plan, implement and control the processes needed to meet the requirements, and to implement the actions determined in [6.1](#), by:

- establishing criteria for the processes;
- implementing control of the processes in accordance with the criteria;
- keeping documented information to the extent necessary to have confidence that the processes have been carried out as planned.

The organization shall control planned changes and review the consequences of unintended changes, taking action to mitigate any adverse effects, as necessary.

The organization shall ensure that outsourced processes are controlled.

The organization shall develop and implement plans, including alternative plans, to meet safety objectives and treat risks identified in [6.2](#).

The organization shall plan activities to ensure they are executed effectively by:

- a) establishing and maintaining documented procedures for the delivery of adventure tourism activities, where their absence could cause deviation from the safety policy and objectives; these procedures shall include prevention and safety measures for participants and staff;
- b) establishing and maintaining procedures related to goods, equipment and services used in the delivery of adventure tourism activities that could affect safety;
- c) defining and documenting participants' minimum required competence;
- d) ensuring that participants have the required minimum competence to safely undertake the activity.

### 8.2 Emergency preparedness and response

The organization shall identify potential emergency situations and their impacts, and establish and maintain response plans and procedures.

The organization shall ensure the availability of appropriate services, competent persons or other resources to implement emergency response plans and procedures.

The organization shall review its emergency response plans and procedures.

The organization shall have a procedure to collect from each participant the following minimum information:

- a) identification details (e.g. ID number, full name);
- b) emergency contact details (including name and means of contact);
- c) special assistance required;
- d) health and medical conditions.

The organization shall collect, store and use personal data according to applicable regulations and requirements.

The organization shall periodically test its emergency response procedures. The test results shall be documented.

Participants shall be informed of emergency response plans before the activity begins.

### 8.3 Managing incidents

The organization shall establish and maintain procedures for defining responsibilities and authority for:

- dealing with, reporting and investigating incidents;
- adopting measures to reduce any consequences deriving from incidents;

Incident documentation shall include, as a minimum, the following information:

- a) activity;
- b) date and time;
- c) location;
- d) people involved, such as participants and staff;

- e) description of environmental conditions, equipment, and particular actions or circumstances;
- f) probable causes and contributory factors;
- g) response, including any medical treatment;
- h) consequences;
- i) corrective actions;
- j) source of the information.

The organization shall have a procedure to record incidents.

**NOTE** Recording and analysing incidents helps to prevent future incidents, to evaluate the effectiveness of an adventure tourism safety management system, and to control risks.

## 9 Performance evaluation

### 9.1 Monitoring, measurement, analysis and evaluation

The organization shall determine:

- what needs to be monitored and measured;
- the methods for monitoring, measurement, analysis and evaluation, as applicable, to ensure valid results;
- when the monitoring and measuring shall be performed;
- when the results from monitoring and measurement shall be analysed and evaluated;
- how the results of monitoring, measurement, analysis and evaluation shall be documented.

The monitoring and measurement shall ensure:

- a) conformance with the requirements of the safety management programmes and applicable legal requirements;
- b) consideration of incidents and other historic data;
- c) consideration of participants' experiences and feedback.

The organization shall retain appropriate documented information as evidence of the results.

The organization shall evaluate the safety performance and effectiveness of the results of the adventure tourism safety management system.

### 9.2 Internal audit

The organization shall conduct internal audits at planned intervals to provide information on whether the adventure tourism safety management system:

- conforms to:
  - the organization's own requirements for its adventure tourism safety management system;
  - the requirements of this International Standard;
- is effectively implemented and maintained.

The organization shall:

- a) plan, establish, implement and maintain (an) audit programme(s) (including the frequency, methods, responsibilities, planning requirements and reporting), which shall take into consideration the importance of the processes concerned and the results of previous audits;
- b) define the audit criteria and scope for each audit;
- c) select auditors and conduct audits to ensure objectivity and the impartiality of the audit process;
- d) ensure that the results of the audits are reported to relevant management; and
- e) retain documented information as evidence of the implementation of the audit programme and the audit results.

The organization's audit programme shall take into account the results of the risk assessments (see [6.1.2](#)) carried out on the organization's activities and the results of previous audits.

### 9.3 Management review

Top management shall review the organization's adventure tourism safety management system, at planned intervals, to ensure its continuing suitability, adequacy and effectiveness.

The management review shall include consideration of:

- a) the status of actions from previous management reviews;
- b) changes in external and internal issues that are relevant to the adventure tourism safety management system;
- c) information on the adventure tourism safety performance, including trends in:
  - 1) nonconformities and corrective actions;
  - 2) monitoring and measurement results; and
  - 3) audit results;
- d) opportunities for continual improvement.

The outputs of the management review shall include decisions related to continual improvement opportunities and any need for changes to the adventure tourism safety management system.

The organization shall retain documented information as evidence of the results of management reviews.

## 10 Improvement

### 10.1 Nonconformity and corrective action

When a nonconformity occurs, the organization shall:

- a) react to the nonconformity and, as applicable:
  - 1) take action to control and correct it; and
  - 2) deal with the consequences;
- b) evaluate the need for action to eliminate the causes of the nonconformity, in order that it does not recur or occur elsewhere, by:
  - 1) reviewing the nonconformity;

- 2) determining the causes of the nonconformity; and
- 3) determining if similar nonconformities exist, or could potentially occur;
- c) implement any action needed;
- d) review the effectiveness of any corrective action taken; and
- e) make changes to the adventure tourism safety management system, if necessary.

Corrective actions shall be appropriate to the effects of the nonconformities encountered.

The organization shall retain documented information as evidence of:

- the nature of the nonconformities and any subsequent actions taken, and
- the results of any corrective action.

## 10.2 Continual improvement

The organization shall continually improve the suitability, adequacy and effectiveness of the adventure tourism safety management system.

## Annex A (normative)

### Adventure tourism risk management process

#### A.1 General

This annex relates to [6.1.2](#), which outlines three steps in the risk management process for adventure tourism:

- a) establishing the context;
- b) risk assessment;
- c) risk treatment.

#### A.2 Establishing the context

The organization shall establish the context of each adventure tourism activity.

The context shall be established by determining each activity's risk management objectives, scope and parameters.

The organization shall define:

- a) the adventure tourism activity;
- b) the scope of the activity, such as locations, duration and all activities within the activity;
- c) the risk management objectives for the activity;
- d) the boundaries and interfaces with other activities or safety management systems;
- e) the risk assessment methodologies;
- f) the risk assessment criteria (including acceptable risk level) and reasoning.

NOTE Establishing the context of the activities can include relating to transport, accommodation, environment, medical or cultural risks.

#### A.3 Risk assessment

There are three steps to risk assessment.

##### a) Risk identification

The organization shall establish and maintain a systematic, structured process for the continuous identification of risks for its adventure tourism activities.

Risk identification procedures shall include:

- routine and non-routine activities;
- the competence of the participant;
- supervised and non-supervised activities, and activity sites;



- activities of all personnel (including subcontractors, participants and visitors) who have access to workplaces and sites of adventure tourism activities;
- facilities, clothing and equipment used in the adventure tourism activities provided by the organization, participants and third parties.

Risk identification methodology shall:

- involve leaders and other interested parties;
- be consistent with operational experience;
- follow current, accepted practice for adventure tourism.

b) Risk analysis

The organization shall analyse risk by considering the causes and sources of risk, their positive and negative consequences, and the likelihood those consequences can occur. Existing controls and their effectiveness shall be taken into account.

c) Risk evaluation:

The organization shall evaluate the risks against the risk assessment criteria and identify those requiring treatment.

## A.4 Risk treatment

The organization shall establish, implement and maintain a risk treatment process.

The organization shall identify responsibilities, deadlines, expected results, resources, performance measures and review processes for risk treatment.

**NOTE** For further information on risk management processes, see ISO 31000. The intent of ISO 31000 is to harmonize risk management processes in existing and future standards. It provides a common approach in support of standards dealing with specific risks or sectors, and does not replace those standards.

## Annex B (informative)

### Partial examples of tools for safety management

Risk assessment involves the systematic use of information for identifying, analysing and evaluating risks. The partial examples in Figures B.1, B.2, B.3 and B.4 illustrate simple tools for undertaking each of these stages of the risk management process.

Risk reference file						
Name of service:			Date of risk critical analysis:			
			Compiled by:		Date:	
Adventure tourism activities involved:			Revised by:		Date:	
Ref.	Stage	Place of occurrence	Hazard: what may happen and how	Consequences of an event	Consequences as a result of the event	Control measures

**Figure B.1 — Example of risk reference table**

Level	Description	Example of description
1	Insignificant	No injuries, minor financial loss
2	Minor	Treatment with first aid
3	Moderate	Medical treatment
4	Major	Severe injury, financial loss
5	Critical	Death, severe injury, major financial loss

**Figure B.2 — Example of qualitative measures of consequences level**

Level	Description	Example of description
A	Almost certain	It is expected to occur most of the times
B	Probable	It is likely to occur most of the time
C	Possible	It may occur sometime
D	Improbable	It is unlikely to occur
E	Rare	It is very unlikely to occur

Figure B.3 — Example of qualitative measures of probability

Level	Consequences			
	Insignificant	Minor	Moderate	Major
A (Almost certain)				
B (Probable)				
C (Possible)				
D (Improbable)				
E (Rare)				

Caption:  
 E: extreme risk, immediate action  
 H: high risk, top management attention  
 M: moderate risk, management attention  
 L: low risk, management attention

Figure B.4 — Example of probability and consequence classification — Risk qualitative analysis matrix — Level of risks

Each organization should identify and use the tools most appropriate to its reality, culture and activities. There is no single solution. For additional examples, see IEC 31010.

## Bibliography

- [1] ISO 9000:2005, *Quality management systems — Fundamentals and vocabulary*
- [2] ISO 19011, *Guidelines for auditing management systems*
- [3] ISO/TR 21102, *Adventure tourism — Leaders — Personnel competence*
- [4] ISO 21103, *Adventure tourism — Information for participants*
- [5] ISO 31000, *Risk management — Principles and guidelines*
- [6] ISO Guide 73:2009, *Risk management — Vocabulary*
- [7] IEC 31010, *Risk management — Risk assessment techniques*

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