

Sustainable forest management



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Sustainable forest management



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Preface

This is the third edition of CSA Z809, *Sustainable forest management*. It supersedes the previous edition, published in 2002 under the title *Sustainable Forest Management: Requirements and Guidance*, which superseded both CAN/CSA-Z808, *A Sustainable Forest Management System: Guidance Document*, and CAN/CSA-Z809, *A Sustainable Forest Management System: Specifications Document*, published in 1996.

This Standard describes the requirements for sustainable forest management (SFM) of a defined forest area (DFA). The Standard outlines the requirements for a forest manager or owner wishing to implement the public participation, system requirements, and performance requirements for a DFA. It includes requirements for public participation, performance, management systems, review of actions, monitoring of effectiveness, and continual improvement. This Standard also outlines the auditing process used to determine whether SFM requirements are implemented at the DFA level. While this Standard provides guidance to users regarding certification, requirements for certification and decisions regarding approval rest with the certification bodies.

A second standard, CSA Z804, is intended for use by woodlot owners or managers of forests up to 4000 hectares.

This Standard is considered suitable for use for conformity assessment within the stated scope of the Standard.

This Standard was prepared by the Technical Committee on Sustainable Forest Management, under the jurisdiction of the Strategic Steering Committee on Business Management and Sustainability, and has been formally approved by the Technical Committee. It will be submitted to the Standards Council of Canada for approval as a National Standard of Canada.

December 2008

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 Standard is stated in its Scope, it is important to note that it remains the responsibility of the users of the Standard to judge its suitability for their particular purpose.
- (3) This publication was developed by consensus, which is defined by CSA Policy governing standardization — Code of good practice for standardization as “substantial agreement. Consensus implies much more than a simple majority, but not necessarily unanimity”. It is consistent with this definition that a member may be included in the Technical Committee list and yet not be in full agreement with all clauses of this publication.
- (4) CSA Standards are subject to periodic review, and suggestions for their improvement will be referred to the appropriate committee.
- (5) All enquiries regarding this Standard, including requests for interpretation, should be addressed to Canadian Standards Association, 5060 Spectrum Way, Suite 100, Mississauga, Ontario, Canada L4W 5N6.
Requests for interpretation should
 - (a) define the problem, making reference to the specific clause, and, where appropriate, include an illustrative sketch;
 - (b) provide an explanation of circumstances surrounding the actual field condition; and
 - (c) be phrased where possible to permit a specific “yes” or “no” answer.

Committee interpretations are processed in accordance with the CSA Directives and guidelines governing standardization and are published in CSA’s periodical Info Update, which is available on the CSA Web site at www.csa.ca.

Z809-08

Sustainable forest management

0 Introduction

0.1 General

Canada's forests make a significant contribution to our quality of life, the integrity of our environment, and the supply of paper and building materials and other forest products both at home and abroad. Canadian forests comprise diverse forest types and circumstances and support hundreds of forest-dependent communities. The future of our forests is important to all Canadians, including Aboriginal Peoples, who have a significant relationship with the land.

Canadian provinces have rigorous legislation and policies for the protection, conservation, and sustainable management of forests. This legislative framework is being continually improved, as is forest management in Canada. In addition to using regulatory tools, organizations can benefit from using voluntary tools, such as this Standard, to help them achieve sustainable forest management (SFM). This Standard gives organizations a system for continual improvement of their forest management performance and for engaging interested parties in a focused public participation process. Certification to this Standard involves regular and rigorous independent, third-party certification audits.

0.2 High degree of public involvement

CSA requires extensive public participation in the development of its Standards. The need for public participation is also strongly emphasized in this Standard, which requires organizations to seek comprehensive, continuing public participation and to work with Aboriginal Peoples at the community level. In this Standard, the public identifies forest values of specific importance to environmental, social, and economic concerns and needs. The public also takes part in the forest management planning process and works with organizations to identify and select SFM objectives, indicators, and targets to ensure that these values are addressed. The public participation requirements of this Standard are some of the most rigorous in certification standards in the world today. Because Canadian forests are primarily publicly owned, it is vital that a Canadian forest certification standard involve the public extensively in the forest management planning process. Forest management that meets the requirements of this Standard involves a positive relationship between the organization and the local community.

This Standard was first published in 1996, using an open and inclusive process managed by CSA. One-quarter of the CSA SFM Technical Committee membership consisted of timber producers, including woodlot owners; the remainder were scientists, academics, representatives of the provincial and federal governments, and environmental, consumer, union, and Aboriginal representatives. In 1995, special consultations with non-governmental and environmental organizations were conducted to obtain input into the development of this Standard. In addition, a Canada-wide public review of this Standard generated considerable interest, with CSA distributing over 1500 copies of the draft standard in response to requests for review. Public meetings were held in Montréal, Toronto, and Vancouver to seek further input.

In 2000, when CSA set out to review and improve upon the original Standard, it sought and incorporated public input once again. It also strengthened the conservation representation on its SFM Technical Committee to include representatives from Wildlife Habitat Canada, the Canadian Wildlife Federation, and the Ontario Federation of Anglers and Hunters.

Work on this third edition of CSA Z809 began in 2004. Input from existing public advisory groups (PAGs) active in the implementation of this Standard was sought to improve its effectiveness. Aboriginal representation was incorporated into the membership categories of the SFM Technical Committee. Input received from a broad range of interests during the public review of the draft standard was incorporated into this edition.

Like the previous editions, this edition of CSA Z809 was developed in an open, inclusive forum. This document reflects the ideas, positions, and concerns of a wide array of individuals and groups from across Canada with an interest in SFM, including the forest industry, woodlot owners, governments, academics, scientists, technical experts, Aboriginal Peoples, unions, consumer groups, and conservation, environmental, and social organizations.

0.3 CCFM SFM criteria and elements as the basis of the SFM performance requirements

The most broadly accepted Canadian forest management values generated to date are embodied in the CCFM SFM criteria and elements. The CCFM SFM criteria and elements are fully consistent with those of the Montréal and Helsinki processes, which are both recognized by governments around the world.

The requirements of this Standard are based on the CCFM SFM criteria. In this Standard, the CCFM SFM criteria and elements have been used as a framework for value identification and to provide vital links between local-level SFM and national and provincial forest policy. The CCFM SFM criteria also provide a strong measure of consistency in the identification of local forest values across Canada.

In this Standard, the organization is required to work closely with the public to identify the local values, objectives, indicators, and targets that reflect the national criteria and to incorporate them into forest management planning and practices. Decisions are made together with the public during this process.

0.4 Performance requirements

This Standard sets a level of performance to be met using a prescribed management system. Performance is dealt with at three levels. First, a set of SFM elements and core indicators is required. Second, the public has the opportunity to assist in setting specific values, objectives, additional indicators, and targets at the local forest level for each of the SFM elements, as well as to participate in effectiveness monitoring. This Standard requires a public participation process to establish and monitor locally appropriate targets (including thresholds and limits). Moreover, this Standard identifies specific requirements for the public participation process. This approach to performance not only respects government-recognized criteria for SFM but also allows the public to participate in the interpretation of the criteria and elements for local application. The third level is the assessment of actual changes in the forest as related to forecasts and results of management practices.

Thus, this Standard involves a combination of public participation, performance, and management system requirements.

0.5 Conformance with ISO (International Organization for Standardization) Standards

0.5.1 Development of CSA Standards

CSA standards development directives are consistent with ISO standards development directives. CSA Standards are developed through a consensus process that includes the principles of inclusive participation, respect for diverse interests, and transparency. The process is based on substantial agreement among committee members, rather than a simple majority of votes. When a draft standard has been agreed upon, it is submitted for public review, and amended as necessary. CSA Standards are living documents that are continually revisited and revised to address changing requirements and emerging technologies. Each Standard is reviewed at least every five years as part of a process of continual improvement.

0.5.2 Environmental management systems

This Standard is in conformance with the internationally recognized CAN/CSA-ISO 14001 environmental management system standard. A management system ensures that public participation and performance requirements are fulfilled in a systematic and predictable manner that guarantees continual improvement. This Standard includes the SFM continuum of

- (a) establishing a policy;
- (b) planning;

- (c) implementation and operation;
- (d) checking and corrective action; and
- (e) management review.

0.6 Forecasting and the future of the forest

Because of the relatively slow growth and long lifespan of Canadian forest trees, as well as the need to ensure the continuance of values associated with forests, forecasting the effects of forest management operations and practices is fundamental to this Standard. This forecasting, which is specified in the management plan, along with the functional bases for making the forecasts, is a key requirement and involves public participation. Forecasting allows the organization to specify the SFM strategy and forest practices that will achieve desired results in the context of adaptive management.

0.7 Continual improvement

The concept of continual improvement in SFM is central to this Standard. This Standard uses adaptive management procedures that recognize SFM as a dynamic process that incorporates new knowledge acquired through time, experience, and research, and that also evolves with society's changing environmental, social, and economic values. This Standard also requires the organization to undertake an annual review of all its requirements, including performance requirements, to identify areas for continual improvement.

Continual improvement is a necessary aspect not only of forest management but also of the evolution of this Standard. That is why CSA requires that its SFM Technical Committee review this Standard periodically to ensure that it incorporates knowledge gained through implementation. A review of this Standard must occur within five years of publication. The first edition of this Standard was published in 1996 and the second edition in 2002. This third edition, published in March 2009, is subject to the same process of review.

0.8 Third-party independent audits

To become certified to this Standard, the organization goes through a third-party independent audit to the SFM requirements in this Standard (these requirements are found in [Clauses 4 to 7](#)). The audit is conducted by a certification body accredited by the Standards Council of Canada. The individual auditors employed or contracted by the certification body have the requisite forestry expertise and are certified as environmental auditors. Audits to this Standard are done by accredited certifiers and certified auditors who are independent of the standards-writing body (CSA). In addition to the initial audit, there are mandatory annual reviews, which include both a document review and on-site checks of the forest to ensure that progress is being made towards the achievement of targets and that the SFM requirements are being upheld. In addition, a full re-certification audit is required periodically following the initial certification, in accordance with the requirements of the Standards Council of Canada.

0.9 Transparency

This Standard specifies requirements for full public disclosure of

- (a) all SFM plans developed under the Standard;
- (b) annual reports on progress against SFM plans; and
- (c) results of independent certification and surveillance audit reports.

1 Scope

1.1

This Standard specifies requirements for sustainable forest management (SFM) of a defined forest area (DFA), including requirements for

- (a) the management framework;
- (b) commitment;

- (c) public participation;
- (d) performance measures and targets;
- (e) the systematic review of actions;
- (f) the monitoring of effectiveness; and
- (g) continual improvement.

1.2

In CSA Standards, “shall” is used to express a requirement, i.e., a provision that the user is obliged to satisfy in order to comply with the standard; “should” is used to express a recommendation or that which is advised but not required; “may” is used to express an option or that which is permissible within the limits of the standard; and “can” is used to express possibility or capability. Notes accompanying clauses do not include requirements or alternative requirements; the purpose of a note accompanying a clause is to separate from the text explanatory or informative material. Notes to tables and figures are considered part of the table or figure and may be written as requirements. Annexes are designated normative (mandatory) or informative (non-mandatory) to define their application.

2 Reference publications

This document refers to the following publications, and where such reference is made, it shall be to the edition listed below.

CSA (Canadian Standards Association)

CAN/CSA-ISO 14001-04

Environmental management systems — Requirements with guidance for use

CAN/CSA-ISO 19011-03(R2007)

Guidelines for quality and/or environmental management systems auditing

CAN/CSA Z731-03

Emergency preparedness and response

Z804-08

Sustainable forest management for woodlots and other small area forests

CAN/CSA-Z809-02

Sustainable forest management requirements and guidance

Z1600-08

Emergency management and business continuity programs

Alberta Forest Genetic Resources Council

Position Paper — Genetically Modified Organisms (GMO), 2001.11.15

<http://www.abtreegene.com/policy.html>

CCFM (Canadian Council of Forest Ministers)

Criteria and Indicators of Sustainable Forest Management in Canada: National Status 2005

http://www.ccfm.org/ci/index_e.php

Defining Sustainable Forest Management in Canada: Criteria and Indicators 2003

http://www.ccfm.org/ci/index_e.php

CFIA (Canadian Food Inspection Agency)

Action plan for invasive alien terrestrial plants and plant pests: Phase 1 — Key Initiatives, 2006

<http://www.inspection.gc.ca/english/plaveg/invenv/action/phase1e.shtml#1>

CFS (Canadian Forest Service)

Carbon Budget Model of the Canadian Forest Sector (CBM-CFS3), Version 1.0 User's Guide, 2007
http://carbon.cfs.nrcan.gc.ca/cbm/operational_scale_e.html

Criteria and Indicators of Sustainable Forest Management in Canada: Technical Report 1997
http://www.ccfm.org/ci/index_e.php

Government of Canada

Canadian Biodiversity Strategy, 1995

Constitution Act, 1982

Migratory Birds Convention Act, 1994, c. 22

Delgamuukw v. British Columbia, [1997] 3 S.C.R. 1010.
<http://scc.lexum.umontreal.ca/en/1997/1997rcs3-1010/1997rcs3-1010.html>

Fisheries Act R.S.1985. c. F-14, s.1

R. v. Badger, [1996] 1 S.C.R. 771.
<http://scc.lexum.umontreal.ca/en/1996/1996rcs1-771/1996rcs1-771.html>

R. v. Van der Peet, [1996] 2 S.C.R. 507.
<http://scc.lexum.umontreal.ca/en/1996/1996rcs2-507/1996rcs2-507.html>

ILO (International Labour Organization)

Conventions and Recommendations.

http://ilo.org/global/What_we_do/InternationalLabourStandards/Introduction/ConventionsandRecommendations/lang--en/index.htm

ISO/IEC (International Organization for Standardization/International Electrotechnical Commission)

ISO/IEC 17000-04

Conformity assessment — Vocabulary and general principles

ISO/IEC 17021-06

Conformity assessment — Requirements for bodies providing audit and certification of management systems

IUCN (International Union for Conservation of Nature)

IUCN's Protected Area Programme

http://www.iucn.org/about/union/commissions/wcpa/wcpa_overview/wcpa_ppa

NRCAN (Natural Resources Canada)

Forest 2020: Practical Guide, Afforestation of Wildlands, 2005.
<http://cfs.nrcan.gc.ca/subsite/afforestation/reportsummaries>

The State of Canada's Forests — Annual Report 2008.
<http://canadaforests.nrcan.gc.ca/rpt#sustainable>

NRTEE (National Round Table on the Environment and the Economy)

Building Consensus for a Sustainable Future: Putting Principles into Practice, 1996

PEFC (Programme for the Endorsement of Forest Certification Schemes)

Annex 4: Chain of Custody of Forest Based Products — Requirements

SCC (Standards Council of Canada)

CAN-P-15 (2000)

Accreditation Programs: Requirements and Procedures for Suspension and Withdrawal, Complaints, Appeals and Hearings

CAN-P-16 (2006)

Conformity assessment — Requirements for bodies providing audit and certification management systems

CAN-P-1517C (2006)

*Management Systems Accreditation Program (MSAP) Handbook: Conditions and Procedures for the Accreditation of Organizations Certifying/Registering Management Systems***UNEP (United Nations Environment Program)***Convention on Biological Diversity — Conference of Parties — 2005***Other publications**Beckley, T.M. et al. *Public Participation in Sustainable Forest Management: A Reference Guide to Best Practices*. Edmonton: Sustainable Forest Management Network, 2006.Hubbard, W. et al. *Forest Terminology for Multiple-Use Management*. University of Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, 1998.
www.sfrc.ufl.edu/Extension/ssfor11.htm

3 Definitions and abbreviations

3.1 Definitions

The following definitions apply in this Standard:

Aboriginal — ““aboriginal peoples of Canada” [which] includes the Indian, Inuit and Métis peoples of Canada”. [*Constitution Act, 1982*, Subsection 35 (2)]**Aboriginal right** — “in order to be an Aboriginal right an activity must be an element of a practice, custom, or tradition (or an element thereof) integral to the distinctive culture of an Aboriginal group claiming that right”. [*R. v. Van der Peet, 1996*]**Aboriginal title** — “...is a right to the land itself, is a collective right to the land held by all members of an aboriginal nation. ...encompasses the right to use the land pursuant to that title for a variety of purposes, which need not be aspects of those aboriginal practices, cultures and traditions which are integral to the distinctive aboriginal cultures”. [*Delgamuukw v. British Columbia, 1997*]**Aboriginal treaty rights** — “...are those contained in official agreements between the Crown and the native peoples”. [*R. v. Badger 1996*]**Accreditation body** — authoritative body that performs accreditation.**Note:** *The authority of an accreditation body is generally derived from government [ISO/IEC 17000]***Adaptive management** — a learning approach to management that recognizes substantial uncertainties in managing forests and incorporates into decisions experience gained from the results of previous actions.**Afforestation** — the conversion of non-forested land to forested land through planting or seeding.**Note:** *Planting carried out after logging is not afforestation as defined under the Kyoto Protocol.***Appeal** — a request by an organization that is certified or seeking certification to a certification body or an accreditation body for reconsideration by that body of a certification decision that has been made.

Auditor — a person qualified to perform audits.

Note: For SFM certification audits, auditors are qualified in accordance with the requirements specified in SCC CAN-P-16, SCC CAN-P-1517C, and SFMP Handbook to CAN/CSA-Z809.

Biodiversity (biological diversity) — “the variability among living organisms from all sources, including inter alia, terrestrial, marine, and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems”. [Canadian Biodiversity Strategy, 1995]

Biomass — the total amount (mass) of living matter in a given ecosystem, population, or sample.

Note: In the context of sustainable forest management, biomass usually refers to plant matter.

CAN/CSA-ISO 14001 — an internationally recognized environmental management system standard revised in 2004 by the International Organization for Standardization.

Note: CAN/CSA-ISO 14001 has been approved as a National Standard of Canada by the Standards Council of Canada.

Certification — the result of a successful certification process in conformance with this Standard, whereby the certification body issues a certification certificate and adds the organization’s certification to a publicly available list maintained by the certification body.

Note: Certification of a management system is sometimes also called registration.

Certification applicant — an organization that has applied to an accredited certification body for certification to this Standard.

Certification audit — a systematic and documented verification process used to obtain and evaluate evidence objectively in order to determine whether an organization meets the SFM requirements of this Standard.

Certification body — an independent third party that is accredited as being competent to certify organizations with respect to nationally and internationally recognized standards.

Certification certificate — the official document issued by a certification body to an organization upon successful completion of the certification process (including the certification audit).

Coarse woody debris — all large deadwood in various stages of decomposition.

Note: Coarse woody debris includes standing dead trees, fallen wood, stumps, and roots.

Complaint — an expression of dissatisfaction, other than an appeal, by any person or organization to a certification body or an accreditation body related to the activities of that body, where a response is expected.

Note: In Canada, the accreditation body for certification bodies conducting audits to this Standard is the Standards Council of Canada.

Compliance — the conduct or results of activities in accordance with legal requirements.

Component — an individual element of the SFM system.

Note: Components include policy, planning, implementation and operation, checking and corrective action, and management review.

Conformance — meeting non-legal requirements.

Note: Non-legal requirements include policies, work instructions, or standards (including this Standard).

Continual improvement — the ongoing process of enhancing SFM performance using

- (a) experience;
- (b) assessment of results;
- (c) the incorporation of new knowledge in line with the organization’s SFM policy; and
- (d) the application of SFM requirements.

Corrective action — action to eliminate the cause of a detected nonconformity or other undesirable situation.

Note: *There can be more than one cause for a nonconformity. Corrective action is taken to prevent recurrence, whereas preventive action is taken to prevent occurrence.*

Defined forest area (DFA) — a specified area of forest, including land and water (regardless of ownership or tenure), to which the requirements of this Standard apply.

Note: *A DFA can consist of one or more contiguous blocks or parcels.*

Deforestation — “clearing an area of forest for another long-term use”. [NRCAN *The State of Canada’s Forests —Annual Report 2007*]

DFA-related worker — an individual employed by an organization to work for wages or a salary, who does not have a significant or substantial share of the ownership in the employer’s organization and does not function as a manager of the organization.

Ecosystem — plants, animals, and micro-organisms and their non-living environment, interacting as a functioning unit.

Note: *“The term ‘ecosystem’ can describe small-scale units, such as a drop of water, as well as large-scale units, such as the biosphere”. [Canadian Biodiversity Strategy, 1995]*

Element — the subcategory used to define the scope of each SFM criterion.

Note: *Each SFM criterion contains several elements. The SFM elements were derived from the national-scale elements developed by the CCFM for more specific local applications.*

Environment — the surroundings in which an organization operates.

Note: *The environment encompasses air, water, land, natural resources, flora, fauna, humans, and the interrelations of these elements.*

Fish habitat — “spawning grounds and nursery, rearing, food supply, and migration areas on which fish depend directly or indirectly to carry out their life processes”. [*Fisheries Act, 1985*]

Focal species — species that warrant special conservation attention and are thus used to guide the management of ecosystems to conserve biodiversity.

Note: *Criteria for the selection of focal species can include ecological, socio-cultural, scientific, and economic considerations.*

Forecast — an explicit statement of the expected future condition of an indicator.

Forest — an ecosystem dominated by trees and other woody vegetation growing more or less closely together, its related flora and fauna, and the values attributed to it.

Forest condition — the state of the forest ecosystem as determined by a range of variables associated with forest structure, composition, and processes.

Forest land — land supporting forest growth or capable of doing so or, if totally lacking forest growth, bearing evidence of former forest growth.

Genetically modified organism (GMO) — an organism that, through human intervention in a laboratory, has had its genome or genetic code deliberately altered through the mechanical insertion of a specific identified sequence of genetic coding material (generally DNA) that has been either manufactured or physically excised from the genome of another organism.

Note: *Genetic modification can be used to alter a wide range of traits, including insect and disease resistance, herbicide tolerance, tissue composition, and growth rate (adapted from Alberta Forest Genetic Resources Council statement).*

Indicator — a variable that measures or describes the state or condition of a value.

Interested party — an individual or organization interested in and affected by the management activities of a DFA.

Invasive alien species — plants, animals, or micro-organisms that have been introduced by human action outside their natural past or present distribution, and whose introduction or spread threatens the environment, the economy, or society, including human health. [CFIA, 2006]

Long term — in the context of making forecasts regarding forest structure and composition, at minimum, twice the average life expectancy of the predominant trees in a DFA, up to a maximum of 300 years.

Migratory bird — the sperm, eggs, embryos, tissue cultures, and other parts of a migratory bird as defined in the *Migratory Birds Convention Act, 1994*.

Native species — a species that occurs naturally in an area; a species that is not introduced.

Objective — a broad statement describing a desired future state or condition of a value.

Old-growth forest — a forest dominated by old trees.

Note: *The age and structure of old-growth forests vary significantly by forest type and from one eco-region to another.*

Organization — a company, corporation, firm, enterprise, government, authority, or combination thereof, incorporated or not, public or private, that has its own functions and administration and that, for the purposes of this Standard, applies for certification.

Note: *For organizations with more than one operating unit (e.g., a division), a single operating unit may be defined as an organization.*

Personnel — management, contractors, and DFA-related workers employed by an organization.

Plantation — a forest area that does not follow natural succession patterns due to reforestation involving high-intensity silviculture practices.

Notes:

(1) *Plantations are highly managed treed areas with few natural characteristics; they are generally managed for a single purpose.*

(2) *Not all areas subjected to intensive silvicultural treatments are plantations.*

Preventive action — action to eliminate the cause of a potential nonconformity or other undesirable situation.

Notes:

(1) *There can be more than one cause for a potential nonconformity.*

(2) *Preventive action is taken to prevent occurrence, whereas corrective action is taken to prevent recurrence.*

Private woodlot owner — an individual or a group of individuals who privately own forest land. For the purposes of this Standard, private woodlots are those recognized as “woodlots” by the woodlot owner association in each province.

Productivity — the natural ability of a forest ecosystem to capture energy, support life forms, and produce goods and services.

Protected area — an area of land and/or sea specifically dedicated to the protection and maintenance of biological diversity and of natural and associated cultural resources, and managed through legal or other effective means. [IUCN, 1994]

Reforestation — re-establishment of trees on forested land following natural (e.g., fire) or human (e.g., timber harvest) disturbance, by natural or artificial (e.g., planting) means.

Seral stage — an identifiable stage of vegetative recovery following a disturbance.

Note: *Disturbances include fire, blowdown, and timber harvest.*

SFM performance — the assessable results of SFM as measured by the level of achievement of the targets set for a DFA.

SFM policy — a statement by an organization of intentions and principles in relation to SFM that provides a framework for objectives, targets, practices, and actions.

SFM requirements — the public participation, performance, and system requirements of this Standard.

SFM system — the structure, responsibilities, practices, procedures, processes, and time frames specified by a certification body for implementing, maintaining, and improving SFM.

Short-term operational plan — an annual or five-year plan.

Species at risk — species defined as at risk by national and provincial legislation applicable to a given DFA.

Standard — a document, established by consensus and approved by a recognized body, that provides, for common and repeated use, rules, guidelines, or specifications for activities or their results, aimed at the achievement of the optimum degree of consistency in a given context.

Note: *Standards are based on the consolidated findings of science, technology, and experience and are aimed at the promotion of optimum community benefits.*

Strategy — a coordinated set of actions designed to meet established targets.

Sustainable forest management (SFM) — management “to maintain and enhance the long-term health of forest ecosystems, while providing ecological, economic, social, and cultural opportunities for the benefit of present and future generations”. [NRCAN *The State of Canada’s Forests 2007*]

Sustainable harvest level — the harvest level of forest products that, with consideration for ecological, economic, social, and cultural factors, leads to no significant reduction of the forest ecosystem’s capacity to support the same harvest level in perpetuity.

Target — a specific statement describing a desired future state or condition of an indicator.

Note: *Targets should be clearly defined, time-limited, and quantified, if possible.*

Tenure — the terms under which a forest manager or owner possesses the rights, and assumes the responsibilities, to use, harvest, or manage one or more forest resources in a specified forest area for a specified period of time.

Note: *Private ownership of forest land is the strongest form of tenure, as the rights and obligations rest solely with the forest owner. Forest tenures of public land in Canada fall into two main categories: area-based and volume-based. Area-based tenures not only confer timber-harvest rights but also usually oblige the tenure holder to assume forest management responsibilities. Volume-based tenures normally give the holder the right to harvest specific volumes of timber in areas specified by the landowner or manager, but can also oblige holders to assume forest management responsibilities.*

Top management — persons with decision-making authority regarding SFM policy, resource allocation, and planning in the DFA.

Value — a DFA characteristic, component, or quality considered by an interested party to be important in relation to an SFM element or other locally identified element.

Watershed — the total land area from which water drains into a particular stream or river. [Hubbard et al., 1998]

3.2 Abbreviations

The following abbreviations apply in this Standard:

BMP	— Best management practices
CCFM	— Canadian Council of Forest Ministers
CoC	— Chain of Custody
CSA	— Canadian Standards Association
DFA	— Defined forest area

GIS	— Geographic information system
GMO	— Genetically modified organism
ILO	— International Labour Organization
ISO	— International Organization for Standardization
NPP	— Net primary production
PAG	— Public Advisory Group
PEFC	— Program for endorsement of forest certification schemes
SCC	— Standards Council of Canada
SFM	— Sustainable forest management

4 Sustainable forest management requirements

4.1 General requirements

The organization shall meet the

- (a) public participation requirements specified in [Clause 5](#);
- (b) performance requirements specified in [Clause 6](#); and
- (c) system requirements specified in [Clause 7](#).

4.2 Required activities

The organization shall meet the SFM requirements of this Standard, which include

- (a) compliance with legislation applicable to the DFA;
- (b) values, objectives, indicators, and targets that clearly address the SFM criteria and elements in this Standard;
- (c) ongoing and meaningful public participation;
- (d) implementation of adaptive management;
- (e) progress towards or achievement of performance targets; and
- (f) continual improvement in performance.

5 Public participation requirements

5.1 Basic requirements

The organization shall establish and implement a public participation process by

- (a) starting a new process;
- (b) building on an existing process; or
- (c) reviving a previous process.

5.2 Interested parties

The organization shall

- (a) openly seek representation from a broad range of interested parties, including DFA-related workers, and invite them to participate in developing the public participation process;
- (b) provide interested parties with relevant background information;
- (c) demonstrate through documentation that efforts were made to contact and encourage affected and interested communities, including Aboriginal communities, to become involved in the SFM public participation process;
- (d) acknowledge that Aboriginal participation in the public participation process is without prejudice to Aboriginal title and rights, or treaty rights; and
- (e) establish and maintain a list of interested parties that includes
 - (i) those that chose to participate;
 - (ii) those that decided not to participate;
 - (iii) those that were unable to participate;

- (iv) the reasons for not participating, if provided; and
 - (v) efforts within the organization to enable participation.
- The list shall contain names and contact information.

5.3 Process: Basic operating rules

The organization shall demonstrate that

- (a) the public participation process works according to clearly defined operating rules that contain provisions on
 - (i) content;
 - (ii) goals;
 - (iii) timelines;
 - (iv) internal and external communication;
 - (v) resources (including human, physical, financial, information, and technological, as necessary and reasonable);
 - (vi) roles, responsibilities, and obligations of participants and their organizations;
 - (vii) conflict of interest;
 - (viii) decision-making methods;
 - (ix) authority for decisions;
 - (x) mechanisms to adjust the process as needed;
 - (xi) access to information (including this Standard);
 - (xii) the participation of experts, other interests, and government;
 - (xiii) a dispute-resolution mechanism; and
 - (xiv) a mechanism to measure participants' satisfaction with the process; and
- (b) the participants have agreed to the public participation process operating rules.

5.4 Content

In the public participation process, interested parties shall have opportunities to work with the organization to

- (a) identify and select values, objectives, indicators, and targets based on SFM elements and any other issues of relevance to the DFA;
- (b) develop one or more possible strategies;
- (c) assess and select one or more strategies;
- (d) review the SFM plan;
- (e) design monitoring programs, evaluate results, and recommend improvements; and
- (f) discuss and resolve any issues relevant to SFM in the DFA.

The organization and the public participation process shall ensure that the values, objectives, indicators, and targets are consistent with relevant government legislation, regulations, and policies.

5.5 Communication

The organization shall

- (a) provide access to information about the DFA and the SFM requirements;
- (b) provide information to the broader public about the progress being made in the implementation of this Standard;
- (c) make allowances for the different linguistic, cultural, geographic, or informational needs of interested parties;
- (d) demonstrate that there is ongoing public communication about the DFA, including the public participation process; and
- (e) demonstrate that all input is considered and responses are provided.

6 SFM performance requirements

6.1 DFA-specific performance requirements

The organization, working with interested parties in the public participation process at each stage, shall establish DFA-specific performance requirements that address the SFM elements in [Clause 6.3](#), as follows:

- (a) for each element, one or more DFA-specific values shall be identified;
- (b) for each value, one or more objectives shall be set;
- (c) for each value, one or more meaningful indicators shall be identified, including core and locally selected indicators. Indicators shall be quantitative where feasible;
- (d) for each indicator, data on the current status shall be provided, and one appropriate target shall be set. Each target shall specify acceptable levels of variance for the indicator and clear time frames for achievement. A clear justification shall be provided for why the targets have been chosen;
- (e) one or more strategies shall be identified and elaborated for meeting identified targets; and
- (f) forecasts shall be prepared for the expected responses of each indicator to applicable strategies, and the methods and assumptions used for making each forecast shall be described.

The work shall be recorded and summarized in the SFM plan. During plan implementation, measurements shall be taken for each indicator at appropriate times and places. Measurement results shall be interpreted in the context of the forecasts in the SFM plan. See [Figure A.4](#) for an illustration of the relationship of values, objectives, indicators, and targets. See [Clauses 7.5.1](#) and [7.6](#) for information on adaptive management.

6.2 SFM criteria — General

The organization, in conformance with the public participation process requirements of [Clause 5](#), shall address the discussion items listed under each Criterion below, and shall identify DFA-specific values, objectives, indicators, and targets for each element, as well as any other values associated with the DFA.

The indicators shall include, but not necessarily be limited to, the core indicators identified in this Standard.

6.3 SFM criteria, elements, and core indicators

6.3.1 Criterion 1 — Biological diversity

Conserve biological diversity by maintaining integrity, function, and diversity of living organisms and the complexes of which they are part.

Discussion items for Criterion 1

The public participation process shall include discussion of the following topics:

- Forest fragmentation and forest loss
- Management in the context of natural disturbance regimes and patterns and the range of natural variation
- Maintenance of populations and communities over time
- Local and regional protected areas and integrated landscape management
- Silvicultural regimes and tools such as plantations, pesticides (including integrated pest management and pesticide-use regulations), structural retention, and timber harvest practices (including clear-cutting)
- Practices to limit the spread of invasive alien species, and the regulatory prohibitions related to adverse ecological effects and the use of exotic tree species
- The gene pool of native seed stock, and genetically modified organisms (GMOs) and the associated regulatory/policy requirements
- Management and protection of biological resources of cultural heritage significance
- Management of cultural values and resources
- Locally available processes and methods for identifying sites with special biological and cultural significance
- Conservation of old-growth forest attributes
- Participation in government programs to protect threatened and endangered species

Element 1.1 — Ecosystem diversity

Conserve ecosystem diversity at the stand and landscape levels by maintaining the variety of communities and ecosystems that naturally occur in the DFA.

Core indicators

- 1.1.1 — Ecosystem area by type
- 1.1.2 — Forest area by type or species composition
- 1.1.3 — Forest area by seral stage or age class
- 1.1.4 — Degree of within-stand structural retention

Element 1.2 — Species diversity

Conserve species diversity by ensuring that habitats for the native species found in the DFA are maintained through time, including habitats for known occurrences of species at risk.

Core indicators

- 1.2.1 — Degree of habitat protection for selected focal species, including species at risk
- 1.2.2 — Degree of suitable habitat in the long term for selected focal species, including species at risk
- 1.2.3 — Proportion of regeneration comprised of native species

Element 1.3 — Genetic diversity

Conserve genetic diversity by maintaining the variation of genes within species and ensuring that reforestation programs are free of genetically modified organisms.

Element 1.4 — Protected areas and sites of special biological and cultural significance

Respect protected areas identified through government processes. Co-operate in broader landscape management related to protected areas and sites of special biological and cultural significance.

Identify sites of special geological, biological, or cultural significance within the DFA, and implement management strategies appropriate to their long-term maintenance.

Core indicators

- 1.4.1 — Proportion of identified sites with implemented management strategies
- 1.4.2 — Protection of identified sacred and culturally important sites

6.3.2 Criterion 2 — Ecosystem condition and productivity

Conserve forest ecosystem condition and productivity by maintaining the health, vitality, and rates of biological production.

Discussion items for Criterion 2

The public participation process shall include discussion of the following topics:

- Climate change impacts and adaptation
- Trends in natural and human-caused disturbances
- Proportion of naturally disturbed area that is not salvage harvested
- Biomass utilization

Element 2.1 — Forest ecosystem resilience

Conserve ecosystem resilience by maintaining both ecosystem processes and ecosystem conditions.

Core indicator

- 2.1.1 — Reforestation success

Element 2.2 — Forest ecosystem productivity

Conserve forest ecosystem productivity and productive capacity by maintaining ecosystem conditions that are capable of supporting naturally occurring species. Reforest promptly and use tree species ecologically suited to the site.

Core indicators

- 2.2.1 — Additions and deletions to the forest area
- 2.2.2 — Proportion of the calculated long-term sustainable harvest level that is actually harvested

6.3.3 Criterion 3 — Soil and water

Conserve soil and water resources by maintaining their quantity and quality in forest ecosystems.

Discussion items for Criterion 3

The public participation process shall include, but not be limited to, discussion of the following topics:

- Soil productivity (long-term nutrient levels, shallow soils, best management practices for soil protection)
- Seasons of operations (operating windows, impacts on soil during frozen and unfrozen conditions)
- Site rehabilitation in areas of severe soil disturbance
- Water quality in watersheds supplying domestic water
- Healthy watersheds
- Management practices and regulatory requirements that protect water quality and quantity

Element 3.1 — Soil quality and quantity

Conserve soil resources by maintaining soil quality and quantity.

Core indicators

- 3.1.1 — Level of soil disturbance
- 3.1.2 — Level of downed woody debris

Element 3.2 — Water quality and quantity

Conserve water resources by maintaining water quality and quantity.

Core indicator

- 3.2.1 — Proportion of watershed or water management areas with recent stand-replacing disturbance

6.3.4 Criterion 4 — Role in global ecological cycles

Maintain forest conditions and management activities that contribute to the health of global ecological cycles.

Discussion items for Criterion 4

The public participation process shall include, but not be limited to, discussion of the following topic:

- Carbon emissions from fossil fuels used in forest operations

Element 4.1 — Carbon uptake and storage

Maintain the processes that take carbon from the atmosphere and store it in forest ecosystems.

Core indicators

- 4.1.1 — Net carbon uptake
- 2.1.1 — Reforestation success

Element 4.2 — Forest land conversion

Protect forest lands from deforestation or conversion to non-forests, where ecologically appropriate.

Core indicator

- 2.2.1 — Additions and deletions to the forest area

6.3.5 Criterion 5 — Economic and social benefits

Sustain flows of forest benefits for current and future generations by providing multiple goods and services.

Discussion items for Criterion 5

The public participation process shall include, but not be limited to, discussion of the following topics:

- Benefits for local communities and Aboriginal Peoples (cultural, spiritual, economic, health, etc.)
- Fair distribution of benefits and costs
- Proportion of goods and services sourced from local communities (to the extent that they are available and reasonably cost-competitive)

Element 5.1 — Timber and non-timber benefits

Manage the forest sustainably to produce an acceptable and feasible mix of timber and non-timber benefits. Evaluate timber and non-timber forest products and forest-based services.

Core indicator

- 5.1.1 — Quantity and quality of timber and non-timber benefits, products, and services produced in the DFA

Element 5.2 — Communities and sustainability

Contribute to the sustainability of communities by providing diverse opportunities to derive benefits from forests and by supporting local community economies.

Core indicators

- 5.2.1 — Level of investment in initiatives that contribute to community sustainability
- 5.2.2 — Level of investment in training and skills development
- 5.2.3 — Level of direct and indirect employment
- 5.2.4 — Level of Aboriginal participation in the forest economy

6.3.6 Criterion 6 — Society's responsibility

Society's responsibility for sustainable forest management requires that fair, equitable, and effective forest management decisions are made.

Discussion items for Criterion 6

The public participation process shall include, but not be limited to, discussion of the following topic:

- Development of working relationships with willing Aboriginal communities and/or people

Element 6.1 — Aboriginal and treaty rights

Recognize and respect Aboriginal title and rights, and treaty rights. Understand and comply with current legal requirements related to Aboriginal title and rights, and treaty rights.

Core indicators

- 6.1.1 — Evidence of a good understanding of the nature of Aboriginal title and rights
- 6.1.2 — Evidence of best efforts to obtain acceptance of management plans based on Aboriginal communities having a clear understanding of the plans
- 6.1.3 — Level of management and/or protection of areas where culturally important practices and activities (hunting, fishing, gathering) occur

Element 6.2 — Respect for Aboriginal forest values, knowledge, and uses

Respect traditional Aboriginal forest values, knowledge, and uses as identified through the Aboriginal input process.

Core indicator

- 6.2.1 — Evidence of understanding and use of Aboriginal knowledge through the engagement of willing Aboriginal communities, using a process that identifies and manages culturally important resources and values

Element 6.3 — Forest community well-being and resilience

Encourage, co-operate with, or help to provide opportunities for economic diversity within the community.

Core indicators

- 6.3.1 — Evidence that the organization has co-operated with other forest-dependent businesses, forest users, and the local community to strengthen and diversify the local economy
- 6.3.2 — Evidence of co-operation with DFA-related workers and their unions to improve and enhance safety standards, procedures, and outcomes in all DFA-related workplaces and affected communities
- 6.3.3 — Evidence that a worker safety program has been implemented and is periodically reviewed and improved

Element 6.4 — Fair and effective decision-making

Demonstrate that the SFM public participation process is designed and functioning to the satisfaction of the participants and that there is general public awareness of the process and its progress.

Core indicators

- 6.4.1 — Level of participant satisfaction with the public participation process
- 6.4.2 — Evidence of efforts to promote capacity development and meaningful participation in general
- 6.4.3 — Evidence of efforts to promote capacity development and meaningful participation for Aboriginal communities

Element 6.5 — Information for decision-making

Provide relevant information and educational opportunities to interested parties to support their involvement in the public participation process, and increase knowledge of ecosystem processes and human interactions with forest ecosystems.

Core indicators

- 6.5.1 — Number of people reached through educational outreach
- 6.5.2 — Availability of summary information on issues of concern to the public

7 SFM system requirements

7.1 General

The organization shall establish and maintain an SFM system as specified in [Clause 7](#).

7.2 SFM policy

Top management shall define and maintain the organization's SFM commitment through policy statements and/or other documented public statements. The statement(s) shall contain a commitment to

- (a) achieve and maintain SFM;
- (b) meet or exceed all relevant legislation, regulations, policies, and other requirements to which the organization subscribes;
- (c) respect and recognize Aboriginal title and rights, and treaty rights;
- (d) provide for public participation;
- (e) provide participation opportunities for Aboriginal Peoples with rights to and interests in SFM within the DFA;

- (f) provide conditions and safeguards for the health and safety of DFA-related workers and the public;
- (g) honour all international agreements and conventions to which Canada is a signatory;
- (h) improve knowledge about the forest and SFM, monitor advances in SFM science and technology, and incorporate these advances where applicable; and
- (i) demonstrate continual improvement of SFM.

The statement(s) shall be documented, communicated, and made readily available.

7.3 Planning

7.3.1 Defined forest area (DFA)

The organization shall designate a clearly defined forest area to which this Standard applies.

The organization shall define the geographic extent and the respective ownership and management responsibilities for the DFA.

7.3.2 Shared responsibilities

The organization shall ensure that all parties necessary to address the SFM elements for the DFA are involved in the process. The organization shall clearly describe the respective roles and responsibilities of the parties involved.

Where there are parties operating within the DFA that are not interested in participating and are not necessary for the achievement of the SFM elements, the organization may proceed without their involvement provided that the objectives and targets can still be achieved.

7.3.3 Rights and regulations

The organization shall

- (a) respect the legal rights and responsibilities of other parties in the DFA that are not part of the certification applicant;
- (b) demonstrate that relevant legislation and regulatory requirements relating to ownership, tenure, rights, and responsibilities in the DFA have been identified and complied with;
- (c) demonstrate that Aboriginal title and rights, and treaty rights have been identified and respected;
- (d) demonstrate that the legal and constitutional rights (including those specified in the International Labour Organization [ILO] conventions to which Canada is a signatory [such as “Freedom of Association” and “Protection of the Right to Organize”]) and the health and safety of DFA-related workers are respected, and their contributions to SFM are encouraged;
- (e) demonstrate that the acquired and legal rights of private woodlot owners to set the values, objectives, indicators, and targets relating to their properties are respected; and
- (f) establish and maintain procedures to identify and have access to all legal and other requirements to which the organization subscribes that are applicable to the DFA. This includes requirements related to ownership tenure, rights, and responsibilities in the DFA.

7.3.4 Incorporation of public participation requirements

The public participation requirements specified in [Clause 5](#) shall be incorporated into the SFM system.

7.3.5 SFM plan

The organization shall document, maintain, and make publicly available an SFM plan for the DFA. The SFM plan for each DFA shall include

- (a) a comprehensive description of the DFA;
- (b) a summary of the most recent forest management plan and the management outcomes, including the conclusions drawn in the management review;
- (c) a statement of values, objectives, indicators, and targets;
- (d) the current status and forecasts for each indicator, including a description of the assumptions and analytical methods used for forecasting;
- (e) a description of the chosen strategy, including all significant actions to be undertaken and the associated implementation schedule;

- (f) a description of the monitoring program;
- (g) a comparative analysis of actual and expected outcomes; and
- (h) a demonstration of the links between short-term operational plans and the SFM plan.

7.4 Implementation and operation

7.4.1 Structure and responsibility

Roles, responsibilities, and authority required to implement and maintain conformance with SFM requirements shall be defined, documented, and communicated within the organization.

The organization shall provide resources essential to the implementation and control of the SFM requirements, including human resources and specialized skills, technology, and financial resources.

The organization shall appoint a specific management representative(s) who shall have defined roles, responsibilities, and authority for

- (a) ensuring that the SFM requirements are established and maintained in accordance with this Standard; and
- (b) reporting on the SFM requirements to top management for review and as a basis for continual improvement.

7.4.2 Training, awareness, qualifications, and knowledge

The organization shall identify training needs. It shall also ensure that personnel receive training in accordance with the impact of their work on the DFA and their ability to ensure that SFM requirements are met.

The organization shall establish and maintain procedures to ensure that personnel, at each relevant function and level, have knowledge of

- (a) the importance of conformance with the SFM policy and with the SFM requirements;
- (b) the environmental impacts, actual or potential, of their work, and the benefits of meeting the SFM requirements;
- (c) their roles and responsibilities in achieving conformance with the SFM policy and SFM requirements, including emergency preparedness and response requirements; and
- (d) the potential consequences of deviations from specified operating procedures.

The organization shall ensure that its personnel are qualified on the basis of appropriate training and/or work experience and have opportunities to gain new knowledge. The organization shall also require contractors working on its behalf to demonstrate that their personnel have the requisite training and awareness levels.

The organization shall continually improve its knowledge of the DFA and SFM and shall monitor advances in SFM science and technology, and incorporate them where and when applicable.

7.4.3 Communication

The organization shall

- (a) establish and maintain procedures for internal communication between its various levels and functions;
- (b) establish and maintain procedures for receiving, documenting, and responding to relevant communication from external interested parties;
- (c) make the SFM plan publicly available;
- (d) make publicly available an annual report on its performance in meeting and maintaining the SFM requirements; and
- (e) make publicly available the results of independent certification and surveillance audit reports, including, at minimum, the following information:
 - (i) a description of the audit process, objectives, and scope;
 - (ii) the scope of certification;
 - (iii) DFA and tenure description;
 - (iv) a list of the elements audited both off-site and on-site;

- (v) the name of the certified organization and/or co-applicant(s) that were audited, including their representatives;
- (vi) the name of the certification body, lead auditor, and audit team members;
- (vii) the dates the audit was conducted and certification completed;
- (viii) a summary of the findings, including general descriptions of nonconformities, opportunities for improvement, and exemplary practices/positives;
- (ix) a statement of corrective actions taken for current nonconformities;
- (x) the status of nonconformities from previous audits;
- (xi) the certification recommendation;
- (xii) the number of sites visited on the ground and activities observed;
- (xiii) the number of public participation members, government officials, DFA-related workers, and other interested parties that were interviewed;
- (xiv) the date of the next audit; and
- (xv) forest areas for the next audit.

7.4.4 SFM documentation

The organization shall establish and maintain documentation, in paper or electronic form, that

- (a) describes the SFM requirements and their interaction; and
- (b) provides direction to related documentation.

Organizations shall ensure that DFA-related workers and contractors have access to the documentation relevant to their responsibilities and tasks.

7.4.5 Document control

7.4.5.1

The organization shall establish and maintain procedures for controlling all documents (paper or electronic) required by this Standard, to ensure that

- (a) documents can be readily located;
- (b) documents are periodically reviewed, revised as necessary, and approved as adequate by authorized personnel;
- (c) the current versions of relevant documents are available at all locations where operations essential to the fulfillment of the SFM requirements and the SFM plan are performed;
- (d) obsolete documents are promptly removed from all points of issue and use, or otherwise prevented from unintended use; and
- (e) obsolete documents retained for legal and/or knowledge preservation purposes are suitably identified.

7.4.5.2

Documentation shall be

- (a) legible;
- (b) dated (with dates of revision);
- (c) readily identifiable;
- (d) maintained in an orderly manner; and
- (e) retained for a specified period.

Procedures and responsibilities for the creation and modification of the various types of documents shall be established and maintained.

7.4.6 Operational procedures and control

The organization shall

- (a) identify the operational procedures and controls needed to meet the SFM requirements;
- (b) establish and maintain documented procedures to cover situations in which the absence of such procedures could lead to deviations from the SFM requirements;
- (c) stipulate operating criteria, including maintenance and calibration requirements;

- (d) communicate relevant procedures, controls, and requirements to employees, suppliers, and contractors; and
- (e) ensure that contractors working on behalf of the organization have the necessary operational procedures and controls.

7.4.7 Emergency preparedness and response

The organization shall

- (a) establish and maintain procedures to identify the potential for, and response to, accidents and emergencies in the DFA;
- (b) establish and maintain procedures to prevent and mitigate the impacts associated with accidents and emergencies;
- (c) review and revise, where necessary, its emergency preparedness and response procedures, particularly after the occurrence of accidents or emergencies; and
- (d) where practicable, test procedures periodically.

7.5 Checking and corrective action

7.5.1 Monitoring and measurement

The organization shall

- (a) establish and maintain documented procedures to monitor, on a regular basis, the key characteristics of its operations and activities that demonstrate progress towards SFM in the DFA. This shall include the recording of performance levels, relevant operational controls, and conformance with the SFM requirements;
- (b) monitor indicators for comparison against forecasts;
- (c) establish and maintain a documented procedure for periodically evaluating compliance with relevant legislation and regulations, and conformance with relevant policies applying to the DFA. If non-compliances or nonconformities are found, the organization shall address these through corrective and preventive actions; and
- (d) assess the quality, validity, and meaningfulness of the locally determined indicators and all of the targets.

7.5.2 Corrective and preventive action

The organization shall establish and maintain procedures for

- (a) defining responsibility and authority for identifying and investigating nonconformity;
- (b) taking action to mitigate impacts; and
- (c) initiating and completing corrective and preventive action.

Any corrective or preventive action taken to eliminate the causes of actual and potential nonconformities shall be appropriate to the magnitude of problem and commensurate with the impact encountered.

7.5.3 Records

The organization shall establish and maintain procedures for the identification, maintenance, and disposal of SFM requirement records. These records shall include training records and the results of audits and reviews.

SFM requirement records shall be

- (a) legible;
- (b) identifiable;
- (c) traceable to the activity involved; and
- (d) stored and maintained such that they are readily retrievable and protected against damage, deterioration, or loss.

Their retention times shall be established and recorded.

Records shall be maintained, in a manner appropriate to the system and to the organization, to demonstrate conformance to the requirements of this Standard.

7.5.4 Internal audits to the SFM requirements

7.5.4.1

The organization shall

- (a) establish and maintain procedures for annual internal audits to ensure that they conform to the SFM requirements of this Standard; and
- (b) provide information on the results of these internal audits to top management.

7.5.4.2

The organization's internal audit program, including any schedules, shall be based on the importance of the specific SFM activity and the results of previous audits.

Audit procedures shall cover the following:

- (a) scope;
- (b) frequency;
- (c) methods;
- (d) responsibilities and requirements for conducting audits;
- (e) auditor qualifications; and
- (f) reporting results.

7.6 Management review

The organization's top management shall, at least annually, review the SFM requirements to ensure that progress towards SFM continues to be suitable, adequate, and effective. The information necessary to allow top management to carry out this evaluation shall be collected. This review shall be documented.

In order to be adaptive, the management review shall address the possible need for changes to policy, targets, and other SFM requirements, in light of audit results, changing circumstances, and the commitment to continual improvement.

Annex A (informative)

Guidance for implementation and certification

Notes:

- (1) This Annex is not a mandatory part of this Standard.
- (2) The boxed text in this Annex is a reproduction of the requirements of this Standard. The text located outside the boxes provides guidance to clarify the specifications within, by using explanations and practical examples. This guidance material does not provide any additional requirements to those specified in the boxes. An organization seeking third-party independent certification will be audited to the text in the boxes, and decisions regarding compliance with these requirements rest with the certification bodies.

A.4 Sustainable forest management requirements

A.4.1 General requirements

4.1 General requirements

The organization shall meet the

- (a) public participation requirements specified in [Clause 5](#);
- (b) performance requirements specified in [Clause 6](#); and
- (c) system requirements specified in [Clause 7](#).

SFM requirements are presented in three separate clauses to facilitate comprehension of the main tenets of this Standard. However, these three sets of requirements are interrelated and should be considered together, rather than independently. For example, the performance requirements provide much of the content for the public participation process. Similarly, an important function of the system requirements is to provide the organization with the means to manage and track its SFM performance for the purposes of continual improvement.

A.4.2 Required activities

4.2 Required activities

The organization shall meet the SFM requirements of this Standard, which include

- (a) compliance with legislation applicable to the DFA;
- (b) values, objectives, indicators, and targets that clearly address the SFM criteria and elements in this Standard;
- (c) ongoing and meaningful public participation;
- (d) implementation of adaptive management;
- (e) progress towards or achievement of performance targets; and
- (f) continual improvement in performance.

The SFM requirements create a framework that facilitates effective and consistent on-site forest management while focusing on continual improvement. To be certified, the organization needs to meet the SFM requirements, which include the public participation, performance, and system requirements specified in [Clauses 5](#), [6](#), and [7](#). The organization is to address all of the SFM elements, as well as other values identified through the public participation process, by establishing objectives, indicators, and targets for the specific DFA. The organization is to establish and maintain an SFM system that includes the following components:

- policy;
- planning;

- implementation and operation;
- checking and corrective action; and
- management review to achieve continual improvement.

A.4.3 Adaptive management

The SFM system requirements are based on the principle of adaptive management, which enables and encourages the improvement of management actions and practices based on knowledge gained from experience. The organization should incorporate adaptive management concepts when implementing and maintaining the SFM system.

Forest ecosystems change continuously as a result of both human and non-human influences. SFM necessitates the establishment of relationships between forest values and management actions. Adaptive management facilitates knowledge of these relationships at the temporal and spatial levels at which forest systems are managed. SFM in accordance with this Standard uses adaptive management to achieve continual improvement. This is done by regularly monitoring and assessing a set of core and locally selected indicators and by modifying forecasts, activities, and plans based on this information (see [Figure A.1](#)).

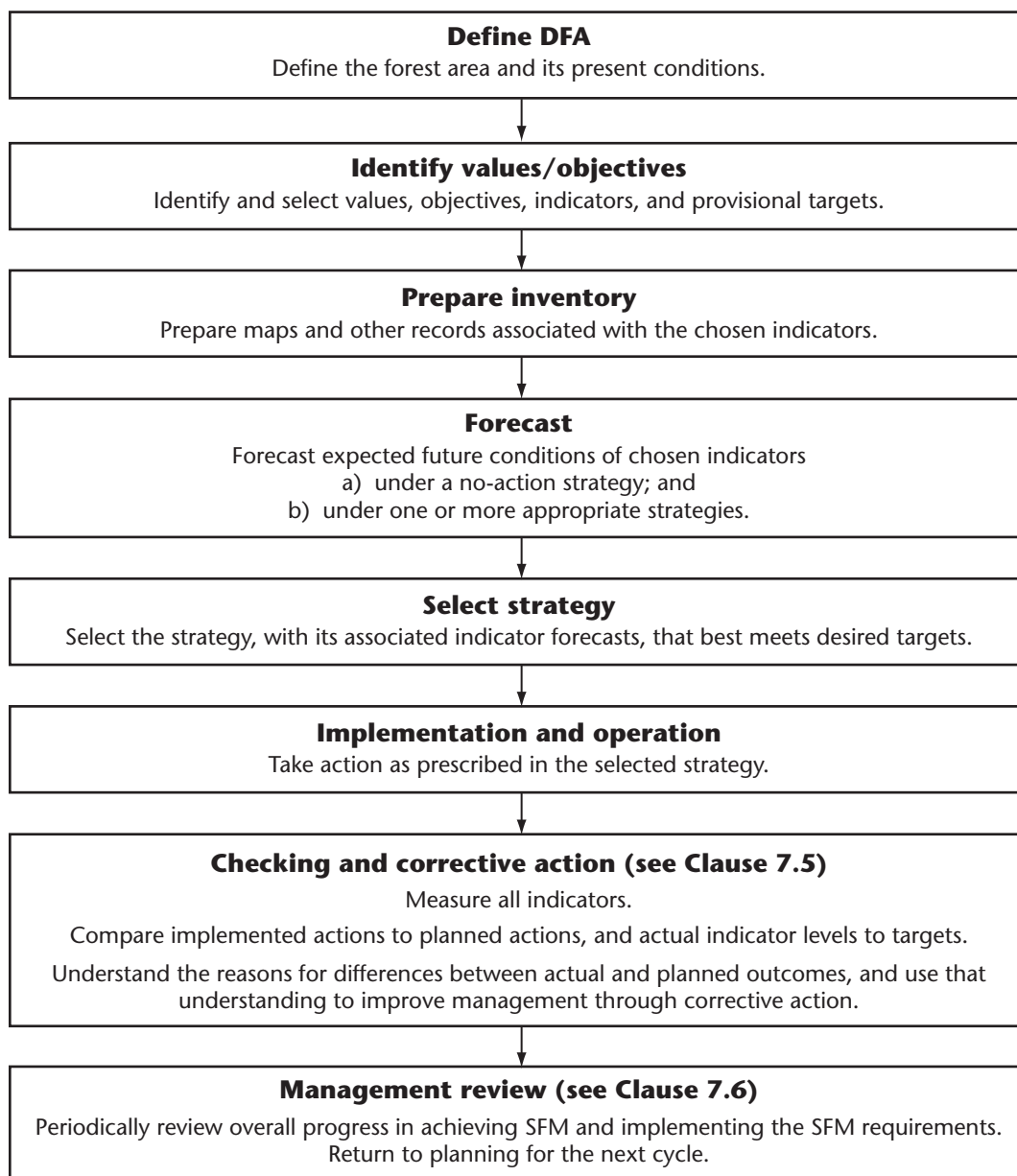


Figure A.1
Adaptive management as applied to forests
 (See [Clause A.4.3.](#))

A.4.4 Continual improvement

Continual improvement (see [Figure A.2](#)) and overall progress towards SFM are achieved when all SFM requirements are aligned and working together. Each of the SFM requirements has specific considerations, and each is dependent on the others to be effective.

SFM policy and management review are the fundamental generators of continual improvement. The SFM policy sets the foundation for SFM for the organization and acts as a guide. Management review provides an opportunity for the organization to examine its performance against the SFM requirements,

both individually and collectively. The review, which takes place annually or more frequently, maintains the continual improvement cycle through specific guidance, direction, and the allocation of necessary resources.

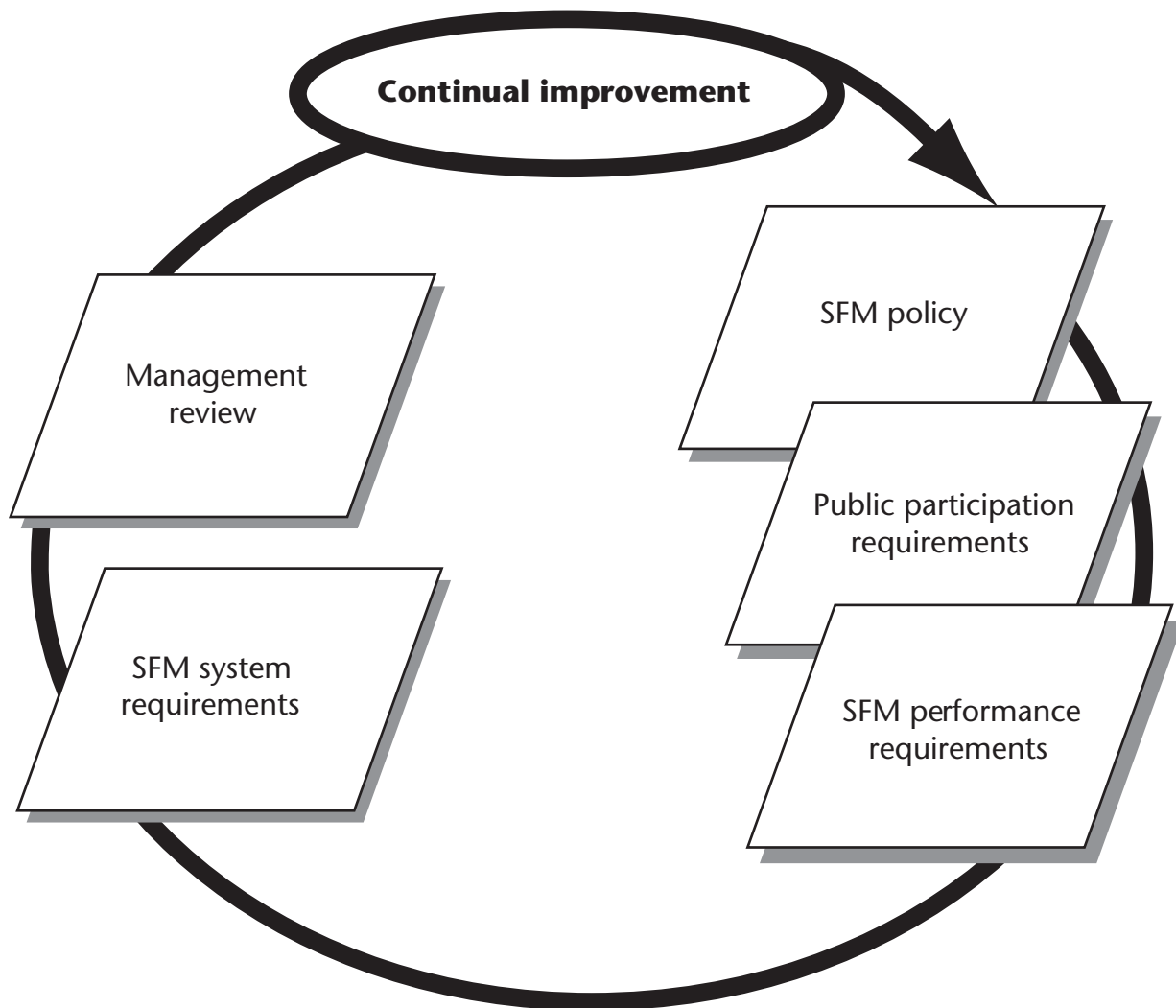


Figure A.2
SFM continual improvement loop
(See [Clause A.4.4.](#))

A.5 Public participation requirements

A.5.1 General requirements

5.1 General requirements

The organization shall establish and implement a public participation process by

- (a) starting a new process;
- (b) building on an existing process; or
- (c) reviving a previous process.

Public participation is a process of engagement that incorporates a diversity of values into SFM. (For more information on public participation, see Beckley et al., *Public Participation in Sustainable Forest Management: A Reference Guide to Best Practices*.) The public participation process specified in this Standard does not replace the Crown's legal duty to consult with Aboriginal Peoples. Members of the public are widely considered to have the right to be involved in the management of publicly owned forests. Private forest landowners may voluntarily adopt processes with extensive public input. Through their participation in the process, citizens can enhance their knowledge of SFM in general and of other interests and values related to local forests. They also gain a valuable opportunity to be involved in the decision-making process for local forests.

Implementation of a public participation process as specified in this Standard gives the public an opportunity to be involved proactively in the management of a DFA. Interested parties are invited to have input in the major steps of SFM, and the organization has an obligation to heed such input, either by accepting it and revising management accordingly or by responding with specific reasons for not accepting it.

Public participation processes, however, have their limits. In a DFA-specific process, participants should not expect to be able to change existing public policies, laws, and regulations established by governments, nor to promote a concept that is illegal. A public participation process for SFM under this Standard respects existing authority for decisions associated with the use and management of the DFA.

Effective public participation processes accommodate the public's wide range of knowledge, interests, and involvement with regard to SFM, as well as its differing cultural and economic ties to the forest. The approach to public participation may vary according to the DFA, the desired outputs, and the specific needs and rights of interested parties. A variety of strategies for public participation might have to be employed on a single DFA in the development and implementation of the SFM requirements. For example, one strategy is to involve a local group of interested and affected parties on an ongoing basis. This strategy could be complemented by communication with a broader public to increase awareness and understanding of SFM and to provide a mechanism for soliciting a wide range of input into the development and implementation of the SFM requirements.

The organization will be implementing the SFM requirements in an environment where other decision-making processes already exist. The organization will need to take previous planning into account and build upon existing management systems, public processes, and decisions relevant to the DFA, even though they might be applicable to a land base larger than the DFA. The organization might have an opportunity to use existing public participation processes when implementing the SFM requirements. Where the outputs of such processes are regulatory or policy requirements of the jurisdiction in which the DFA is situated, these requirements should be reflected in the SFM system.

The organization can build on the results of existing or former public participation processes, but might need to refine and/or expand them to apply specifically to the DFA and to meet the public participation requirements of this Standard. Where existing processes do not address all the public participation requirements of this Standard, the organization should ensure that the gaps are filled through complementary measures.

A.5.2 Interested parties

A.5.2.1

5.2 Interested parties

The organization shall

- (a) openly seek representation from a broad range of interested parties, including DFA-related workers, and invite them to participate in developing the public participation process;
- (b) provide interested parties with relevant background information;

To seek representation of those directly affected by or interested in forest management in the DFA, the organization needs to have an understanding of the relevant interests and positions of local, interested parties. In addition, it is important that the organization consider the broader public interest, particularly where decisions are likely to be seen as regionally significant or contentious. The organization should openly seek representation from DFA-related workers and/or their union representatives.

Interested parties can be engaged in public participation processes in several ways. Specific groups or individuals can be selected and personally invited to participate. Alternatively, parties may be invited to nominate a representative. Where it is advisable on practical grounds to restrict the number of participants, clear criteria for selection should be established, and a mechanism should be developed to provide those interested parties not selected with the opportunity to have input in the process.

A.5.2.2

5.2 Interested parties

- (c) demonstrate through documentation that efforts were made to contact and encourage affected and interested communities, including Aboriginal communities, to become involved in the SFM public participation process;

The encouragement of Aboriginal forest users and communities to become involved in identifying and addressing SFM values can vary from community to community, but always begins with a clear respect for their rights, values, and traditional knowledge. From a foundation of respect, an organization is able to involve Aboriginal representatives in the decision-making process based on their interests, values, and traditions, and integrate their knowledge into management planning at the outset. This can result in opportunities for capacity-building, Aboriginal employment opportunities, and business development with Aboriginal contractors and businesses, including joint ventures.

If an organization approaches an Aboriginal forest user or community with an understanding of what they might expect from the engagement and what some of their concerns might be, the chances of engaging effectively and alleviating concerns are increased. When attempting to engage Aboriginal Peoples in a meaningful way, an organization should

- approach the Aboriginal community to determine the appropriate authority on the theme of SFM. The appropriate authority might be the elected Chief and Council, or a forestry committee established by a band. The appropriate authority can vary by community;
- have a background on Aboriginal Peoples and the rapidly changing legal context;
- have an understanding of existing provincial policies and legislation on Aboriginal participation and consultation; and
- be open to the perspectives of Aboriginal Peoples on their participation and on key aspects of SFM.

Information about the SFM plan should be provided to Aboriginal communities associated with the DFA (e.g., through workshops or training sessions), particularly if they are not already receiving information through active participation in an advisory group. Providing this information can facilitate mutual understanding and encourage further Aboriginal participation.

A.5.2.3**5.2 Interested parties**

(d) acknowledge that Aboriginal participation in the public participation process is without prejudice to Aboriginal title and rights, or treaty rights; and

This Standard recognizes that Canadian forests have special significance to Aboriginal Peoples. It further recognizes the unique rights and legal status of Aboriginal Peoples, and that they possess expertise, knowledge, and insights concerning SFM, derived from their traditional practices, beliefs, and experience. Aboriginal forest users and communities require unique consideration in the public participation process.

Aboriginal Peoples who have an interest in or who are affected by forest management in a DFA should be given an opportunity to contribute their knowledge to the process of setting values, objectives, indicators, and targets. In some cases, this opportunity might necessitate a separate process of Aboriginal participation.

Some jurisdictions have specific regulations or policies regarding Aboriginal participation. Even where regulations or policies are in place, and especially where they are not, the organization should seek out guidance from Aboriginal Peoples regarding the best methods and/or frequency of contact.

A.5.2.4**5.2 Interested parties**

(e) establish and maintain a list of interested parties that includes

- (i) those that chose to participate;**
 - (ii) those that decided not to participate;**
 - (iii) those that were unable to participate;**
 - (iv) the reasons for not participating, if provided; and**
 - (v) efforts within the organization to enable participation.**
- The list shall contain names and contact information.**

Several reasons might be associated with a lack of participation, including but not limited to

- treaty engagement;
- land claim issues;
- court hearings pertaining to relevant issues;
- issues related to representation and participation; and
- the relationship between the organization and interested parties and/or Aboriginal Peoples.

An organization seeking certification could benefit from knowing the reasons for a person's or group's lack of participation, as it might be within the organization's ability to facilitate such participation. Reasons that might be associated with lack of participation can include issues related to representation and participation, the relationship between the organization and interested parties and/or Aboriginal people, court hearings pertaining to relevant issues, or land claim issues. It is likely beyond the organization's ability to control or remove some impediments to participation (such as land claim issues), but in other cases (such as the relationship between the organization and interested parties), it might be feasible for the organization to initiate discussions on solutions that would enable the desired participation.

Certified organizations should maintain a list of active participants and documentation describing the circumstances for recent changes to the list. The organization should conduct periodic reviews of the active participants and invite new participants as necessary.

A.5.3 Process: Basic operating rules

A.5.3.1 General

5.3 Process: Basic operating rules

The organization shall demonstrate that

- (a) the public participation process works according to clearly defined operating rules that contain provisions on
 - (i) content;
 - (ii) goals;
 - (iii) timelines;
 - (iv) internal and external communication;
 - (v) resources (including human, physical, financial, information, and technological, as necessary and reasonable);
 - (vi) roles, responsibilities, and obligations of participants and their organizations;
 - (vii) conflict of interest;
 - (viii) decision-making methods;
 - (ix) authority for decisions;
 - (x) mechanisms to adjust the process as needed;
 - (xi) access to information (including this Standard);
 - (xii) the participation of experts, other interests, and government;
 - (xiii) a dispute-resolution mechanism; and
 - (xiv) a mechanism to measure participants' satisfaction with the process; and
- (b) the participants have agreed to the public participation process operating rules.

The public participation process for a specific DFA will be a function of the range of interested parties and their values and needs. Organizations should thus develop public participation processes that are appropriate to local circumstances. To ensure that the public participants have some degree of ownership of the process in which they are being asked to participate, this Standard specifies requirements for agreement on the operating rules that guide the process. This involves a determination of the relative importance of the required characteristics of a public participation process according to local circumstances. For example, if participants exercising their responsibility under this clause jointly determine that a dispute-resolution mechanism (Clause 5.3, Item (a)(xiii)) is unnecessary, and a rationale is provided, then such a process would not be included in the operating rules.

Public participation is not confined to a single event; it is an ongoing process. It must consistently provide input toward the continual improvement of the organization's fulfillment of the SFM requirements, and continue to do so during the monitoring and follow-up phases of the SFM system.

Guidance on operating rules is provided in [Clauses A.5.3.2 to A.5.3.15](#).

A.5.3.2 Content

The operating rules should specify the range of considerations and issues to be addressed in the process.

A.5.3.3 Goals

The aims or purposes for the public participation process should be defined. The goals should address the expectations of the interested parties that have chosen to participate.

A.5.3.4 Timelines

The operating rules should specify the expected duration of various stages of the process, including delivery dates for key outcomes. Timelines should be sensitive to both efficiency (i.e., implementation of this Standard without undue delay) and effectiveness (i.e., taking sufficient time to meet SFM requirements and successfully complete key tasks).

A.5.3.5 Provisions for internal and external communication

The success of the public participation process is greatly influenced by the extent and quality of communications, both internal and external. Consideration should be given to the ways in which

- the organization will communicate with other participants;
- participants will communicate and interact with each other; and
- participants will communicate with their respective constituencies and the broader public.

See [Clause A.5.3.7](#).

A.5.3.6 Resources

Effective public participation requires resources for successful implementation. The operating rules should specify the resources that will be made available to the process, by which parties, and under what conditions. Consideration should be given to the following:

- Human resources are needed to implement and service the process.
- Physical resources include meeting places and transportation services.
- Financial resources are needed to defray process costs and to underwrite the direct expenses of participants attending meetings.
- Relevant information, a key ingredient in any planning process, should be assembled and put in a format that is readily accessible to participants.
- Technological resources are mainly the analytical tools associated with planning, including geographic information systems, remote sensing images, and various communications tools.

A.5.3.7 Roles, responsibilities, and obligations of participants

Expectations of both the participants and the organization should be clear at the outset and throughout the public participation process. Participant representation (do they represent themselves or an organization or affiliation?), attendance (are alternates permitted? how many meetings can a participant miss?), continuity, and similar matters are critical to credible, efficient, and valuable public participation. Where the participants come into the process representing other organizations, they have the responsibility to keep their respective constituencies regularly apprised of the process and report the views of their constituents back into the process.

A.5.3.8 Provisions for conflict of interest

The public participation process should have a system to deal with conflicts of interest, particularly when participants have relationships with the organization or any other party that must be declared.

A.5.3.9 Decision-making methods

For effective engagement, participants should know how meetings will be conducted and decisions made. It is particularly important to establish

- whether meetings will use a specific method (e.g., consensus seeking); and
- if there is any voting, how it will be done.

A.5.3.10 Authority for decisions

The operating rules should clarify which participants in the process have the authority to decide on specific matters. Participants should know about the organization's regulatory responsibilities; this will help define the scope of the organization's authority and of the public participation process.

A.5.3.11 A mechanism to adjust the process

Changes to the public participation process are sometimes needed during implementation as participants become more involved. Such changes should be made according to protocols specified at the beginning of the process.

A.5.3.12 Access to information

Information is critical to a sound public participation process. Participants, and particularly the organization, should bring forward relevant information. To understand SFM as described in this Standard, it is vital that the organization ensure that all participants be given an opportunity to read this Standard (available electronically at no cost at www.csa.ca).

Conditions of confidentiality of certain information should be specified, if applicable. This Standard recognizes the rights of Aboriginal Peoples to their intellectual and cultural knowledge, innovations, and practices, and the need to protect sensitive information when it is shared. Generally, information presented by any party in a forum that is part of the public participation process will become public information. Conditions on the use of any information, from any source, exchanged in separate Aboriginal consultation processes may be governed by prior agreements among all the parties involved.

A.5.3.13 The participation of experts, other interests, and government

The participants might find it useful to invite experts to discuss technical issues. Government representatives may become regular participants in the process, or they may take observer or technical-support roles. Non-local interests might have a desire to provide input, and the means of doing so should be agreed upon in advance. One approach is to design special ad hoc forums for dialogue between non-local interests and local interested parties.

A.5.3.14 Dispute-resolution mechanism

A common decision-making approach used in public participation processes for forest management in Canada today is that of consensus, which might or might not require unanimity. Given the sometimes heated debates that surround contemporary forest management, total agreement can be difficult to reach on some DFA-specific issues. The operating rules should anticipate this circumstance and outline a means of dealing with conflict. Many guides are available to help participants understand participatory and/or consensus-seeking processes and develop means to resolve disputes. The guiding principles published by the National Round Table on the Environment and the Economy (reproduced in [Table A.1](#)) are of particular relevance since they were developed in a Canadian context.

Table A.1
Guiding principles of consensus processes
 (See [Clause A.5.3.14.](#))

Principle No.	
1	Purpose driven People need a reason to participate in the process.
2	Inclusive, not exclusive All parties with a significant interest in the issues should be involved in the consensus process.
3	Voluntary participation The parties who are affected or interested participate voluntarily.
4	Self design The parties design the consensus process
5	Flexibility Flexibility should be designed into the process.
6	Equal opportunity All parties must have equal access to relevant information and the opportunity to participate effectively throughout the process.
7	Respect for diverse interests Acceptance of the diverse values, interests, and knowledge of the parties involved in the consensus process is essential.
8	Accountability The parties are accountable both to their constituencies and to the process that they have agreed to establish.
9	Time limits Realistic deadlines are necessary throughout the process.
10	Implementation Commitment to implementation and effective monitoring are essential parts of any agreement.

Note: Adapted from NRTEE, *Building Consensus for a Sustainable Future: Putting Principles in Practice (1996)*.

A.5.3.15 Measuring participant satisfaction

Participatory processes work best when participants are satisfied with how the process is running. Therefore, process convenors and facilitators need to know how participants are feeling about the means and protocols of engagement. Different methods can be used for gauging participant satisfaction, including qualitative interviews and quantitative surveys.

A.5.4 Content

A.5.4.1

5.4 Content

In the public participation process, interested parties shall have opportunities to work with the organization to

- (a) identify and select values, objectives, indicators, and targets based on SFM elements and any other issues of relevance to the DFA;
- (b) develop one or more possible strategies;
- (c) assess and select one or more strategies;
- (d) review the SFM plan;
- (e) design monitoring programs, evaluate results, and recommend improvements; and
- (f) discuss and resolve any issues relevant to SFM in the DFA.

It is the organization's responsibility to provide interested parties with an opportunity to participate in the activities specified in [Clause 5.4](#). However, the level of involvement will be up to the participants. If the participants choose to focus only on the items that they consider to be significant, it remains the responsibility of the organization to address all of the items specified in [Clause 5.4](#) and to report back to the participants on its decisions. The participants would then be in a position to provide input, should they so desire.

Because the final set of values, objectives, indicators, and targets is specific to the DFA, the outputs from broader processes might need to be refined and gaps gradually closed. To facilitate this, the organization may compile information about its existing commitments to values, objectives, indicators, and targets as a "seed document" for its public participation process. However, it should be clear to participating interested parties that any such document is only a starting point and that it could be accepted, rejected, or improved upon through the public participation process.

The issues referenced in [Clause 5.4](#) Item (f) might arise in association with the discussion items specified for each criterion in [Clause 6.3](#) or during other discussions that are part of the public participation process. The outcome of discussions regarding an issue(s) relevant to SFM in the DFA should consist of one or more of the following:

- demonstration that the issue raised is not applicable to the DFA;
- identification of one or more DFA-specific values and the associated objectives, indicators, and targets;
- identification of the issue as a topic that the public participation process should discuss on an ongoing basis;
- establishment and implementation of performance-based thresholds and specifications to address the issue;
- addressing the issue through policy, operational controls, and/or best management practices;
- demonstration that the issue has already been addressed through satisfaction of a previously identified value; and
- other means, developed and accepted through the public participation process, that clearly and adequately address the issue.

A.5.4.2

5.4 Content

The organization and the public participation process shall ensure that the values, objectives, indicators, and targets are consistent with relevant government legislation, regulations, and policies.

A key role of public participation is the development of values, objectives, indicators, and targets for the DFA. Outcomes of this process should, at minimum, comply with existing government laws and regulations. The process should also respect the findings of any formal public participation processes that have developed values, objectives, indicators, or targets relating to the SFM elements at a landscape or regional level in the area in which the DFA is situated.

A.5.5 Communication

A.5.5.1

5.5 Communication

The organization shall

- (a) provide access to information about the DFA and the SFM requirements;
- (b) provide information to the broader public about the progress being made in the implementation of this Standard;

To meet the requirements of [Clause 5.5](#), Items (a) and (b), the organization should provide information for interested parties to review and comment upon. Different participants might request varying amounts and types of information. While access to all relevant information should be provided, the organization is not required to disclose information on internal proprietary and confidential matters, such as personal information about staff or information that might affect the organization's competitive advantage. In some cases, summaries of information can be provided.

Interested parties involved in the public participation process can represent broader constituencies and should relay information to those constituencies. However, the organization should provide information to a broader public about the process and progress of implementing the SFM requirements. The strategies for disseminating such information include

- public announcements in the media;
- development of a website;
- open houses;
- town meetings;
- smaller meetings with specific interest groups; or
- other forms of communication.

Opportunities should be provided for sharing information, views, and values. Suggestions received through the broader process of public communication should be considered by the organization and responded to in a timely fashion.

A.5.5.2

5.5 Communication

- (c) make allowances for the different linguistic, cultural, geographic, or informational needs of interested parties;
- (d) demonstrate that there is ongoing public communication about the DFA, including the public participation process; and
- (e) demonstrate that all input is considered and responses are provided.

The requirements of this Standard include a rigorous process designed to provide interested parties with an opportunity to influence decisions and to provide input on important issues. However, this does not mean that the decision-making power resides with the public alone. The organization should take the public input seriously and demonstrate that it is responsive to and respectful of this input. In doing so, the organization should clearly explain how decisions, including any trade-offs, are reached. See [Clause A.7.4.3](#).

A.6 SFM performance requirements

A.6.1 DFA-specific performance requirements

A.6.1.1 General

6.1 DFA-specific performance requirements

The organization, working with interested parties in the public participation process at each stage, shall establish DFA-specific performance requirements that address the SFM elements in [Clause 6.2](#), as follows:

- (a) for each element, one or more DFA-specific values shall be identified;
- (b) for each value, one or more objectives shall be set;
- (c) for each value, one or more meaningful indicators shall be identified, including core and locally selected indicators. Indicators shall be quantitative where feasible;
- (d) for each indicator, data on the current status shall be provided, and one appropriate target shall be set. Each target shall specify acceptable levels of variance for the indicator and clear time frames for achievement. A clear justification shall be provided for why targets have been chosen;
- (e) one or more strategies shall be identified and elaborated for meeting identified targets; and
- (f) forecasts shall be prepared for the expected responses of each indicator to applicable strategies, and the methods and assumptions used for making each forecast shall be described.

The work shall be recorded and summarized in the SFM plan. During plan implementation, measurements shall be taken for each indicator at appropriate times and places. Measurement results shall be interpreted in the context of the forecasts in the SFM plan. See [Figure A.4](#) for an illustration of the relationship of values, objectives, indicators, and targets. See [Clauses 7.5.1](#) and [7.6](#) for information on adaptive management.

Because values represent what is important in and for a DFA, the organization should have a clear and transparent mechanism for identifying DFA-specific values and translating them into detailed targets that can be met with implementation of a chosen strategy. This Standard identifies a basic set of mandatory core indicators and specifies a process for identifying other indicators and setting associated targets. The values, objectives, indicators, and targets identified during the public participation process may be documented in a table (see [Table A.2](#)).

Table A.2
Sample integration of public participation process
content requirements and DFA performance requirements
 (See Clauses A.6.1.1 and A.6.1.5.)

Public participation process content (see Clause 5.4)	Setting DFA performance requirements (see Clause 7.3.5)	Explanations and examples
Identify and select values, objectives, indicators, and targets.	For each element, identify one or more DFA-specific values.	When considering Element 1.2, Species diversity, the habitat for a population of pileated woodpeckers could be a DFA-related value. There can be many values for each element.
	For each value, identify one or more objectives.	For the pileated woodpecker habitat, the objective could be to maintain the habitat at the present level. Limit objectives to one per value; however, in some circumstances, more than one objective might be necessary.
	For each value, identify one or more indicators, including core and locally selected indicators.	For the pileated woodpecker habitat, the indicator might be the habitat carrying capacity, measured by the number of breeding pairs per 100 km ² . Each value can have more than one indicator.
	For each indicator, provide data on current status and identify a target.	For the pileated woodpecker habitat, the current habitat carrying capacity might be 20 pairs per 100 km ² , and the target might be a minimum of 20 pairs per 100 km ² .
Develop appropriate strategies to be assessed.	Design a small set of appropriate strategies.	Examples might include (a) no timber harvest and associated activities; (b) continuation of current forest management; (c) shift to highly intensive forest management; and (d) strong move to emulation of natural disturbance patterns. Strategies should be restricted in number (approximately 4 to 6) and clearly distinguished in the early stages of analysis. Each strategy includes all the major actions that could affect the habitat for the pileated woodpecker (e.g., access, timber harvest, regeneration, protection).
	Create a forecast for each chosen indicator in response to each applicable strategy.	Forecasts for biophysical indicators should be quantitative and long-term. Forecasts for socio-economic indicators may be quantitative or qualitative, as appropriate. Forecasts for qualitative indicators can be developed using scenario-building techniques. Provide the analytical basis for all forecasts.
Assess strategies and select the preferred one.		Use formal (e.g., trade-off analysis, multivariate statistical techniques) and/or informal (e.g., discussion) methods to weigh the relative merits of the assessed strategies. If no strategy emerges as broadly acceptable, then revise targets or develop new strategies, or both, and prepare new forecasts. Continue the process until an acceptable/preferred strategy emerges.

(Continued)

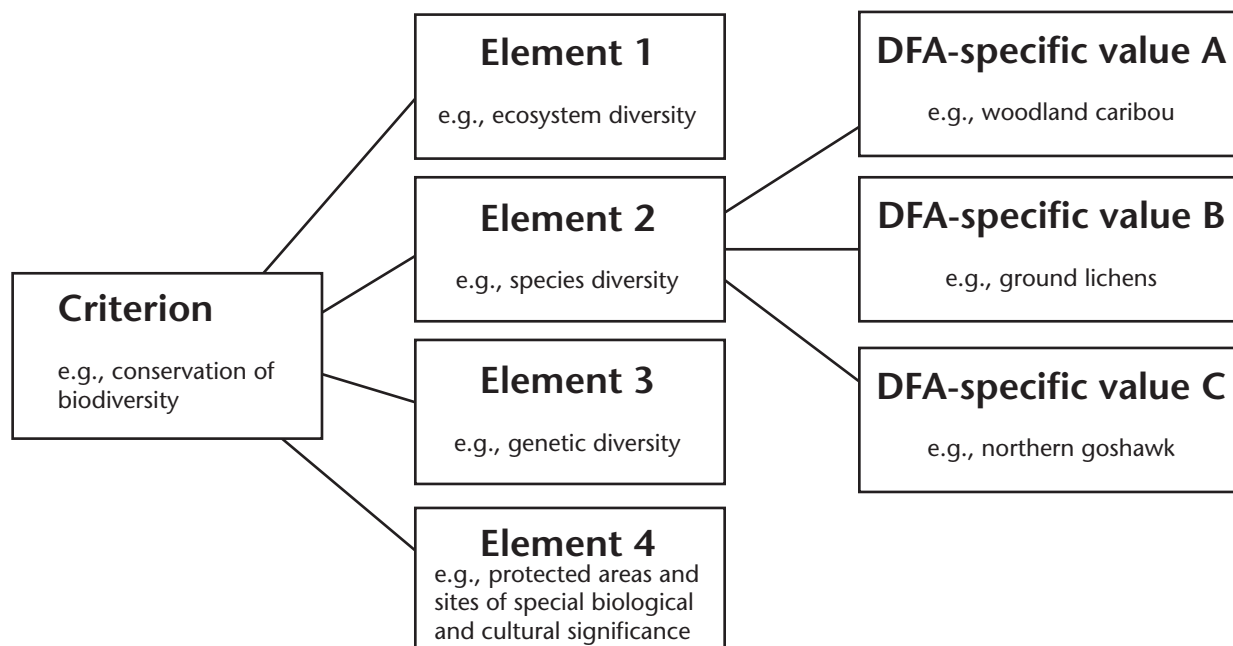
Table A.2 (Concluded)

Public participation process content (see Clause 5.4)	Setting DFA performance requirements (see Clause 7.3.5)	Explanations and examples
Review the SFM plan.		This step allows all parties to agree that the SFM plan properly reflects the decisions reached throughout the process so far.
Design monitoring programs, evaluate results, and determine opportunities for improvement.	Design field measurement programs and implement them.	Collect appropriate data to track indicators and any other variables deemed important in checking the performance of forecasting models.
	Analyze results and include them in the public participation process for interpretation and discussion.	All parties should examine monitoring data in the context of the forecasts and discuss how to improve all facets of the SFM plan for its next revision/iteration.

A.6.1.2 Identifying DFA-specific values

A set of forest values should be created that pertains specifically to the DFA. In the public participation process, interested parties might wish to begin by identifying DFA-specific values and then organizing them under the elements. Alternatively, they might begin by considering the elements and then making sure to identify at least one DFA-specific value for each element. The SFM criteria and elements specified in [Clause 6](#) serve as organizing concepts and ensure that DFA-specific values cover a comprehensive range of SFM considerations (see [Figure A.3](#)).

During the process, interested parties might identify DFA-specific values that are not apparently associated with any of the SFM elements. In such a case, the number of elements might have to be increased to include the additional values.



Note: Objectives and indicators are identified for DFA-specific values in [Figure A.4](#).

Figure A.3
Criteria, elements, and DFA-specific values
 (See [Clause A.6.1.2](#).)

A.6.1.3 Defining objectives

Each value should have at least one objective that describes the desired future condition for the value. Interested parties may develop more than one objective for each value. In such a case, the parties should strive to ensure compatibility among the objectives, aiming for mutually supporting objectives rather than conflicting ones.

A.6.1.4 Identifying core and locally selected indicators

A.6.1.4.1

Indicators are the means of measuring or describing the state or condition of forest values. Some indicators are prescribed as core indicators in [Clause 6.3](#). Others are identified through the local public participation process. Interested parties are guided in various ways regarding indicator selection, including by

- their own ideas about useful indicators;
- the core indicators in this Standard;
- mandatory indicators related to government regulations and policies that relate to the DFA; and
- possible reference sets of indicators, such as those of the CCFM and the Model Forest Network.

The organization's own internal management policies and procedures can dictate the need for certain indicators, and the interested parties might find it useful to consult with technical experts. The final indicator set is a result of the input from a number of sources.

A.6.1.4.2

Selecting indicators involves defining what is to be measured and why it is important. Indicators pertaining directly to forest conditions are preferred over those that pertain to SFM activities. Direct measurement of a forest condition provides a better gauge of most values than measuring an activity that influences the condition.

In some instances, direct measurements of forest conditions are not feasible, and an indirect measurement is necessary. In such cases, the relationship between the selected indicator and the condition being measured should be clearly established and periodically checked to ensure that the stated relationship remains valid. For example, if a certain ecosystem type is used as a surrogate for the population of a rare species, it is necessary to confirm periodically that the rare species is present in the ecosystem type.

A.6.1.4.3

In the indicator selection process, interested parties should apply a set of quality criteria when assessing whether proposed indicators should be retained for use. Such criteria should include the following:

- Measurability — targets can only be set for indicators that can be measured;
- Predictability — indicators whose future levels can be predicted with reasonable accuracy should be used;
- Relevance — indicators should be clearly applicable to their associated values;
- Understandability — indicators should be simple, clear, and easy to understand;
- Validity — indicators should be consistent with the scientific understanding of the value they measure and should be technically valid (objectively obtained, documented, comparable, and reproducible); and
- Feasibility — the process of monitoring indicators should be practical, cost effective, and efficient.

A.6.1.4.4

Scientists recognize four legitimate types of measurement scales:

- Nominal — measurements are based on names (e.g., names of tree species);
- Ordinal — ranks are assigned (e.g., tallest trees, second tallest trees, etc.). In the ordinal scale, the distance between ranked items is generally not equal;

- Interval — the distance between quantitative units is equal but there is an arbitrary zero (e.g., temperature in degrees Celsius — when the temperature is zero degrees Celsius, we still have a temperature); and
- The ratio scale — the distance between quantitative units is equal and zero is non-arbitrary (e.g., volume of wood in a stand). Using a ratio scale, 0 m³ of wood means there is no wood.

All four of these measurement scale types have utility and legitimacy; selection should be based on careful consideration, to ensure appropriate application and use in tracking indicators.

A.6.1.5 Setting targets

Each indicator requires a single target to define the desired future condition. A target may be a specified level for an indicator at a given point in the future or a series of such levels for a corresponding series of points in the future. See [Table A.2](#) for a sample target.

Targets can be set in a variety of ways. Using the “bull’s eye” concept, a target could call for the indicator to show a fixed quantity or a fixed range. Alternatively, the target could specify a minimum or maximum value for the indicator. Whichever approach is chosen, targets should specify acceptable departures (e.g., the size, location, duration, and frequency of a deviation) from the chosen limits.

There is a danger in trying to set firm targets at the beginning of the planning process, as it is possible that no feasible strategy can be designed and implemented to meet all targets. A better approach is to set tentative or provisional targets at the beginning of the planning process, and then iteratively develop and assess strategies and adjust targets until a match is obtained between an appropriate set of targets and an acceptable strategy (see [Table A.2](#)).

A key concept in determining appropriate SFM performance in relation to ecological elements (i.e., those associated with Criterion 1) is the range of natural variation. For each chosen indicator, explicit consideration should be given to a reference time frame, the limits on the range of natural variation, and behaviour of the indicator within these limits. As part of the public participation process, the organization and interested parties should examine carefully and discuss fully the role of the range of natural variation in the context of SFM in the DFA.

A.6.1.6 Designing and evaluating strategies

In the context of this Standard, a strategy comprises the actions, specified according to type of action and time and place of implementation, that are proposed to achieve one or more targets. A strategy can be as simple as holding workshops and open houses to meet targets for satisfactory public participation. Conversely, it can be as complex as a comprehensive set of silvicultural prescriptions to meet targets for a sustainable wood supply while conserving biodiversity, water, and soil, and promoting carbon sequestration. A particular strategy can relate to a specific target (e.g., workshops relate to public participation) or can relate to targets for many indicators at once (e.g., a silviculture strategy relates to biodiversity, forest productivity, soil and water, carbon budget, and wood supply).

If only one type of action is appropriate for achieving a target, then only one strategy is developed. However, for many indicators, a range of strategies might be appropriate. For example, in exploring how to meet targets for habitats of focal species (see [Element 1.2](#)), the organization and interested parties might wish to explore the relative effectiveness of different means of harvesting timber (e.g., clear-cutting vs. partial cutting) or regenerating harvested areas (e.g., natural vs. planting). Possible strategies should be limited in number (for tractability of assessment work) and easily distinguished (so that any analytical results can show how the indicator responses to the assessed strategies actually differ).

A good strategy is one that has the best potential to help managers achieve established targets. Where there is essentially only one strategy deemed to work in this regard, strategy assessment is simple. However, where several strategies are under consideration, strategy assessment and selection can be complicated. For example, where a set of silviculture strategies has implications for many indicators specified in [Clause 6.3](#), strategy evaluation is a complicated exercise of examining forecasts for all the relevant indicators under the full range of strategies considered.

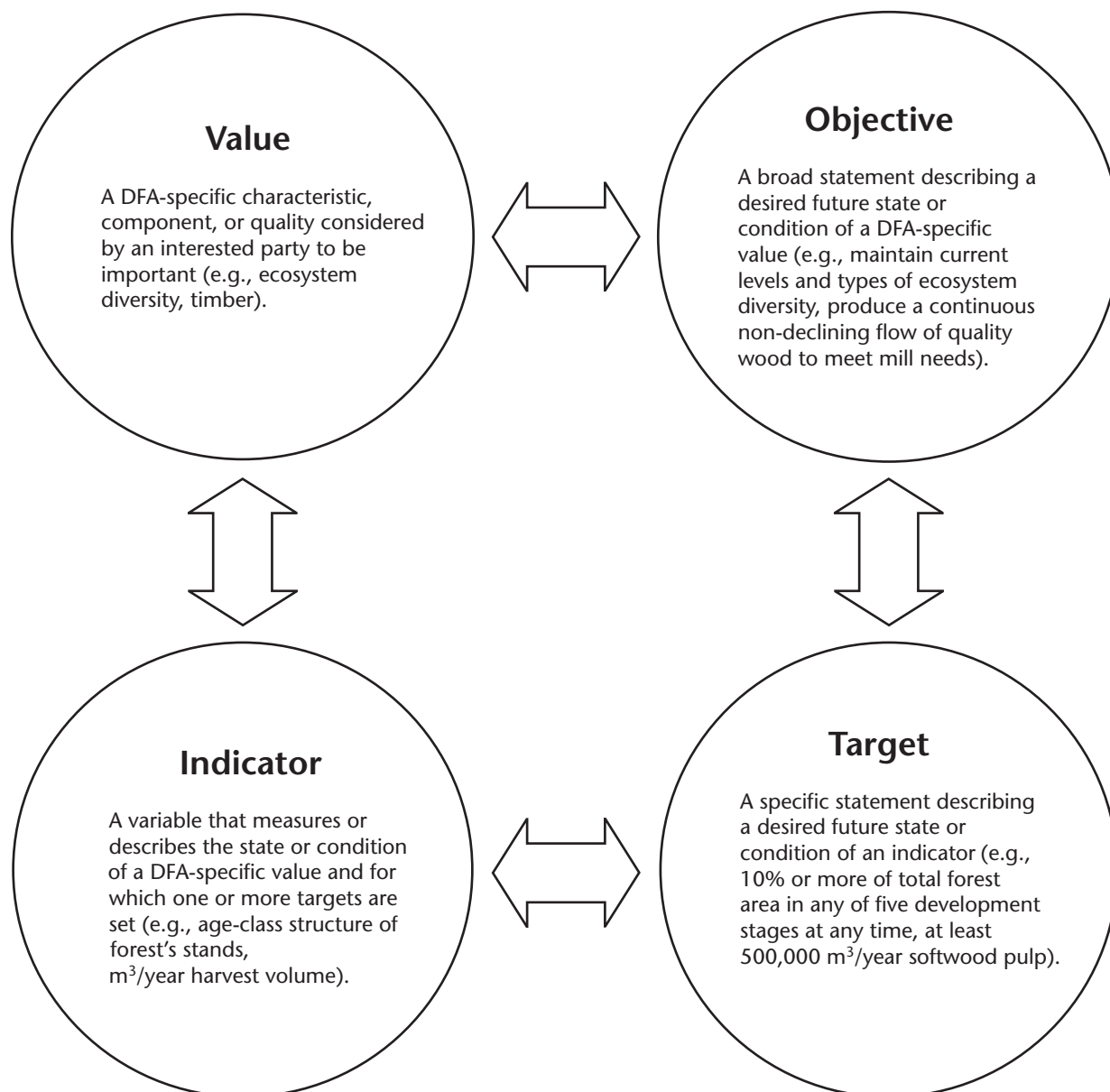


Figure A.4
Relationship of values, objectives, indicators, and targets
(See [Clause 6.1](#) and [Figure A.3.](#))

A.6.1.7 Making forecasts

Indicator forecasts require specialized processes that are appropriate to each indicator. Forecasts for quantitative indicators are normally made using mathematical models that can range from simple equations to complex computer models associated with a GIS (geographic information system). Forecasts for qualitative indicators are normally made using scenario-building techniques. Regardless of the approach used, explicit forecasts should be provided for all indicators, along with an accompanying explanation of the analytical techniques used to generate forecasts. Explanations should specify explicitly the particular time and space considerations associated with each indicator, since many indicators change over time and are unevenly distributed across the DFA.

Organizations should address two issues when making indicator forecasts. The first is potential interactions among indicators. Many of the indicators chosen to represent DFA-specific values will not be independent of each other; forecasts for linked indicators should be made using integrated models. The second issue relates to the fact that some indicators are influenced as much by human actions within the DFA that are not related to SFM as they are by actions related to SFM. Examples include recreational forest use, and exploration and extraction of minerals, oil, or gas from below the earth's surface. In such cases, there can be cumulative effects. In the context of this Standard, the cumulative effects on an indicator are those from both SFM actions and from other actions. Organizations are urged to assess cumulative effects in their indicator forecasting exercises.

A.6.1.8 Monitoring indicators

Monitoring is repetitive measurement, or measurement over time. Monitoring delivers the data required to assess management effectiveness. In the context of adaptive management of forests, managers should monitor both the actions they take (to determine if what actually is done matches what was planned) and the effects of the actions (to determine if the desired indicator responses are being achieved and targets met).

Adaptive management is, above all, a learning exercise in which comparisons of expectations with real outcomes can reveal where managers have been successful in delivering on values and where value satisfaction is inadequate. The latter can result from departures from planned actions or from lack of sufficient knowledge to forecast indicator outcomes with confidence. Monitoring provides the data needed to determine the magnitude and nature of differences between forecasts and reality, and the reasons for the differences. Ultimately, the goal is to determine how and why forecasts are incorrect and to improve predictive capability for the next round of SFM planning. Monitoring data and analyses are essential components of an overall assessment of the ongoing validity of values, objectives, indicators, and targets (see [Clause A.7.5.1.3](#)).

In some cases, DFA managers do not have authority to manage for specific public values associated with the DFA land base. For example, the organization has authority to manage bird habitats but not bird populations. In such cases, it is incumbent upon the organization to undertake the monitoring and research required to determine whether its SFM strategies are meeting habitat targets. Broader scientific processes are needed to determine if the habitat targets are sufficient to meet population targets.

A.6.2 SFM criteria — General

6.2 SFM criteria — General

The organization, in conformance with the public participation process requirements of [Clause 5](#), shall address the discussion items listed under each Criterion below, and shall identify DFA-specific values, objectives, indicators, and targets for each element, as well as any other values associated with the DFA.

The indicators shall include, but not necessarily be limited to, the core indicators identified in this Standard.

Successful implementation of SFM requires both a strong process and a comprehensive content. The content of SFM is determined by the values established for the DFA.

In this Standard, adoption of the CCFM's SFM criteria as a framework for value identification provides vital links between local-level SFM and national and provincial forest policy, as well as a strong measure of consistency in identification of local forest values across Canada.

Each criterion is followed by a list of discussion items. These represent issues commonly faced by forest managers and interested parties in DFAs across Canada. As part of the public participation process specified in this Standard, participants discuss each of the items and demonstrate, through clear records, that the issues inherent in the items have been brought to a satisfactory resolution. Revisitation of the discussion items might be necessary as local circumstances change. An appropriate time for revisitation would be during preparation for a re-certification audit.

Each element is described in a heading followed by an elaborating statement. Core indicators are subsequently identified for use in SFM implementation in accordance with this Standard. Where core indicators have been deemed to apply to several elements, they are repeated under each applicable element.

A.6.3 SFM criteria, elements, and core indicators

A.6.3.1 Criterion 1 — Biological diversity

Conserve biological diversity by maintaining integrity, function, and diversity of living organisms and the complexes of which they are part.

Discussion items for Criterion 1

The public participation process shall include discussion of the following topics:

- Forest fragmentation and forest loss
- Management in the context of natural disturbance regimes and patterns and the range of natural variation
- Maintenance of populations and communities over time
- Local and regional protected areas and integrated landscape management
- Silvicultural regimes and tools such as plantations, pesticides (including integrated pest management and pesticide-use regulations), structural retention, and timber harvest practices (including clear-cutting)
- Practices to limit the spread of invasive alien species, and the regulatory prohibitions related to adverse ecological effects and the use of exotic tree species
- The gene pool of native seed stock, and genetically modified organisms (GMOs) and the associated regulatory/policy requirements
- Management and protection of biological resources of cultural heritage significance
- Management of cultural values and resources
- Locally available processes and methods for identifying sites with special biological and cultural significance
- Conservation of old-growth forest attributes
- Participation in government programs to protect threatened and endangered species

Element 1.1 — Ecosystem diversity

Conserve ecosystem diversity at the stand and landscape levels by maintaining the variety of communities and ecosystems that naturally occur in the DFA.

Core indicators

- 1.1.1 — Ecosystem area by type
- 1.1.2 — Forest area by type or species composition
- 1.1.3 — Forest area by seral stage or age class
- 1.1.4 — Degree of within-stand structural retention

Element 1.2 — Species diversity

Conserve species diversity by ensuring that habitats for the native species found in the DFA are maintained through time, including habitats for known occurrences of species at risk.

Core indicators

- 1.2.1 — Degree of habitat protection for selected focal species, including species at risk
- 1.2.2 — Degree of suitable habitat in the long term for selected focal species, including species at risk
- 1.2.3 — Proportion of regeneration comprised of native species

Element 1.3 — Genetic diversity

Conserve genetic diversity by maintaining the variation of genes within species and ensuring that reforestation programs are free of genetically modified organisms.

Element 1.4 — Protected areas and sites of special biological and cultural significance

Respect protected areas identified through government processes. Co-operate in broader landscape management related to protected areas and sites of special biological and cultural significance.

Identify sites of special geological, biological, or cultural significance within the DFA, and implement management strategies appropriate to their long-term maintenance.

Core indicators

- 1.4.1 — Proportion of identified sites with implemented management strategies
- 1.4.2 — Protection of identified sacred and culturally important sites

A.6.3.1.1 General

Canada is a signatory to the United Nations *Convention on Biological Diversity* and has developed a national strategy for biodiversity conservation (the *Canadian Biodiversity Strategy*, 1995). The *Convention on Biological Diversity* recognizes the dependence of Aboriginal Peoples on biological resources and the value of traditional knowledge and practices in the conservation of biological diversity and sustainable use of its components. Biodiversity is an umbrella concept dealing with all living things and their relationships and habitats. It is a complex concept that recognizes ecological, genetic, social, and cultural dimensions related to the conservation and sustainable use of biological resources. A fundamental requirement for biodiversity conservation is the in situ conservation of ecosystems and natural habitats with special focus on scales of time, space, and hierarchical order. Because forests are ecosystems of incredible biological richness, biodiversity is central in the pursuit of SFM.

Landscape ecology provides insight into a range of themes underpinning biodiversity conservation. These include the concepts of patches (e.g., forest stands) and matrix (the surrounding land in which patches are situated) and how these can affect habitat suitability for forest species. The degree of both forest loss and fragmentation can affect forest habitat. Fragmentation describes the breaking up of formerly continuous forest ecosystems and includes the concepts of edge (i.e., boundaries between distinct ecosystems that form unique habitats), patch area and shape, and connectivity (i.e., the way forest ecosystems are joined to each other such that ecological processes such as animal migration can occur with little resistance). Anthropogenic, linear features, such as roads, pipelines, electricity transmission lines, and seismic lines, are often implicated in reducing forest connectivity and increasing fragmentation, as well as contributing to overall forest loss.

Many experts believe that natural disturbance regimes and the range of natural variation in forest ecosystems provide sound models and guidance for the conservation of forest biodiversity. These concepts acknowledge that forest disturbances occur through natural forces such as fire, insect outbreaks, disease and windthrow, and that human disturbances can be best managed by emulating the rates of natural disturbances and the structures, shapes, and patterns of the resulting ecosystems. Management strategies are designed to ensure that the forest continues to function within the range of natural variation. Managers may take guidance from historical or current disturbance regimes, or they may investigate how future climate change might alter the disturbance regimes during the next century. It should be recognized, however, that human-caused disturbances cannot entirely emulate the effects of natural disturbances and that not all aspects of natural disturbances can or should be emulated.

Except for commercial tree species, in most cases the organization has no authority to manipulate plant and animal populations. Rather, it manipulates habitats through management actions focused primarily on trees. Habitat, in terms of both quantity and quality, is a key component of the health of species populations. Species cannot exist where habitats are inhospitable. However, just because the habitat is suitable does not mean that a species will occupy it to its fullest capacity; other forces, such as hunting, fishing, and diseases, can prevent a species from occupying its normal range at normal densities. For

forest-dwelling species, managers should take special care with species that exist at their range limits, that exist in isolated populations, and for which knowledge is deficient.

In conservation planning, protected areas are widely seen as pivotal in conserving biodiversity and maintaining natural ecological processes. In some circumstances, small protected areas can serve vital protection functions (e.g., a small critical habitat for a species); in others, large protected areas are required. Conservation design strives to establish networks of protected areas that are representative of both the enduring landscape features and the local or regional biodiversity.

Silvicultural practices, including timber harvesting, can either degrade or enhance biodiversity values. For example, reckless timber harvesting can destroy forest habitats for some species, whereas sensitive timber harvesting can actually be used to improve habitat conditions. Key attributes of silvicultural practices that influence biodiversity include type of treatment, spatial extent and layout, timing (seasonal and long term), and intensity. An example of a habitat element that requires special attention in the design and implementation of forest treatments is deadwood, whose snags and downed logs provide habitat for a diverse range of forest species.

In some parts of Canada, alien invasive species have the potential to threaten native forest biodiversity. Examples include the Emerald Ash Borer in southwestern Ontario and the Brown Spruce Longhorn Beetle in Nova Scotia. SFM demands prudence in monitoring and treatment design to limit the spread of alien invasive species into Canadian forests. This might mean that the organization agrees not to engage in practices where there is a risk of introducing invasive alien species, or commits to undertaking special actions should an invasive alien species become established, through no fault of the organization, in the DFA.

Some have raised concerns over whether tree breeding programs are gradually reducing the genetic diversity of native forests. Attention should be given to the nature of the gene pools associated with seed stocks of native species, as well as effective population sizes in seed orchards.

A.6.3.1.2 Element 1.1 — Ecosystem diversity

Ecosystem conservation represents a coarse-filter approach to biodiversity conservation. It assumes that by maintaining the structure and diversity of ecosystems, the habitat needs of various species will be provided. For many species, if the habitat is suitable, populations will be maintained. Two key characteristics of forest ecosystems are the community types, as driven largely by the species composition of the overstorey, and community seral stages, as driven by succession and disturbance processes. These factors are strong predictors of the biotic communities that will inhabit both forest stands and the entire forest landscape.

Ecosystem area by type can be influenced by managers, and many foresters/ecologists prefer to characterize the forest in terms of ecosystem types (according to forest ecosystem classifications) rather than by age and type of structures as derived from classic forest inventories. Forest ecosystem classification schemes are well-developed, hierarchical systems, and local experts/stakeholders can jointly decide on the appropriate scales of application.

The measurement of forest area by type or species composition should include wetlands and other non-forest ecosystem types, even if they are relatively stable through time, as forest management can directly affect them, if in a relatively minor way. Plantations should also be included in the analysis. Measuring forest area by seral stage or age class relies on some form of classification that takes into account the time since stand-replacing disturbance as well as evolving forest structural development. A simple classification might include the following five seral stages: regenerating, young, immature, mature, and old. Older age classes are often the most difficult to manage, primarily because they require much time to develop. However, they are often host to unique communities that would not otherwise be present across the forest landscape.

A.6.3.1.3 Element 1.2 — Species diversity

While ecosystem conservation is the coarse-filter approach to biodiversity management, species diversity is the fine-filter approach. For most species, forest managers can manipulate habitats only, not species populations. To account for the degree of habitat protection for selected focal species, including species at risk, forest managers should recognize short-term habitat needs, particularly for critical and core habitats, and consider existing protection plans for species at risk. For the longer term, forest managers can use

habitat supply models (as part of any forest forecasting exercises) to track the degree of long-term habitat suitability for selected focal species, including species at risk. To account for concerns that forests be regenerated primarily with native tree species, managers should address and monitor the proportion of regeneration comprised of native species.

A.6.3.1.4 Element 1.3 — Genetic diversity

Ecologists recognize that species diversity rests on a foundation of diversity in gene pools within and among species. Unfortunately, gene-pool diversity is difficult to measure. Until practical indicators of characteristics inherent to genetic diversity are developed, this element should be addressed through discussions and management protocols. For tree species, such discussions and protocols will focus on tree breeding programs and seed stocks.

A.6.3.1.5 Element 1.4 — Protected areas and sites of special biological and cultural significance

Protected areas are an important tool for biodiversity conservation. They can help to protect and conserve species that occur within their boundaries and can contribute to conservation across the broader landscape. They are also valuable ecosystems in their own right. A DFA exists within a larger landscape and potentially within a broader land-use planning process. Effective conservation within a landscape encompasses a network of both protected areas and sustainable activities within the DFA and other working parts of the landscape. Organizations should co-operate with provincial managers to determine whether representative samples of the ecosystems present in the DFA are protected at the landscape level either in the DFA or in the adjacent area and should have examples of such protected areas. A peer-reviewed gap analysis can be used to identify the existence and significance of protected areas when determining whether adequate representation of the range of sites has been achieved. When identifying local values and developing objectives, indicators, and targets for biodiversity, there should be alignment with strategic or policy direction provided by the provincial government and the CCFM.

Sites of biological and cultural significance include critical areas for wildlife habitat, sensitive sites including spiritual and cultural sites, and unusual or rare forest conditions or communities. A wide range of criteria may be used in their identification. Such sites might need protection or active management to perpetuate the conditions that make them significant. Such management can focus on preventing harmful actions (e.g., fencing or signs to discourage human traffic inside an area) or on taking restorative actions (e.g., removal of barriers to periodic flooding of a wetland).

Organizations should ensure that a process is in place to identify any sites of biological and cultural significance that would be threatened by forest management activities without the implementation of special management strategies. These sites can vary in size depending on the nature of the value identified. Management strategies should endeavour to maintain the specific values present on these sites.

Efforts should be made by the organization to involve willing Aboriginal communities in the identification and protection of sites of cultural significance. To address the issues regarding the sharing of confidential and sensitive information from Aboriginal communities, organizations are encouraged to develop information sharing agreements, such as partnership agreements and memoranda of understanding, that outline ways to protect this information.

A.6.3.2 Criterion 2 — Ecosystem condition and productivity

Conserve forest ecosystem condition and productivity by maintaining the health, vitality, and rates of biological production.

Discussion items for Criterion 2

The public participation process shall include discussion of the following topics:

- Climate change impacts and adaptation
- Trends in natural and human-caused disturbances
- Proportion of naturally disturbed area that is not salvage harvested
- Biomass utilization

Element 2.1 — Forest ecosystem resilience

Conserve ecosystem resilience by maintaining both ecosystem processes and ecosystem conditions.

Core indicator

- 2.1.1 — Reforestation success

Element 2.2 — Forest ecosystem productivity

Conserve forest ecosystem productivity and productive capacity by maintaining ecosystem conditions that are capable of supporting naturally occurring species. Reforest promptly and use tree species ecologically suited to the site.

Core indicators

- 2.2.1 — Additions and deletions to the forest area
- 2.2.2 — Proportion of the calculated long-term sustainable harvest level that is actually harvested

A.6.3.2.1 General

In the context of forests, mitigation of climate change entails managing forests so they can sequester and store more carbon from the atmosphere. Mitigation is addressed under [Clause A.6.3.4](#). Despite mitigation efforts, some climate change is inevitable in the next few decades. Thus, this Clause focuses on the impacts of climate change on forests and how forests might be managed to adapt to the changes. There is limited knowledge of how forests will respond to a changing climate this century. However, it is known that forest conditions are tightly tied to the prevailing climate, and that the forest management decisions made today commit forest ecosystems to development trajectories that unfold over many decades. Climate change is already affecting forest productivity, water availability, and the rate and extent of forest disturbances such as fires and insect outbreaks. Therefore, it is important for organizations and interested parties to explore conceptually how climate change might help or hinder forest development in the DFA and what options are feasible to cope with undesirable impacts. The differences between active and passive strategies for coping should be considered. For example, managers might consider actively addressing climate change through anticipatory planting (e.g., establishment of drought-resistant subspecies of trees) and maintenance of stands with multiple species and ages.

Disturbances can be seen as both destructive and regenerative processes. For example, while an intense fire can kill whole stands of mature trees, it also can create favourable conditions for tree regeneration. Rapid and intense disturbances can therefore reduce some forest values (e.g., fire destroys valuable timber) and increase others (e.g., fire creates habitats favoured by early-successional species). While disturbances are a key driver of forest change, managers cannot usually predict where and when they will occur. Managers therefore need to engage in risk management. This includes actions such as

- reducing the vulnerability of forests to catastrophic disturbances;
- maintaining preparedness for appropriate responses when disturbances occur; and
- managing human disturbances in such a way that they do not compromise ecosystem condition and productivity.

A.6.3.2.2 Element 2.1 — Forest ecosystem resilience

The concept of resilience, as applied to ecosystems, suggests an ability to rebound after a disturbance such that the characteristics of the pre-disturbance ecosystem are re-established. Direct measures of resilience are rare, although one facet of resilience pertains to allowing natural disturbances to run their course without human intervention. The Standard therefore requires a discussion of the extent of salvage harvesting following forest disturbance. The discussion should address the merits of leaving biomass intact on site following a major disturbance such as a blowdown or insect outbreak. The ecological communities associated with forests immediately following a disturbance (particularly fire) are unique and should be represented within the forest landscape. However, in some provincial jurisdictions there are regulations obliging the organization to undertake salvage harvests at specific rates in specific places. In addition, there could be situations where provincial jurisdictions award licences to others to salvage harvest within the DFA.

SFM is predicated on the principle of maintaining forested landscapes. If forest cover is removed from a site, successful forest regeneration, including reforestation in a timely manner, must be achieved. One method to gauge the success of forest renewal is tracking the proportion of harvest area successfully regenerated within a specific period of time.

The core indicators from Element 1.1 are also relevant to the concept of resilience. Maintenance of the distribution of ecosystem types, forest types, and forest ages within the range of natural variation that can occur through time and across the DFA landscape helps to ensure that the DFA is resilient to disturbance introduced by harvesting or other activities. Regeneration success should be estimated in the context of maintaining this range of natural variation.

A.6.3.2.3 Element 2.2 — Forest ecosystem productivity

Forest ecosystem productivity can be interpreted to mean both net primary production (NPP) and forest (i.e., wood) productivity. This Clause focuses on wood productivity, or the production of wood biomass.

SFM should cover the extent of forest in a landscape, including encouraging additions to the forest ecosystems and discouraging deletions caused by humans. Such additions and deletions to the forest area should be tracked according to cause. It might be sufficient to track area changes to forest ecosystems according to a broad classification of causes (e.g., new infrastructure, industrial or residential development, impoundments or drainage works, agriculture, afforestation). There are circumstances where it can be inappropriate to foster additions to forest ecosystems. For example, the reduction of grassland and savannah conditions in western Canada allows for the suppression of forest fires and the establishment of forest ecosystems where they would not normally occur under natural conditions.

For many people, sustainability involves limiting actual timber harvest to levels within the long-term capability of the forest to grow wood. To track this, managers need data on both harvest levels and long-term production capability to make proportional calculations. In practice, only the actual harvest level can be physically measured. The amount of wood that can be produced in perpetuity from a forest is a theoretical calculation that depends not only on the inherent wood-growing capacity of the forest ecosystem but also on the kinds and intensities of management inputs (e.g., silvicultural treatments). Because the latter inputs are under human control, a forest can have a wide range of potential long-term sustainable wood harvest levels. The organization and interested parties should develop a mutual understanding of how long-term sustainable harvest levels should and will be calculated.

As a precaution, managers might wish to ensure that, over time, wood harvest levels are maintained at or below the calculated long-term sustainable level. However, for a variety of reasons, it might be sensible to harvest above the long-term sustainable level for a few years. These include

- salvaging harvests as a result of insect infestations;
- attempting to accelerate changes in forest composition toward more natural states; and
- correcting undesirable age-class imbalances such as an over-abundance of declining stands caused by the suppression of natural disturbances. It should be recognized that these forest conditions can deliver valuable ecological services.

A.6.3.2.4 Biomass utilization

A key contemporary issue in SFM in Canada is the use of forest biomass (e.g., dead trees, coarse woody debris, fine materials) beyond conventional timber. This issue has arisen largely in response to rising energy prices and the desire for renewable energy sources. The organization and interested parties should examine the issue closely, with initial discussions focusing on the immediate uses of non-timber biomass (e.g., left on site, burned, removed for energy or other purposes). Subsequent discussions should examine future expectations for biomass use, with emphasis on the ecological and cultural impacts of such biomass removals. If the organization intends to remove biomass, it should develop clear operational guidelines for the sustainable removal of biomass from forest ecosystems.

A.6.3.3 Criterion 3 — Soil and water

Conserve soil and water resources by maintaining their quantity and quality in forest ecosystems.

Discussion items for Criterion 3

The public participation process shall include, but not be limited to, discussion of the following topics:

- Soil productivity (long-term nutrient levels, shallow soils, best management practices for soil protection)
- Seasons of operations (operating windows, impacts on soil during frozen and unfrozen conditions)
- Site rehabilitation in areas of severe soil disturbance
- Water quality in watersheds supplying domestic water
- Healthy watersheds
- Management practices and regulatory requirements that protect water quality and quantity

Element 3.1 — Soil quality and quantity

Conserve soil resources by maintaining soil quality and quantity.

Core indicators

- 3.1.1 — Level of soil disturbance
- 3.1.2 — Level of downed woody debris

Element 3.2 — Water quality and quantity

Conserve water resources by maintaining water quality and quantity.

Core indicator

- 3.2.1 — Proportion of watershed or water management areas with recent stand-replacing disturbance

A.6.3.3.1 General

Soil is the foundation of forest ecosystems and the main source of nutrients for all plant species. Most of the fine roots of trees, which are responsible for nutrient uptake, exist in the top 20 cm of the soil (i.e., in the topsoil). It is therefore vital to keep soil in place and to disturb it as little as possible. A common approach is the implementation of best management practices (BMPs), established on the basis of substantial field experience and targeted research. Soil-related BMPs address topics such as appropriate kinds of machine traffic on sensitive sites and appropriate seasons for field operations. Even with careful use of BMPs, some sites can endure severe soil disturbance (e.g., due to machine operations). In such cases, managers might need to take actions to rehabilitate sites.

Fresh water is considered one of the most precious natural resources in the world today. Much of Canada's fresh water moves through forest ecosystems before entering rivers and streams, and is found in wetlands such as swamps, marshes, bogs, and similar areas. These wetlands and water bodies are not only key habitats for all aquatic organisms, but many people rely on them as sources of domestic (potable) water. The way a forest is managed and used can have a profound influence on both water quantity and quality in rivers, lakes, and wetland systems.

A.6.3.3.2 Element 3.1 — Soil quality and quantity

Maintaining soil quality and quantity involves implementing management strategies to minimize and mitigate soil disturbance. Measuring soil conditions, particularly chemical and physical properties, might be feasible at a specific site, but impractical across entire working forests. Established research may be used to identify the links between certain kinds of soil-related forest practices and soil conditions, and forest managers can control their practices accordingly. When monitoring of operations reveals that soil disturbances exceed threshold levels (e.g., through erosion, rutting, displacement, slumping), direct measures of soil condition should be performed.

Dead wood is an important component of a healthy forest ecosystem. While live trees can be blown down and die, often trees die standing. These standing dead trees, or snags, serve as important habitats for a wide range of decomposing organisms, as well as cavity-nesting species such as woodpeckers. Coarse woody debris includes both downed woody debris and standing trees that have been left to allow the woody debris to decompose, resulting in organic matter that eventually becomes part of the soil. Downed woody debris can be managed by leaving both dead and live trees, as well as downed logs, whenever timber harvests are taken.

A.6.3.3.3 Element 3.2 — Water quality and quantity

Water is everywhere in forest ecosystems, so direct measurements of water quality and quantity are largely unfeasible across entire working forests. Established research on the effects of certain field practices on local water quality and flows can be used to establish regulations and guidelines to control field practices. These regulations and guidelines address such topics as fish habitat, stream crossings, and riparian areas.

It is important to understand the risk to water quality and quantity associated with stand-replacing disturbances (human and natural-caused) in a defined watershed or broad water-management area. The effects due to disturbances are normally highest in the initial post-disturbance years and diminish over time as regenerating forest cover is established. The critical threshold at which the disturbance begins to affect water values varies according to a number of factors, including topography, soil properties, vegetation types, and climate. When the extent of the disturbed area approaches threshold levels, appropriate mitigation strategies such as road deactivation and stream crossing removals are necessary. This is particularly important in watersheds such as those used for potable water. Engaging experts who are familiar with local or regional conditions is important when defining the appropriate size of watershed or water management area, critical thresholds, and appropriate mitigation strategies.

Forest ecosystem conditions at the watershed level can have a strong influence on water quality and quantity in rivers, lakes, and wetland systems. Forest ecosystems subject to stand-replacing disturbances such as fire, windthrow, or clear-cutting can temporarily lose their ability to ameliorate water flows associated with large rainfalls and snowfalls. These water flows include both overland flow and the underground flows associated with groundwater recharge and discharge. To maintain water quality and quantity in forest-based rivers, lakes, and wetlands, forest managers might need to restrict, to the degree possible, the proportion of a watershed's forest that has recently experienced stand-replacing disturbances. This will also help ensure that peak flow thresholds are not exceeded due to management actions.

The appropriate scale for measuring the proportion of a watershed's forests that has been recently disturbed differs according to region and conditions. If the order or size of watershed used is too large, disturbance effects will be unmeasurable or diminished by scale. Similarly, if the watershed order or size is too small, the effect of the disturbance will be exaggerated inappropriately by the scale. Watershed features such as slope or soil texture vary, as does the length of time for stands to recover, and these also affect the impact of disturbance on water flows.

Because an organization has little control over natural disturbances, it might be appropriate to distinguish between natural disturbances and the subsequent forest operations when reporting on the proportion of recent disturbances in a watershed.

A.6.3.4 Criterion 4 — Role in global ecological cycles

Maintain forest conditions and management activities that contribute to the health of global ecological cycles.

Discussion items for Criterion 4

The public participation process shall include, but not be limited to, discussion of the following topic:

- Carbon emissions from fossil fuels used in forest operations

Element 4.1 — Carbon uptake and storage

Maintain the processes that take carbon from the atmosphere and store it in forest ecosystems.

Core indicators

- 4.1.1 — Net carbon uptake
- 2.1.1 — Reforestation success

Element 4.2 — Forest land conversion

Protect forest lands from deforestation or conversion to non-forests, where ecologically appropriate.

Core indicator

- 2.2.1 — Additions and deletions to the forest area

A.6.3.4.1 General

Machine operations generate emissions of carbon dioxide and other compounds that contribute to climate change. Thus, the lower that forest managers can make the emissions during forest operations, the better for the environment. In addition, the current prices of fossil fuels and the likelihood that they will continue to rise also makes these reductions economically beneficial.

A.6.3.4.2 Element 4.1 — Carbon uptake and storage

Forests have great potential to sequester and store carbon from the atmosphere. Given the importance today and in the future of the carbon-storage potential of forests, managers should recognize the imperative of keeping forest lands in vigorous tree growth at all times. This includes ensuring prompt tree regeneration following disturbances such as timber harvests. It also includes converting the smallest possible amount of forest land to non-forest land during forest operations (e.g., minimizing roads and landings). Where possible, it can also mean converting non-forest land to forest land by establishing trees — a process known as afforestation. A common example of afforestation is planting trees on abandoned farm fields.

Forest carbon has recently become a key SFM value, especially in light of Canada's international commitment to lower its net carbon outputs to the atmosphere. Models for calculating a forest carbon budget (e.g., the Canadian Forest Service's Carbon Budget Model of the Canadian Forest Sector (CBM-CFS3)) have become widely available and are readily linked to common models used for forecasting forest structures and potential wood supplies. Their use in forest planning can indicate whether a specific forest is expected to be a net carbon source or sink over the period normally used for wood-supply forecasts. In some cases, it can be advisable for the organization to look beyond the DFA and identify the carbon budget using existing data calculated over a broader scale (e.g., from provincial government initiatives devoted to calculating forest carbon budgets).

Two important considerations for determining the scope of carbon-budget analysis are

- whether the fate of timber harvested from the DFA is tracked as part of carbon-budget modelling; and
- whether and how carbon emissions from forest operations will be tracked.

A.6.3.4.3 Element 4.2 — Forest land conversion

Notwithstanding the special circumstances in which forests might not be naturally occurring ecosystems (see [Clause A.6.3.2](#)), it is good for the global carbon cycle to have land in forest cover across its natural range. Forests can be turned into other types of ecosystems through a variety of activities, including those that relate directly to SFM (e.g., building roads and landings) and those outside the influence of forest managers (e.g., urban and industrial developments, utility corridors). Forest managers should reduce, as much as possible, the amount of area they convert to non-forest ecosystems and should discourage unwarranted forest land conversions that are beyond their control.

A.6.3.5 Criterion 5 — Economic and social benefits

Sustain flows of forest benefits for current and future generations by providing multiple goods and services.

Discussion items for Criterion 5

The public participation process shall include, but not be limited to, discussion of the following topics:

- Benefits for local communities and Aboriginal Peoples (cultural, spiritual, economic, health, etc.)
- Fair distribution of benefits and costs
- Proportion of goods and services sourced from local communities (to the extent that they are available and reasonably cost-competitive)

Element 5.1 — Timber and non-timber benefits

Manage the forest sustainably to produce an acceptable and feasible mix of timber and non-timber benefits. Evaluate timber and non-timber forest products and forest-based services.

Core indicator

- 5.1.1 — Quantity and quality of timber and non-timber benefits, products, and services produced in the DFA

Element 5.2 — Communities and sustainability

Contribute to the sustainability of communities by providing diverse opportunities to derive benefits from forests and by supporting local community economies.

Core indicators

- 5.2.1 — Level of investment in initiatives that contribute to community sustainability
- 5.2.2 — Level of investment in training and skills development
- 5.2.3 — Level of direct and indirect employment
- 5.2.4 — Level of Aboriginal participation in the forest economy

A.6.3.5.1 General

While there is limited information on the ecological services and non-timber benefits produced in the DFA, it is important to consider the costs and benefits of a variety of goods and services.

Forests represent not only a return on investment (measured, for example, in dollar value, person-days, donations, etc.) for the organization but also a source of income and non-financial benefits for DFA-related workers, contractors, and others; stability and opportunities for communities; and revenue for local, provincial, and federal governments. Through the public participation process and the implementation of SFM, the organization should address

- timber and non-timber benefits, including
 - outdoor activities, in terms of both quality and quantity;
 - sustainable harvest of timber and non-timber resources;
 - maintenance of viable hunting, fishing, and trapping activities;
 - opportunities for ecotourism;
 - protection, management, and sustainable use of cultural and heritage resources; and

- opportunities for development of ecological goods and services and other non-timber forest products;
- communities and sustainability, including
 - diversification of opportunities;
 - investment in the community and its facilities, through educational opportunities or philanthropic activities; and
 - opportunities for direct and indirect employment both in the DFA and within the community; and
- fair distribution of benefits and costs, including
 - fair and reasonable wages for DFA-related workers, as established by prevailing industry collective agreements or market rates;
 - fair return on investment to the organization and to DFA contractors;
 - local taxation as determined by applicable assessment and appeal procedures;
 - revenues to the Crown and other landlords as determined by applicable stumpage or market rates;
 - cost-sharing of activities;
 - sharing of the economic, social, environmental, and health risks; and
 - educational opportunities for DFA-related workers.

A.6.3.6 Criterion 6 — Society’s responsibility

Society’s responsibility for sustainable forest management requires that fair, equitable, and effective forest management decisions are made.

Discussion items for Criterion 6

The public participation process shall include, but not be limited to, discussion of the following topic:

- Development of working relationships with willing Aboriginal communities and/or people

Element 6.1 — Aboriginal and treaty rights

Recognize and respect Aboriginal title and rights, and treaty rights. Understand and comply with current legal requirements related to Aboriginal title and rights, and treaty rights.

Core indicators

- 6.1.1 — Evidence of a good understanding of the nature of Aboriginal title and rights
- 6.1.2 — Evidence of best efforts to obtain acceptance of management plans based on Aboriginal communities having a clear understanding of the plans
- 6.1.3 — Level of management and/or protection of areas where culturally important practices and activities (hunting, fishing, gathering) occur

Element 6.2 — Respect for Aboriginal forest values, knowledge, and uses

Respect traditional Aboriginal forest values, knowledge, and uses as identified through the Aboriginal input process.

Core indicator

- 6.2.1 — Evidence of understanding and use of Aboriginal knowledge through the engagement of willing Aboriginal communities, using a process that identifies and manages culturally important resources and values

A.6.3.6.1 Element 6.1 — Aboriginal and treaty rights

Section 35 of the *Constitution Act* states “The existing aboriginal and treaty rights of Aboriginal Peoples of Canada are hereby recognized and affirmed”. Some examples of the rights that Section 35 has been found to protect include hunting, fishing, trapping, gathering, sacred and spiritual practices, and title. SFM requirements are not in any way intended to define, limit, interpret, or prejudice ongoing or future discussions and negotiations regarding these legal rights and do not stipulate how to deal with Aboriginal title and rights, and treaty rights.

The first step toward respecting Aboriginal title and rights, and treaty rights is compliance with the law. This Standard reinforces legal requirements (see [Clause 7.3.3](#)) for many reasons, including the reality that demonstrating respect for Aboriginal title and rights, and treaty rights can be challenging in Canada's fluid legislative landscape and therefore it is important to identify these legal requirements as a starting point.

This Standard goes beyond legal compliance and includes other methods of respecting Aboriginal title and rights, such as

- making efforts to understand Aboriginal rights;
- seeking acceptance of forest management plans on the basis of Aboriginal communities having a clear understanding of the plans;
- identification of and respect for Aboriginal forest values and uses;
- recognition of Aboriginal Peoples' expertise;
- use of Aboriginal knowledge; and
- development of meaningful and effective working relationships with willing Aboriginal Peoples, which are integral components of involving Aboriginal communities and facilitating acceptance of forest management plans (see [Clause A.6.3.6.2](#), Element 6.2).

It is important for the organization to have an understanding of applicable Aboriginal title and rights, and treaty rights, as well as the Aboriginal interests that relate to the DFA. The organization should also be aware that the Aboriginal interests or rights of one group can be different than those of another. Several organizations that have applied this Standard have benefited from cross-cultural training and shared community experiences with Aboriginal Peoples.

In order to effectively incorporate Aboriginal rights and interests into SFM plans, a process should be established to identify, address, and protect Aboriginal rights, uses, cultural resources, and values. Examples of management and protection activities might include management and protection of riparian areas and wetlands or establishment of wildlife corridors.

A.6.3.6.2 Element 6.2 — Respect for Aboriginal forest values, knowledge, and uses

Organizations are also required to make special efforts to obtain Aboriginal participation (see [Clause 5.2](#)). A meaningful relationship might include

- a process for engagement and information exchange that already exists or is jointly developed between the organization and willing Aboriginal communities;
- the use of Aboriginal knowledge in planning and management of forest lands and resources;
- encouraging willing Aboriginal communities to identify important cultural resources, sites, and values;
- planning based on the mutually agreeable incorporation of values and management of sites and values; and
- the tracking and fulfillment of agreements and commitments made between the organization and Aboriginal communities.

Agreements based on information sharing and engagement should encourage the dissemination and use of information, respect confidentiality, and specify the parameters for the release of information. In order to address the issues regarding the sharing of confidential and sensitive information from Aboriginal communities, organizations are encouraged to develop information-sharing agreements, such as partnership agreements and memoranda of understanding, that outline ways to protect this information.

Element 6.3 — Forest community well-being and resilience

Encourage, co-operate with, or help to provide opportunities for economic diversity within the community.

Core indicators

- 6.3.1 — Evidence that the organization has co-operated with other forest-dependent businesses, forest users, and the local community to strengthen and diversify the local economy
- 6.3.2 — Evidence of co-operation with DFA-related workers and their unions to improve and enhance safety standards, procedures, and outcomes in all DFA-related workplaces and affected communities
- 6.3.3 — Evidence that a worker safety program has been implemented and is periodically reviewed and improved

Element 6.4 — Fair and effective decision-making

Demonstrate that the SFM public participation process is designed and functioning to the satisfaction of the participants and that there is general public awareness of the process and its progress.

Core indicators

- 6.4.1 — Level of participant satisfaction with the public participation process
- 6.4.2 — Evidence of efforts to promote capacity development and meaningful participation in general
- 6.4.3 — Evidence of efforts to promote capacity development and meaningful participation for Aboriginal communities

Element 6.5 — Information for decision-making

Provide relevant information and educational opportunities to interested parties to support their involvement in the public participation process, and increase knowledge of ecosystem processes and human interactions with forest ecosystems.

Core indicators

- 6.5.1 — Number of people reached through educational outreach
- 6.5.2 — Availability of summary information on issues of concern to the public

A.6.3.6.3 Element 6.3 — Forest community well-being and resilience

An economically and socially diverse community is more sustainable. While an organization is not expected to financially support community diversity, it should support efforts to increase diversity and avoid preventing the establishment of other enterprises. Co-operation with other forest-dependent businesses and forest users might include initiatives such as coordinating the timing of activities to accommodate multiple uses.

A.6.3.6.4 Element 6.4 — Fair and effective decision-making

A mechanism such as a survey may be used to determine participant satisfaction with the public participation process, particularly when participants understand that consensus-based decision-making is used to incorporate all interests. The ability of people to share information, discuss and solve problems, and set and meet objectives is key to achieving and maintaining meaningful participation. Many types of initiatives (e.g., two-way information exchanges, educational opportunities) can be used to help promote meaningful participation.

See [Clause 5](#) for information on the public participation process, which is part of fair and effective decision-making.

A.6.3.6.5 Element 6.5 — Information for decision-making

Organizations and the public provide and receive information through interactions with each other. Information on issues of concern, such as forest inventory educational opportunities (e.g., field trips or school tours) should be made available to both public advisory groups and the public in general. The sharing of learnings and opinions contributes to balanced, more acceptable plans and decisions.

A.7 SFM system requirements

A.7.1 General

7.1 General

The organization shall establish and maintain an SFM system as specified in [Clause 7](#).

SFM system requirements are intended to ensure that an infrastructure (including resources, processes, and controls) that enables an organization to deliver on the overall goal of SFM in the DFA is established and maintained. System requirements are the delivery mechanism of SFM.

The organization is required to establish SFM values, objectives, indicators, and targets for all SFM elements (see [Clause 6.3](#)) and develop an SFM plan that describes the methods by which the targets are to be achieved in the DFA. The organization should put in place the resources, processes, and controls necessary to ensure successful implementation of the SFM plan. Progress can be assessed by the regular measurement and assessment of performance against the SFM requirements, including the effects on the forest. Through monitoring, measurement, and management review, the organization can report on its progress and demonstrate that corrective and preventive actions are taken in the event of any unplanned variances.

A.7.2 SFM policy

7.2 SFM policy

Top management shall define and maintain the organization's SFM commitment through policy statements and/or other documented public statements. The statement(s) shall contain a commitment to

- (a) achieve and maintain SFM;
- (b) meet or exceed all relevant legislation, regulations, policies, and other requirements to which the organization subscribes;
- (c) respect and recognize Aboriginal title and rights, and treaty rights;
- (d) provide for public participation;
- (e) provide participation opportunities for Aboriginal Peoples with rights to and interests in SFM within the DFA;
- (f) provide conditions and safeguards for the health and safety of DFA-related workers and the public;
- (g) honour all international agreements and conventions to which Canada is a signatory;
- (h) improve knowledge about the forest and SFM, monitor advances in SFM science and technology, and incorporate these advances where applicable; and
- (i) demonstrate continual improvement of SFM.

The statement(s) shall be documented, communicated, and made readily available.

A.7.2.1

The ongoing commitment and leadership of top management are crucial. An early step in developing or improving an SFM system is obtaining a commitment to the SFM system from the top management of the organization that is responsible for managing the DFA. The responsibility for setting and approving the SFM policy normally rests with the organization's top management, while other levels of management might be responsible for implementing policy and suggesting modifications.

An SFM policy establishes an overall sense of direction for the sustainable management of the DFA and sets out the principles of action for an organization. It also establishes the level of responsibility and performance required of the organization, against which all subsequent actions will be measured. The SFM policy statement is the yardstick for the organization managing the DFA. Therefore, the policy should be documented, communicated both internally and externally, and readily available to any interested party.

This Standard does not require an Aboriginal policy as a stand-alone document; however, it does require Aboriginal-based commitments (see [Clause 7.2](#)). While efforts to encourage Aboriginal Peoples to become involved may include developing and successfully implementing an Aboriginal policy, this alone does not ensure strong Aboriginal relations. An Aboriginal policy and/or Aboriginal commitments can be more meaningful when they are supported by

- a high-level commitment to build positive Aboriginal relations and partnerships, and encourage Aboriginal input into the SFM planning process;
- appropriate awareness and training at the local level to help employees understand the challenges and opportunities in building or improving Aboriginal relations;
- self-assessment of the status of current Aboriginal relations; and
- a plan for future attainment of corporate goals with respect to Aboriginal relations that includes communication strategies, capacity building, and the goals of the Aboriginal community with regard to corporate relations.

If the certification applicant comprises several organizations, there may be one policy statement for the DFA to which all organizations subscribe, or each organization may have its own policy statement. While the vision, mission, and guiding principles of each organization may be different (and may not directly address SFM), their policies should not contradict each other in terms of a commitment to SFM.

The SFM policy statement should be reviewed periodically as part of the continual improvement process and modified, where appropriate, to reflect changing circumstances and the results of implementing the SFM requirements.

International agreements and conventions to which Canada is signatory include agreements issued by the International Labour Organization, *Convention on Biological Diversity*, and others.

A.7.3 Planning

A.7.3.1 Defined forest area (DFA)

7.3.1 Defined forest area (DFA)

The organization shall designate a clearly defined forest area to which this Standard applies.

The organization shall define the geographic extent and the respective ownership and management responsibilities for the DFA.

One of the first steps in meeting the SFM requirements is to establish the geographical boundaries of the DFA to be managed under the SFM requirements. The DFA may be privately or publicly owned land, or a combination of both.

The SFM requirements should be addressed for the entire DFA. This is a primary consideration in determining the extent of the DFA and the organizations or individuals needed to meet the SFM requirements. There is no specified minimum or maximum size for a DFA: it can range from a few hectares to more than a million hectares, and can be a combination of smaller units or even a combination of non-contiguous operating areas.

In the case of non-contiguous or overlapping areas, all parties needed to address the SFM elements for the DFA should consider the issues associated with isolated parcels and common areas within the overall plan for sustainability of the DFA (see [Clause 7.3.2](#)). The organization should attempt to maximize the participation of individual parties that make up the applicant and should demonstrate that the activities of other parties within the DFA do not undermine the achievement of the SFM objectives.

Changes to the geographic extent of the DFA may be made over time without affecting certification, provided that the impacts of the changes are insignificant. Changes to a DFA can result from a variety of circumstances. For example, under volume-based tenure, the operating areas of the organizations that make up the applicant can vary from year to year, and this can influence the geographic extent of the DFA. In this case, historical operating areas of volume-based tenures may be included in the DFA. Where owners or managers of small, non-contiguous parcels of land come together to form the applicant, the addition of new areas to the DFA or the deletion of existing areas from the DFA may occur according to the interests of participants. Even in cases of area-based tenure, factors can arise that result in modifications to the boundaries of a DFA. In all cases, these changes should be documented. Slight changes to a DFA, with no apparent impact on values, objectives, indicators, and targets, might not require changes to the methods of meeting the SFM requirements of the SFM plan.

The organization can be subject to a range of rights and responsibilities related to its operations in the DFA, depending on the pattern of land ownership and the types of activities that are carried out in the DFA. These rights and responsibilities will generally be set out in agreements between the landowner (e.g., the government in the case of public lands) and the organization. There can be other parties in the DFA that are not part of the applicant but whose legal rights and responsibilities should be respected by the organization. These rights and responsibilities, which include all the existing legislative and policy responsibilities assumed and executed by various government agencies, should be documented.

A.7.3.2 Shared responsibilities

7.3.2 Shared responsibilities

The organization shall ensure that all parties necessary to address the SFM elements for the DFA are involved in the process. The organization shall clearly describe the respective roles and responsibilities of the parties involved.

Where there are parties operating within the DFA that are not interested in participating and are not necessary for the achievement of the SFM elements, the organization may proceed without their involvement provided that the objectives and targets can still be achieved.

A.7.3.2.1 General

Certification is specific to the DFA to which the SFM requirements are applied. Any combination of owners and managers can make up the applicant, and any combination of public land and private land can make up a DFA, provided that the SFM requirements of this Standard can be met.

Depending on the pattern of land ownership and the nature of the relationship between governments and licensees or users on public land, there will likely be shared responsibilities for managing forest values in a DFA. These responsibilities should be defined. Where responsibilities related to any of the SFM elements are shared among organizations or individuals, it might be necessary to consider these organizations for inclusion as part of the applicant. An open invitation to participate in meeting the SFM requirements should be provided to those with management responsibilities.

There can be individuals or organizations, in the forest sector or other resource sectors (e.g., mineral or oil/gas) and operating inside or outside the boundaries of the DFA, whose activities can have a significant impact on the ability of the organization to achieve SFM targets within the DFA. Such individuals or organizations should be invited to participate in the process. If they decline, the organization cannot be held responsible for the actions of such individuals or organizations provided that the SFM objectives and targets can still be achieved. The organization should try to anticipate the impacts of these actions in the development of SFM targets, and to co-operate with such individuals or organizations to minimize and mitigate their impacts.

Attempts made to include other organizations, as well as the reasons given for their participation or non-participation, should be documented.

A.7.3.2.2 The role of government

Many DFAs in Canada are situated on public land where governments are responsible for the forest values specified in the SFM elements. Although government may be involved as an applicant, participation in meeting the SFM requirements cannot be made mandatory. This Standard is voluntary and non-regulatory, and meeting the SFM requirements is not dependent on government involvement.

A.7.3.2.3 Volume-based tenure

SFM requirements are intended to achieve performance targets in a DFA, and their implementation will require a significant level of co-operation among organizations operating on volume-based tenures. In such circumstances, individual organizations are unlikely to have sufficient responsibility and control to ensure that all SFM elements are addressed in the DFA. Organizations that operate on a volume-based tenure should determine the extent of their responsibilities related to implementing the SFM requirements in the DFA and identify the responsibilities of other organizations operating in the same area. In this way, the organization can determine the partnerships it might need to establish to become a viable applicant. Each organization within the applicant may have its own “corporate personality” in the form of vision, mission, policy statements, and operating procedures, provided that they meet the requirements of this Standard. All organizations comprising the applicant, however, should agree to the same SFM targets for the DFA and should have the resources, processes, and controls in place to ensure that they are met.

Because the implementation of the SFM requirements is voluntary and non-regulatory, there might be cases where individuals or organizations with management responsibilities are not interested in participating. This does not preclude successful certification to this Standard for the individuals or organizations that are interested in proceeding; it is not necessary for all individuals or organizations with management responsibility to be involved, provided that the operations of those parties not participating do not prevent the applicant from meeting its SFM targets in the DFA.

A.7.3.3 Rights and regulations

A.7.3.3.1

7.3.3 Rights and regulations

The organization shall

- (a) respect the legal rights and responsibilities of other parties in the DFA that are not part of the certification applicant;

Property rights and land tenure arrangements should be clearly defined and documented for the relevant forest area. In addition, legal and traditional rights related to the forest land should be clarified, recognized, and respected.

The organization can be subject to a range of rights and responsibilities, in addition to Aboriginal title and rights, and treaty rights, related to its operations in the DFA and in accordance with the pattern of land ownership and the types of activities carried out in the DFA. These rights and responsibilities will generally be set out in agreements between the landowner (e.g., the government in the case of public lands) and the organization. There can be other parties in the DFA that are not part of the applicant but whose legal rights and responsibilities should be respected by the organization. These rights include

- guide outfitters licences/certificates;
- angling guide licences;
- registered traplines and trapping licences;
- easements and covenants;
- public and private rights-of-way;
- statutory tenures (e.g., licences, permits), including mineral exploration and development;

- customarily or legally permitted uses of public land for gathering of non-timber forest products, hunting, fishing, etc.;
- rights or obligations related to construction, rehabilitation, or maintenance of trails or other recreation facilities;
- rights to use public footpaths or roads (e.g., access to well-known landmarks, features, or viewpoints);
- water-use rights and obligations (licensed and unlicensed); and
- common law rights of riparian owners.

Such rights and responsibilities should be documented. They include all the existing legislative and policy responsibilities assumed and executed by various government agencies.

A.7.3.3.2

7.3.3 Rights and regulations

(b) demonstrate that relevant legislation and regulatory requirements relating to ownership, tenure, rights, and responsibilities in the DFA have been identified and complied with;

The organization should establish and maintain a list of all legal requirements pertaining to the DFA. The organization should be able to demonstrate that it is aware of legal requirements and has a system to ensure legal compliance. Specific legal requirements can be related to various aspects of the organization's forestry activity, including

- the activity (e.g., road construction, resource management, authorizations, licences and permits);
- the organization's products or services; and
- monitoring, measurement, and reporting.

Some issues that should be considered (for legal and other requirements) are the organization's access to and identification of relevant requirements, tracking changes to requirements, and communication of relevant information on requirements to personnel, contractors, and subcontractors.

Several sources can be used to identify legal requirements and ongoing changes, including company legal departments, all levels of government, industry associations or groups, commercial databases, and professional services.

A.7.3.3.3

7.3.3 Rights and regulations

(c) demonstrate that Aboriginal title and rights, and treaty rights have been identified and respected;

See Elements 6.1 and 6.2 in [Clause 6.3.6](#).

A.7.3.3.4

7.3.3 Rights and regulations

(d) demonstrate that the legal and constitutional rights (including those specified in the International Labour Organization (ILO) conventions to which Canada is a signatory [such as "Freedom of Association" and "Protection of the Right to Organize"]) and the health and safety of DFA-related workers are respected, and their contributions to SFM are encouraged;

The right of DFA-related workers to organize and participate in collective bargaining should be respected, including full recognition of unions and their representatives. The organization should refrain from interference in legitimate union activities and organizing efforts.

DFA-related workers should have access to training and awareness programs related to SFM.

A.7.3.3.5**7.3.3 Rights and regulations**

- (e) demonstrate that the acquired and legal rights of private woodlot owners to set the values, objectives, indicators, and targets relating to their properties are respected; and

The values of private woodlot owners should be addressed in the context of important public values. Private woodlot owners have acquired rights and responsibilities, which are recognized by this Standard. While all SFM requirements apply regardless of ownership, this Standard recognizes that private landowners have the right to decide the objectives for their land and limit public access for certain activities.

A.7.3.3.6**7.3.3 Rights and regulations**

- (f) establish and maintain procedures to identify and have access to all legal and other requirements to which the organization subscribes that are applicable to the DFA. This includes requirements related to ownership tenure, rights, and responsibilities in the DFA.

A.7.3.4 Incorporation of public participation requirements

The public participation requirements specified in [Clause 5](#) shall be incorporated into the SFM system.

A.7.3.5 SFM plan**7.3.5 SFM plan**

The organization shall document, maintain, and make publicly available an SFM plan for the DFA. The SFM plan for each DFA shall include

- (a) a comprehensive description of the DFA;
- (b) a summary of the most recent forest management plan and the management outcomes, including the conclusions drawn in the management review;
- (c) a statement of values, objectives, indicators, and targets;
- (d) the current status and forecasts for each indicator, including a description of the assumptions and analytical methods used for forecasting;
- (e) a description of the chosen strategy, including all significant actions to be undertaken and the associated implementation schedule;
- (f) a description of the monitoring program;
- (g) a comparative analysis of actual and expected outcomes; and
- (h) a demonstration of the links between short-term operational plans and the SFM plan.

An SFM plan should be developed for each DFA. SFM plans should cover a 20- to 25-year period and should be revised as necessary. The SFM plan is the principal vehicle for transforming the organization's commitments to SFM into actual actions in the forest. The SFM plan should summarize the current state of the DFA as well as the values, objectives, indicators, and targets of SFM developed through the public participation process. The organization should consider the inclusion of a brief summary of the organization's operating environment, including the SFM plan linkages to higher level plans and other regulatory requirements. Such a summary would provide the public participation process and third parties with an understanding of the organization's planning and practices that goes beyond the information provided in the SFM plan or in a matrix of values, objectives, indicators, and targets developed through a public participation process.

Organizations should ensure that the SFM plan not only contains the right information but also presents the information in a way that makes it readily understandable to interested parties. The complicated technical components of the planning process should be explained in terms of their essential components and implications. Organizations are encouraged to explore alternative forms of communication for SFM plans, including customary print-based media as well as digital options (e.g., websites, compact discs, and videos).

Because of the extended time frame of an SFM plan, specific details about what is to be accomplished in any given year might not be included. As a result, short-term plans, including annual operating plans that prescribe specific activities that will contribute to the overall implementation of the SFM plan, should be developed. Short-term plans should clearly demonstrate how planned activities will lead to the achievement of the SFM targets. One method is to include benchmarks, which represent intermediate milestones along the way to achieving a target.

A.7.4 Implementation and operation

A.7.4.1 Structure and responsibility

7.4.1 Structure and responsibility

Roles, responsibilities, and authority required to implement and maintain conformance with SFM requirements shall be defined, documented, and communicated within the organization.

The organization shall provide resources essential to the implementation and control of the SFM requirements, including human resources and specialized skills, technology, and financial resources.

The organization shall appoint a specific management representative(s) who shall have defined roles, responsibilities, and authority for

- (a) ensuring that the SFM requirements are established and maintained in accordance with this Standard; and**
- (b) reporting on the SFM requirements to top management for review and as a basis for continual improvement.**

The capabilities and support required by an organization constantly evolve in response to changing requirements. To fulfill its SFM requirements, an organization should focus and align its people, systems, strategies, resources, and structure. The human resources, physical resources (e.g., facilities and equipment), and financial resources required to meet the SFM requirements (including the fulfillment of SFM targets) should be defined and made available to all levels of the organization. The allocation of sufficient resources to ensure the success of the SFM system is a measure of the organization's commitment.

The organizations and individuals responsible for the implementation of each aspect of the SFM requirements should be identified. General and specific responsibilities, authority, and accountability should be assigned to all persons whose activities influence the SFM requirements.

Within an organization there is usually one person who is appointed to be the SFM coordinator or management representative. This person uses the authority and resources given by top management to effect the implementation and maintenance of the SFM requirements.

A.7.4.2 Training, awareness, qualifications, and knowledge

7.4.2 Training, awareness, qualifications, and knowledge

The organization shall identify training needs. It shall also ensure that personnel receive training in accordance with the impact of their work on the DFA and their ability to ensure that SFM requirements are met.

The organization shall establish and maintain procedures to ensure that personnel, at each relevant function and level, have knowledge of

- (a) the importance of conformance with the SFM policy and with the SFM requirements;
- (b) the environmental impacts, actual or potential, of their work, and the benefits of meeting the SFM requirements;
- (c) their roles and responsibilities in achieving conformance with the SFM policy and SFM requirements, including emergency preparedness and response requirements; and
- (d) the potential consequences of deviations from specified operating procedures.

The organization shall ensure that its personnel are qualified on the basis of appropriate training and/or work experience and have opportunities to gain new knowledge. The organization shall also require contractors working on its behalf to demonstrate that their personnel have the requisite training and awareness levels.

The organization shall continually improve its knowledge of the DFA and SFM and shall monitor advances in SFM science and technology, and incorporate them where and when applicable.

Top management has a key role to play in building awareness and motivating personnel by explaining the organization's commitment to SFM and communicating its commitment through the SFM policy. It is the actions of individual personnel, however, that transform the SFM requirements into an effective process, leading to satisfactory on-site performance.

All personnel and contractors should be aware of the SFM requirements and how they are being met. Personnel and contractors should be provided with opportunities to include their input in the ongoing review of the SFM requirements. Motivation for continual improvement is enhanced when personnel and contractors are recognized for achieving SFM targets and encouraged to make suggestions that can lead to improved SFM.

The knowledge and skills necessary to achieve SFM should be identified. These should be considered in personnel selection, recruitment, training, skills development, and ongoing education. Appropriate training should be provided to all personnel within the organization and to relevant contractors. Personnel and contractors should have sound knowledge of the methods and skills required to perform their tasks in an efficient and competent manner, and should be aware of the impact of their activities on SFM. Education and training are needed to ensure that personnel and contractors have appropriate and current knowledge of regulatory requirements, internal standards, and the organization's policies and targets. The level of training will vary according to the task.

Training programs typically include

- identification of qualification requirements for personnel and tasks;
- identification of personnel and contractor training needs;
- development of a training plan to address defined needs;
- verification of conformance of the training program to regulatory or organizational requirements;
- training of target personnel/contractor groups;
- documentation of training received; and
- evaluation of training received.

As a means to achieve continual improvement, the organization should monitor advances in SFM science and technology and incorporate them where and when applicable. The organization should also be engaged in the acquisition of knowledge about the DFA and SFM. This can be achieved through such activities as inventory data collection, gathering of conventional knowledge, and involvement in research.

A.7.4.3 Communication

7.4.3 Communication

The organization shall

- (a) establish and maintain procedures for internal communication between its various levels and functions;
- (b) establish and maintain procedures for receiving, documenting, and responding to relevant communication from external interested parties;
- (c) make the SFM plan publicly available;
- (d) make publicly available an annual report on its performance in meeting and maintaining the SFM requirements; and
- (e) make publicly available the results of independent certification and surveillance audit reports, including, at minimum, the following information:
 - (i) a description of the audit process, objectives, and scope;
 - (ii) the scope of certification;
 - (iii) DFA and tenure description;
 - (iv) a list of the elements audited both off-site and on-site;
 - (v) the name of the certified organization and/or co-applicant(s) that were audited, including their representatives;
 - (vi) the name of the certification body, lead auditor, and audit team members;
 - (vii) the dates the audit was conducted and certification completed;
 - (viii) a summary of the findings, including general descriptions of nonconformities, opportunities for improvement, and exemplary practices/positives;
 - (ix) a statement of corrective actions taken for current nonconformities;
 - (x) the status of nonconformities from previous audits;
 - (xi) the certification recommendation;
 - (xii) the number of sites visited on the ground and activities observed;
 - (xiii) the number of public participation members, government officials, DFA-related workers, and other interested parties that were interviewed;
 - (xiv) the date of the next audit; and
 - (xv) forest areas for the next audit.

A.7.4.3.1 Reporting issues

The following communication and reporting issues should be considered:

- What is the process for communicating with DFA-related workers and contractors?
- What is the process for communicating with external interested parties?
- What is the process for communicating the organization's SFM policy and performance?
- How are the results from internal and external audits communicated to all appropriate people in the organization?
- What is the process for making the SFM policy available to the public?
- Is internal communication adequate to support continual improvement of the SFM?

A.7.4.3.2 Reporting processes

Communication includes establishing processes to report internally and, where desired, externally on the SFM activities of the organization in order to

- demonstrate commitment to the SFM requirements;
- deal with internal concerns and questions about the SFM requirements;
- raise awareness of the public participation process and the organization's SFM policy and plan (see [Clause A.7.3.5](#) for information on the contents of the SFM plan); and
- inform interested parties about the organization's progress in fulfilling the SFM requirements as appropriate and as required by this Standard.

Results from monitoring, measurement, performance checks, audits, and management reviews should be communicated to those within the organization who are responsible for delivering and managing these

functions. In addition, the organization will likely need to develop a number of internal reports and schedules as part of the SFM requirements.

A.7.4.3.3 Annual report

An annual report describing the organization's progress in meeting and maintaining the SFM requirements should be prepared and made available to the public. These annual reports may resemble the annual environmental reports that many organizations produce. The annual report should be open and factual so that the reader can be confident that all of the SFM requirements continue to be met and that the organization is living up to its SFM policy statement and its commitment to continual improvement. Progress, success, shortcomings, emerging issues, future plans, corrective actions, and management commitment are some of the topics an annual report should address. Because some readers of the report might not have been involved in the public participation process, the report should have information regarding all of the major issues related to SFM in the DFA.

The provision of appropriate information to the organization's DFA-related workers, contractors, and other interested parties serves to motivate workers and encourage public understanding and acceptance of the organization's efforts to improve its SFM performance.

A.7.4.4 SFM documentation

A.7.4.4.1 General

7.4.4 SFM documentation

The organization shall establish and maintain documentation, in paper or electronic form, that

- (a) describes the SFM requirements and their interaction; and
- (b) provides direction to related documentation.

Organizations shall ensure that DFA-related workers and contractors have access to the documentation relevant to their responsibilities and tasks.

The primary purpose of SFM documentation is to describe the methods of fulfilling the SFM requirements. The nature of the documentation can vary depending on the size and complexity of the DFA and the organization(s) implementing the SFM requirements. Where SFM requirements are integrated with an organization's overall management system, the SFM documentation may be integrated into existing documentation.

A.7.4.4.2 SFM system manual

Organizations might consider developing an SFM system manual to describe the methods of fulfilling each of the SFM requirements. Such a document would then serve as a reference for the implementation and maintenance of the SFM requirements. The SFM system manual is different from the SFM plan, which focuses on performance requirements.

It is not necessary for all documentation pertaining to the SFM requirements to be duplicated in the SFM system manual. Rather, the SFM system manual could provide direction to relevant documentation. The individual(s) or organization(s) responsible for each document should be clearly identified in the SFM system manual.

A.7.4.4.3 Documentation issues

The following documentation issues should be considered:

- How are documents and procedures identified, documented, communicated, and revised?
- Does the organization have a process for developing and maintaining documentation?
- How is SFM documentation integrated with existing documentation, where appropriate?
- How do personnel and contractors access the relevant documentation needed to fulfill their responsibilities and perform their job activities?

Effective documentation encourages awareness on the part of personnel and contractors of the requirements of the SFM. Documentation also enables the evaluation of an organization's progress towards SFM.

A.7.4.5 Document control

7.4.5 Document control

7.4.5.1

The organization shall establish and maintain procedures for controlling all documents (paper or electronic) required by this Standard, to ensure that

- (a) documents can be readily located;
- (b) documents are periodically reviewed, revised as necessary, and approved as adequate by authorized personnel;
- (c) the current versions of relevant documents are available at all locations where operations essential to the fulfillment of the SFM requirements and the SFM plan are performed;
- (d) obsolete documents are promptly removed from all points of issue and use, or otherwise prevented from unintended use; and
- (e) obsolete documents retained for legal and/or knowledge preservation purposes are suitably identified.

7.4.5.2

Documentation shall be

- (a) legible;
- (b) dated (with dates of revision);
- (c) readily identifiable;
- (d) maintained in an orderly manner; and
- (e) retained for a specified period.

Procedures and responsibilities for the creation and modification of the various types of documents shall be established and maintained.

The purpose of documentation control is to ensure that the organization creates and maintains documents in a manner that is adequate to fulfill the requirements of this Standard.

A.7.4.6 Operational procedures and control

7.4.6 Operational procedures and control

The organization shall

- (a) identify the operational procedures and controls needed to meet the SFM requirements;
- (b) establish and maintain documented procedures to cover situations in which the absence of such procedures could lead to deviations from the SFM requirements;
- (c) stipulate operating criteria, including maintenance and calibration requirements;
- (d) communicate relevant procedures, controls, and requirements to employees, suppliers, and contractors; and
- (e) ensure that contractors working on behalf of the organization have the necessary operational procedures and controls.

Implementation of the SFM requirements and the SFM plan is accomplished through the establishment and maintenance of operational procedures and controls. These are often referred to as best management practices, work instructions, standard operating procedures, etc. Such operational controls are designed to ensure that activities or tasks are completed in a systematic way with desired outcomes. Operational

controls also increase the probability that legal requirements are met and allow for targeted training of new personnel and contractors. Operational controls should be detailed and specific and should focus on operational specifications and thresholds that are easily and clearly understood by DFA-related workers.

When the applicant comprises more than one organization, various operational procedures and controls may be used, provided that they enable each organization to meet the requirements of the SFM plan.

A.7.4.7 Emergency preparedness and response

7.4.7 Emergency preparedness and response

The organization shall

- (a) establish and maintain procedures to identify the potential for, and response to, accidents and emergencies in the DFA;
- (b) establish and maintain procedures to prevent and mitigate the impacts associated with accidents and emergencies;
- (c) review and revise, where necessary, its emergency preparedness and response procedures, particularly after the occurrence of accidents or emergencies; and
- (d) where practicable, test procedures periodically.

Emergency plans and procedures should be established to ensure that there will be an appropriate response to unexpected incidents or accidents. The organization should define the types of emergencies that could occur in the DFA and maintain appropriate response procedures. Emergencies can include fire and spills of hazardous material onto land or into water. Contingency plans should be developed for forest disturbances such as insect and disease outbreaks and blowdown.

Emergency procedures should take into account incidents arising, or likely to arise, as a consequence of both normal operating conditions and abnormal or unique operating conditions.

Emergency plans may include

- a list of types of emergencies;
- identification of emergency organizations and responsibilities;
- a list of key personnel and their contact information;
- details of emergency services (e.g., fire control and spill management services);
- internal and external communication plans;
- actions taken in the event of different types of emergencies;
- information on hazardous materials, including each material's potential impact on the environment and measures to be taken in the event of accidental release;
- provisions for clean up and remediation as necessary; and
- emergency response training plans and testing exercises.

For further information, see CAN/CSA-Z731.

A.7.5 Checking and corrective action

A.7.5.1 Monitoring and measurement

A.7.5.1.1 General

7.5.1 Monitoring and measurement

The organization shall

- (a) establish and maintain documented procedures to monitor, on a regular basis, the key characteristics of its operations and activities that demonstrate progress towards SFM in the DFA. This shall include the recording of performance levels, relevant operational controls, and conformance with the SFM requirements;
- (b) monitor indicators for comparison against forecasts;
- (c) establish and maintain a documented procedure for periodically evaluating compliance with relevant legislation and regulations, and conformance with relevant policies applying to the DFA. If non-compliances or nonconformities are found, the organization shall address these through corrective and preventive actions; and
- (d) assess the quality, validity, and meaningfulness of the locally determined indicators and all of the targets.

A true measure of success in implementing the SFM requirements is comparing the indicator conditions that evolve over time with those that were forecast, and then assessing the acceptability of any variances. The periodic assessment of indicator conditions is key in determining if values are being sustained and SFM targets are being achieved. This includes assessment of actual changes in the forest. Understanding the reasons for variances between the actual and forecast results is essential to continual improvement. Management strategies should be adapted accordingly.

A.7.5.1.2 Assessing the public participation process

At periodic intervals, the organization and those involved in the public participation process should undertake an assessment of the entire public participation process to ensure that it continues to meet SFM requirements and participant expectations.

A.7.5.1.3 Assessing values, objectives, indicators, and targets

SFM is always a work in progress. At each stage of SFM planning, the values, objectives, indicators, and targets should be examined for continuing quality and validity. Values and objectives can lose their validity as public expectations change. Through monitoring experience, some indicators might be deemed less useful and others more so. Management experience might show that previous targets were either easily met (resulting in more rigorous objectives) or impossible to meet (necessitating more realistic goals). Overall assessment of the effectiveness of the values, objectives, indicators, and targets for the DFA should be carried out at the beginning of each major round of SFM planning, with full engagement of interested parties in accordance with requirements for public participation.

A.7.5.1.4 Assessing SFM performance requirements

Indicators should be compared against targets (or short-term benchmarks) according to a defined schedule. Unacceptable variances from any target should be identified, and the reasons determined and explained. Such variances can be caused by

- failure to implement fully the activities specified in the SFM plan;
- deficiencies in the information available when setting targets, leading to false assumptions about the feasibility of their achievement;
- poor choice of indicators; or
- factors beyond the control of the organization. An analysis of variances allows the organization to determine whether progress towards stated objectives is being made.

A.7.5.1.5 Assessing the SFM system requirements

Because the SFM system requirements are the delivery mechanism for the overall SFM requirements, the effectiveness of the SFM system should be assessed regularly and improved as necessary. This is usually achieved through internal audits and corrective and preventive action processes.

A.7.5.1.6 Legal compliance

Compliance with legal requirements is a critical part of the SFM requirements. The key steps to ensuring legal compliance include

- obtaining a thorough knowledge of applicable legal requirements;
- ensuring that all legal requirements are met;
- taking the necessary and appropriate corrective and preventive actions if a legal requirement is not met; and
- maintaining a mechanism for periodically evaluating compliance.

A.7.5.2 Corrective and preventive action

7.5.2 Corrective and preventive action

The organization shall establish and maintain procedures for

- (a) defining responsibility and authority for identifying and investigating nonconformity;
- (b) taking action to mitigate impacts; and
- (c) initiating and completing corrective and preventive action.

Any corrective or preventive action taken to eliminate the causes of actual and potential nonconformities shall be appropriate to the magnitude of problem and commensurate with the impact encountered.

The organization should implement and record any changes in the documented procedures resulting from corrective and preventive action. The findings, conclusions, and recommendations reached as a result of observation, measuring, monitoring, audits, and other reviews of the SFM requirements should be documented, and the necessary corrective and preventive actions identified. Management should ensure that these corrective and preventive actions are implemented and that there is systematic follow-up to ensure their completion and effectiveness.

Note: *Corrective actions are meant to correct a problem or a condition as soon as it is identified; preventive actions are intended to prevent problems or conditions from happening or recurring.*

A.7.5.3 Records

7.5.3 Records

The organization shall establish and maintain procedures for the identification, maintenance, and disposal of SFM requirement records. These records shall include training records and the results of audits and reviews.

SFM requirement records shall be

- (a) legible;
- (b) identifiable;
- (c) traceable to the activity involved; and
- (d) stored and maintained such that they are readily retrievable and protected against damage, deterioration, or loss.

Their retention times shall be established and recorded.

Records shall be maintained, in a manner appropriate to the system and to the organization, to demonstrate conformance to the requirements of this Standard.

Records are evidence of the ongoing maintenance of the SFM requirements and the progress towards targets. The number and types of records will vary greatly among DFAs and organizations. Records should include all the documents necessary to demonstrate conformance with the SFM requirements, including documentation of the public participation process, the SFM performance requirements, and the SFM system requirements.

To fulfill the SFM requirements, the organization should maintain a range of records and information. Effective management of records is essential to the successful implementation and maintenance of the SFM requirements. Documentation procedures should include

- identification;
- collection;
- indexing;
- filing;
- storage;
- maintenance;
- retrieval;
- retention; and
- disposition.

A.7.5.4 Internal audits to the SFM requirements

7.5.4 Internal audits to the SFM requirements

7.5.4.1

The organization shall

- (a) establish and maintain procedures for annual internal audits to ensure that they conform to the SFM requirements of this Standard; and
- (b) provide information on the results of these internal audits to top management.

7.5.4.2

The organization's internal audit program, including any schedules, shall be based on the importance of the specific SFM activity and the results of previous audits.

Audit procedures shall cover the following:

- (a) scope;
- (b) frequency;
- (c) methods;
- (d) responsibilities and requirements for conducting audits;
- (e) auditor qualifications; and
- (f) reporting results.

Internal audits are intended to encourage continual improvement inside the organization. Audits can be carried out by personnel who are internal to the organization and/or by external parties selected by the organization. The person(s) conducting such audits should be properly trained and should strive to be objective and impartial. Audit procedures and protocols should be clearly defined.

The internal audit report should be submitted to

- top management for review; and
- individuals who can and will act on the audit results.

A.7.6 Management review

7.6 Management review

The organization's top management shall, at least annually, review the SFM requirements to ensure that progress towards SFM continues to be suitable, adequate, and effective. The information necessary to allow top management to carry out this evaluation shall be collected. This review shall be documented.

In order to be adaptive, the management review shall address the possible need for changes to policy, targets, and other SFM requirements, in light of audit results, changing circumstances, and the commitment to continual improvement.

An organization should review its performance in meeting the SFM requirements and continually improve its progress in achieving SFM. The organization's top management should, at appropriate intervals, conduct a complete and thorough review. The review should be broad enough in scope to address all dimensions of the SFM requirements and the DFA (see [Clause A.6.1.8](#)) and should cover the following:

- the public participation process;
- the values, objectives, indicators, targets, strategies, and forecasts;
- performance in relation to targets;
- changes in the forest in relation to forecasts;
- findings of audits (internal and external);
- corrective and preventive actions;
- the SFM policy and the need for changes;
- changing legislation or other relevant requirements;
- changing expectations, requirements, or responsibilities of interested parties;
- changes in types of forest operations or forest activities;
- changes in the organization or in resource requirements and availability;
- advances in science and technology;
- lessons learned from experience; and
- changes in the DFA.

Annex B (informative)

Certification framework

Note: *This Annex is not a mandatory part of this Standard.*

B.1 General

B.1.1

Part of the certification process for a DFA involves determining whether the organization has met

- (a) public participation requirements (see [Clause 5](#));
- (b) SFM performance requirements (see [Clause 6](#)); and
- (c) SFM system requirements (see [Clause 7](#)).

This determination involves an audit undertaken by a third-party independent certification body accredited by the Standards Council of Canada (SCC). This audit includes an on-site audit of the DFA and field inspections of forest sites.

B.1.2

Accredited registrars require that an organization meet the SFM requirements to achieve certification. If a nonconformance is raised, the individual certification bodies define whether it is a major or minor nonconformity. While minor nonconformities do not necessarily prevent certification, major nonconformities will normally disqualify an organization from certification or lead to de-certification. These decisions are made by individual certification bodies, who are guided by the importance and consequences of nonconformities.

While it is up to the certification body to determine nonconformities, a major nonconformity is any one or combination of the following:

- (a) one or more requirements of this Standard have not been addressed;
- (b) one or more requirements of this Standard have not been implemented; or
- (c) several nonconformities exist that, taken together, lead the auditor to conclude that one or more requirements of this Standard have not been addressed.

B.1.3

A list of accredited certification bodies is available from the SCC. The SCC accredits national third-party independent certification bodies who have competent audit teams consisting of auditors and technical experts with the requisite forestry and environmental management system expertise to conduct audits according to Canada's national guidelines.

Organizations and forest owners might wish to obtain third-party independent certification of their SFM system and related DFA to demonstrate conformance with the requirements of this Standard. These SFM certifications are conducted by certification bodies that are accredited by the SCC.

B.1.4

[Clause B.2](#) specifies the steps taken by an organization to obtain certification to this Standard by a certification body.

B.2 Certification process

B.2.1 Application

A formal application for certification is filed by the organization with the certification body.

B.2.2 Preliminary assessment/documentation review

The initial certification audit is conducted in two stages as specified in SCC CAN-P-16. The certification body assigns an audit team leader to the project. The auditor reviews the details of the applicant and the DFA to be certified. All necessary information and documentation from the applicant is provided to the certification body. The assessment also evaluates the organization's state of preparedness for the upcoming certification audit. The preliminary assessment generally takes place in the organization's office, with some time spent in the DFA assessing actual forest conditions, operations, and the organization's field interpretation of values, objectives, indicators, and targets.

B.2.3 Certification audit

The purpose of the certification audit is to verify that the organization meets the requirements of its documentation, its SFM plan, and this Standard, and the requirements of this Standard are effectively implemented. A high proportion of the audit time is spent in the DFA assessing actual forest conditions, operations, and the organization's field interpretation and implementation of values, objectives, indicators, and targets. Auditors also meet with stakeholders about the public consultation process and any concerns related to the certification. The audit team makes a recommendation for certification based on the audit results.

B.2.4 Certification

The certification body staff designated for the decision-making process reviews

- (a) auditors' recommendations;
- (b) audit files;
- (c) nonconformities;
- (d) documents and audit reports;
- (e) auditor's notes;
- (f) records of objective verifiable evidence; and
- (g) justifications for conformity and nonconformities to this Standard, and associated checklists, process and technical reviews, etc.

The certification body then grants or does not grant certification, based on decision-making process results.

B.2.5 Surveillance audits

A surveillance audit takes place on a periodic basis (at least every 12 months) to provide assurance that the organization is continuing to effectively meet the SFM requirements.

B.2.6 Re-certification audit

A full re-certification audit takes place in accordance with the requirements of the SCC, and if the organization passes, it maintains its certification. Regular surveillance audits are conducted by the certification body to ensure that the certified organization meets the requirements on an ongoing basis.

For information regarding specific conformity assessment requirements (e.g., audit frequency, etc.), contact the SCC and/or SCC-accredited sustainable forest management certification bodies.

B.2.7 SFM audit reports (initial certification and surveillance)

The audit report is prepared under the direction of the lead auditor, who is responsible for its accuracy and completeness. The audit report should be signed by the lead auditor. The audit report should contain the audit findings or a summary thereof with reference to supporting evidence. Subject to agreement between the lead auditor and the auditee, the report may also include additional items. See SCC CAN-P-16 for further details on the content of the audit report.

In accordance with the requirements of this Standard, it is the responsibility of the auditee to make the audit report available to the public.

B.2.8 Dispute resolution

Complaints and disputes regarding an organization's accredited certification to this Standard can be filed by any interested party, including those involved in the public participation process. Any party can complain about a certification decision that has been made; however, ISO/IEC 17021 specifies that an appeal can only be launched by a certified organization or its legal council.

If the matter is under appeal in regard to the contents of this Standard, CSA should be contacted. If the matter pertains to a certified client and its implementation of the requirements of this Standard or the SCC accreditation requirements for the certification body, the certification body should be contacted. If the matter is not addressed to the satisfaction of the interested party following this procedure, the SCC should be contacted.

B.2.9 Objectivity, independence, and competence

To ensure the objectivity of the audit process and its findings and conclusions, the members of the audit team should be independent of the activities they audit. They should be objective and free from bias and conflicts of interest throughout the process. The audit team members should possess an appropriate combination of knowledge, skill, and experience to carry out audit responsibilities (see CAN/CSA-ISO 19011).

Certification bodies or any related organization should not be involved in consulting activities that provide

- (a) guidance on obtaining or maintaining SFM system certification; or
- (b) the design, implementation, or maintenance of SFM systems.

The certification body should not offer nor provide consulting services or advice as part of a pre-assessment, an initial assessment, an audit, or a reassessment. The certification body, their employees, their subcontractors, and the agents involved in any SFM system certification activity (assessment, audit, or reassessment) should not have been involved in any consulting relating to SFM systems for a certification applicant or any company related to that certification applicant within two years prior to the beginning of the certification activity. The auditors and their dependants should not have a direct or indirect interest in the DFA or the certification applicant.

The SCC specifies the current requirements for the accredited certification bodies delivering certification to this Standard. Contact SCC for further information on accreditation requirements.

Annex C (informative)

Summary of key changes in this edition of CSA Z809

Note: *This Annex is not a mandatory part of this Standard.*

C.1 Introduction

This Annex highlights the key changes in this edition of CSA Z809 and provides information about the CSA SFM program.

C.2 Standards review process

National Standards of Canada are subject to a mandatory five-year review. The review of this Standard process was conducted by CSA's Technical Committee on Sustainable Forest Management (SFM TC), a volunteer group consisting of a balanced representation from the following four categories:

- (a) Producers — includes companies, provincial forest product associations, and private woodlot owners;
- (b) Environmental and general interests — includes consumers, public advisory group representatives, the public, and environmental representation;
- (c) Academic and professional practitioners — includes professors and professionals involved with universities and other research organizations; and
- (d) Aboriginal Peoples, governments, and regulatory authorities — includes Aboriginal interests, and provincial and federal governments.

The review process consisted of several meetings of the SFM TC, meetings with public advisory groups, open public consultation, and a public review period.

C.3 Application of this Standard

Although the vast majority of Canada's forested lands are publicly owned, the role of the small private woodlot owner is significant and integral to many communities and the forest industry. This Standard is intended to foster and improve the sustainable forest management of public and private lands of all sizes. Any small, medium, or large organization operating on public or private land can apply for certification to this Standard.

CSA Z804, *Sustainable forest management for woodlots and other small area forests*, applies more specifically to private woodlot owners.

C.4 Revised structure

The structure of this Standard has changed to align with requirements for National Standards of Canada. In this edition, only requirements (without guidance) are found in the main body of the Standard. This Standard includes the following three annexes:

- (a) [Annex A](#) repeats the requirements of the main body and specifies the applicable guidance. Requirements are given in the text within boxes, while the guidance text is outside the boxes.
- (b) [Annex B](#) outlines the third-party certification (registration) process.
- (c) [Annex C](#) highlights the key changes in this edition and provides information about the CSA SFM program.

C.5 Performance and system requirements

C.5.1

This Standard includes rigorous public participation requirements and a performance framework for addressing the CCFM criteria for sustainable forest management at the DFA level. Public participation requirements are specified in [Clause 5](#) and SFM performance requirements are specified in [Clause 6](#).

A strong systems component, aligned with CAN/CSA-ISO 14001 environmental management requirements, ensures the delivery of both the public participation and DFA-specific performance requirements. These systems requirements ensure that performance requirements are met and continually improved over the long term (see [Clause 7](#)).

Both performance and system requirements are subject to a third-party independent audit conducted by an accredited registrar.

C.5.2 Performance requirements

C.5.2.1 Core indicators

A new set of 35 mandatory core indicators has been added under each SFM element to bring a level of consistency to SFM plans developed under this Standard. These indicators include

- (a) forest area by seral stage or age class;
- (b) degree of habitat protection for selected focal species, including species at risk;
- (c) reforestation success;
- (d) proportion of the calculated long-term sustainable harvest level that is actually harvested;
- (e) proportion of watershed or water management areas with recent stand-replacing disturbance;
- (f) net carbon uptake;
- (g) additions and deletions to the forest area;
- (h) evidence of a good understanding of the nature of Aboriginal title and rights;
- (i) management and/or protection of areas where culturally important practices and activities (hunting, fishing, and gathering) occur; and
- (j) availability of summary information on issues of concern to the public.

Other indicators, as well as locally appropriate targets for all indicators, are identified through the local public participation process.

C.5.2.2 Discussion items

At time of publication of this edition, over 55 public consultation groups operate in CSA certified forests across Canada. They participate at the local community level in the development and monitoring of CSA SFM plans and ongoing forestry discussions. They often participate in the development of various forestry plans required under provincial regulations. This high degree of public involvement reflects the Canadian context, where 93% of the forests are publicly owned.

Key topics for discussion during the public consultation process have been added in this edition for each CCFM criterion. These will become part of the two-way education and exchange of information that occurs regarding each forest. For example, topics to be discussed under CCFM Criterion 1, Conservation of biological diversity, include

- (a) forest fragmentation and forest loss;
- (b) management in the context of natural disturbance regimes and patterns, and the range of natural variation;
- (c) maintenance of population and communities over time;
- (d) local and regional protected areas and integrated landscape management;
- (e) silvicultural regimes and tools such as plantations, pesticides (including integrated pest management and pesticide-use regulations), structural retention, and timber harvest practices (including clear-cutting);
- (f) practices to limit the spread of invasive alien species, and the regulatory prohibitions related to adverse ecological effects and the use of exotic tree species;

- (g) the gene pool of native seed stocks, and genetically modified organisms (GMOs) and the associated regulatory/policy requirements;
- (h) management and protection of biological resources of cultural heritage significance;
- (i) management of cultural values and resources;
- (j) locally available processes and methods for identifying sites with special biological and cultural significance;
- (k) conservation of old-growth forest attributes; and
- (l) participation in government programs to protect threatened and endangered species.

C.5.2.3 DFA-specific performance requirements

Information on establishing SFM performance requirements has been moved to [Clause 6.1](#); thus, the background information necessary for setting appropriate values, objectives, indicators, and targets for the SFM elements in [Clause 6](#) is specified right at the start of that clause.

C.5.3 System requirements

System requirements for the development of strategies, forecasting outcomes, and monitoring the effectiveness of indicators and objectives have been clarified.

C.6 Adapting global and national criteria to the local forest area

C.6.1

Certification programs need to be globally and nationally consistent, yet flexible enough to account for different local situations and conditions. At the international level, Canada is involved in the Montreal Process, one of eight intergovernmental processes for developing and reporting on global criteria and indicators for sustainable forest management. As an outcome of that involvement, the CCFM developed a definition of sustainable forest management for Canada that includes a suite of broadly accepted Canadian forest values embodied in a set of CCFM criteria, elements, and indicators. There are six criteria representing high-order forest values, with associated elements that represent specific features of the criteria.

This Standard uses the CCFM criteria and an adaptation of the elements to ensure their applicability at the DFA level. These criteria and elements apply to all of Canada. Local public advisory committees then develop indicators and targets for each element that are adapted to local conditions.

Adoption of the CCFM SFM criteria and elements as a framework for identifying forest values provides vital links between local sustainable forest management and national and provincial forest policy. This edition provides more consistency in the identification of local forest values across Canada through the adoption of a set of mandatory core indicators to be used consistently wherever this Standard is applied. To provide flexibility to address specific circumstances, other local level indicators are set through the public participation process.

C.6.2

The CSA SFM elements address important Canadian forest and sustainability values. The elements (specified in [Clause 6.3](#)) address the following criteria:

Criterion 1 — Biological diversity

- 1.1 Conserving **ecosystem diversity**
- 1.2 Conserving **species diversity**
- 1.3 Conserving **genetic diversity**
- 1.4 Protecting **areas and sites of special biological and cultural significance**

Criterion 2 — Ecosystem condition and productivity

- 2.1 Conserving **ecosystem resilience**
- 2.2 Conserving **ecosystem productivity**

Criterion 3 — Soil and water

- 3.1 Conserving **soil resources**
- 3.2 Conserving **water resources**

Criterion 4 — Role in global ecological cycles

- 4.1 Maintaining the processes that take **carbon from the atmosphere and store it** in forest ecosystems
- 4.2 Protecting forest lands from **deforestation or conversion** to non-forests

Criterion 5 — Economic and social benefits

- 5.1 Managing the forest sustainably to produce an acceptable and feasible mix of **both timber and non-timber benefits**
- 5.2 Contributing to the **sustainability of communities by providing diverse opportunities** to derive benefits from forests and supporting local economies

Criterion 6 — Society's responsibility

- 6.1 Recognizing and respecting **Aboriginal title and rights, and treaty rights**
- 6.2 Respecting traditional **Aboriginal forest values and uses** identified through the Aboriginal input process
- 6.3 Encouraging, co-operating with, or helping to provide **opportunities for economic diversity** within the community
- 6.4 Demonstrating that the **SFM public participation process** is designed and functioning to the satisfaction of the participants and that there is general public awareness of the process and its progress
- 6.5 Providing relevant **information and educational opportunities** to interested parties to support their involvement in the public participation process, and increase knowledge of ecosystem processes and human interactions with forest ecosystems

C.6.3

Clauses 5 and 7 specify requirements with regard to the following:

- (a) developing a sustainable forest management plan through a public participation process in which values, objectives, indicators, and targets for forest management are set. Third-party auditors review progress against the SFM plan, and an annual performance report is reviewed with the public group each year;
- (b) respecting the legal rights and responsibilities of other parties in the DFA;
- (c) demonstrating that Aboriginal title and rights, and treaty rights have been identified and respected;
- (d) demonstrating that the legal and constitutional rights and the health and safety of DFA-related workers are respected and their contributions to SFM are encouraged; and
- (e) demonstrating that the acquired and legal rights of private woodlot owners to set the values, objectives, indicators, and targets relating to their properties are respected.

C.7 The public participation process

Given that the vast majority of Canada's forested lands are publicly owned, a key requirement of this Standard is a rigorous public participation process. This is in line with increasingly rigorous and continually expanding government regulation of public input processes for forest management planning in Canada. The public participation process requirements of this Standard are flexible enough to allow organizations to start a new process, build on an existing process where appropriate, or revive a previous process.

Revisions to the public consultation requirements of this Standard were guided by

- (a) results of a survey sent to all public advisory groups across Canada;
- (b) input from public advisory group members of the Technical Committee on Sustainable Forest Management;
- (c) insights from letters received from public advisory groups since publication of the previous edition of this Standard; and
- (d) meetings between public advisory group members and the Technical Committee.

These revisions include, among other things, the addition of a mechanism to measure participants' level of satisfaction with the process, and a transparency section (Clause 7.4.3) that clearly identifies in one location information requiring full public disclosure.

C.8 Aboriginal issues

A separate Aboriginal Working Group was formed within the Technical Committee to review the requirements and guidance relating to Aboriginal Peoples. The group used feedback from Aboriginal organizations, resource documents, and expert advice, and proposed changes that resulted in the following:

- (a) understanding of and compliance with the current legal requirements related to Aboriginal title and rights, and treaty rights;
- (b) clarifying that Aboriginal Peoples can participate in CSA public consultation processes and the development of forestry plans without prejudice to Aboriginal title and rights, and treaty rights;
- (c) understanding Aboriginal forest values, knowledge, and uses, and incorporating them into forestry plans;
- (d) using Aboriginal knowledge to identify and manage culturally important resources and values;
- (e) respecting traditional Aboriginal forest values and uses identified through the Aboriginal input process
- (f) making best efforts to obtain acceptance of management plans based on Aboriginal communities having a clear understanding of these plans;
- (g) promoting capacity development and meaningful participation of Aboriginal communities; and
- (h) focusing on the level of Aboriginal participation in the forest economy.

C.9 Safety, worker protection, and community sustainability

Requirements regarding safety, worker protection, and community sustainability have also been strengthened, and include

- (a) evidence that the organization has co-operated with other forest-dependent businesses, forest users, and the local community to strengthen and diversify the local economy;
- (b) demonstration that the legal and constitutional rights (including those specified in ILO Conventions to which Canada is signatory) and the health and safety of DFA-related workers are respected; and
- (c) evidence that a worker safety program is implemented and periodically reviewed and improved.

C.10 Definitions

Many of the definitions used in this Standard have been revised, and several new terms have been defined. Newly defined terms include

- (a) Aboriginal treaty rights;
- (b) afforestation;
- (c) biomass;
- (d) coarse wood debris;
- (e) focal species;
- (f) invasive alien species;
- (g) genetically modified organisms;
- (h) migratory bird;
- (i) native species;
- (j) old-growth forest;
- (k) plantation;
- (l) seral stage; and
- (m) watershed.

C.11 Transition from the 2002 edition

The transition requirements to move from the 2002 edition of this Standard are set by the SCC.

C.12 Interpretations and clarifications

Registration bodies (certifiers) can provide clarifications of this Standard. Contact the registrar or visit www.scc.ca for a list of registrars accredited to conduct audits to this Standard.

Official requests for interpretations should be directed to the Project Manager of this Standard (Ahmad Hussein at ahmad.husseini@csa.ca). Requests will be put forward to the Technical Committee for their review and vote. They will then be forwarded to the SCC for distribution to the accredited registration bodies who will take the appropriate steps in accordance with their accreditation requirements. For further information, contact the registrar or the SCC, or refer to the contact information provided in [Clause C.15](#).

C.13 Accessibility of this Standard

CSA Z809-08 is available free of charge in an electronic, downloadable format from the CSA Online Store at <http://www.csa-intl.org/onlinestore> under "Environmental" "Sustainable Forest Management", as well as at certifiedwood.csa.ca

C.14 Voluntary programs based on this Standard

C.14.1 Chain of Custody (CoC)

A voluntary next step for organizations wanting to demonstrate their commitment to SFM is certification of a chain of custody for forest products. A chain of custody is a mechanism used to track the origin of raw materials from certified forests and other sources, through each stage of manufacturing and distribution, to the end-user. Characteristics such as the proportion of certified content and the legality of any non-certified raw materials used are verified and accurately reported, and an optional claim label may then be applied to the product.

CSA CoC certification requires conformance with the internationally recognized PEFC Council CoC requirements set out in PEFC *Annex 4*. This document is available at http://www.pefc.org/internet/html/documentation/4_1311_400/4_1208_165/5_1177_452.htm. The CSA chain of custody program is managed and delivered through CSA International (see [Clause C.15](#)) and requires third-party independent audits.

C.14.2 CSA SFM Product Mark

A voluntary option available to organizations is the licensing and application of the CSA SFM Product Mark, or “on-product label”. The CSA Mark has been applied to billions of consumer products around the world for over 50 years. Now organizations that are using or processing wood that has originated from a forest certified to CSA Z809 and hold a valid chain of custody certificate can be licensed to apply the CSA SFM Product Mark. More information can be obtained from CSA International (see [Clause C.15](#)).

C.15 Contact information

All questions regarding this Standard can be directed to

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Proposition de modification

N'hésitez pas à nous faire part de vos suggestions et de vos commentaires. Au moment de soumettre des propositions de modification aux normes CSA et autres publications CSA prière de fournir les renseignements demandés ci-dessous et de formuler les propositions sur une feuille volante. Il est recommandé d'inclure

- le numéro de la norme/publication
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- relevant Clause, Table, and/or Figure number(s)
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