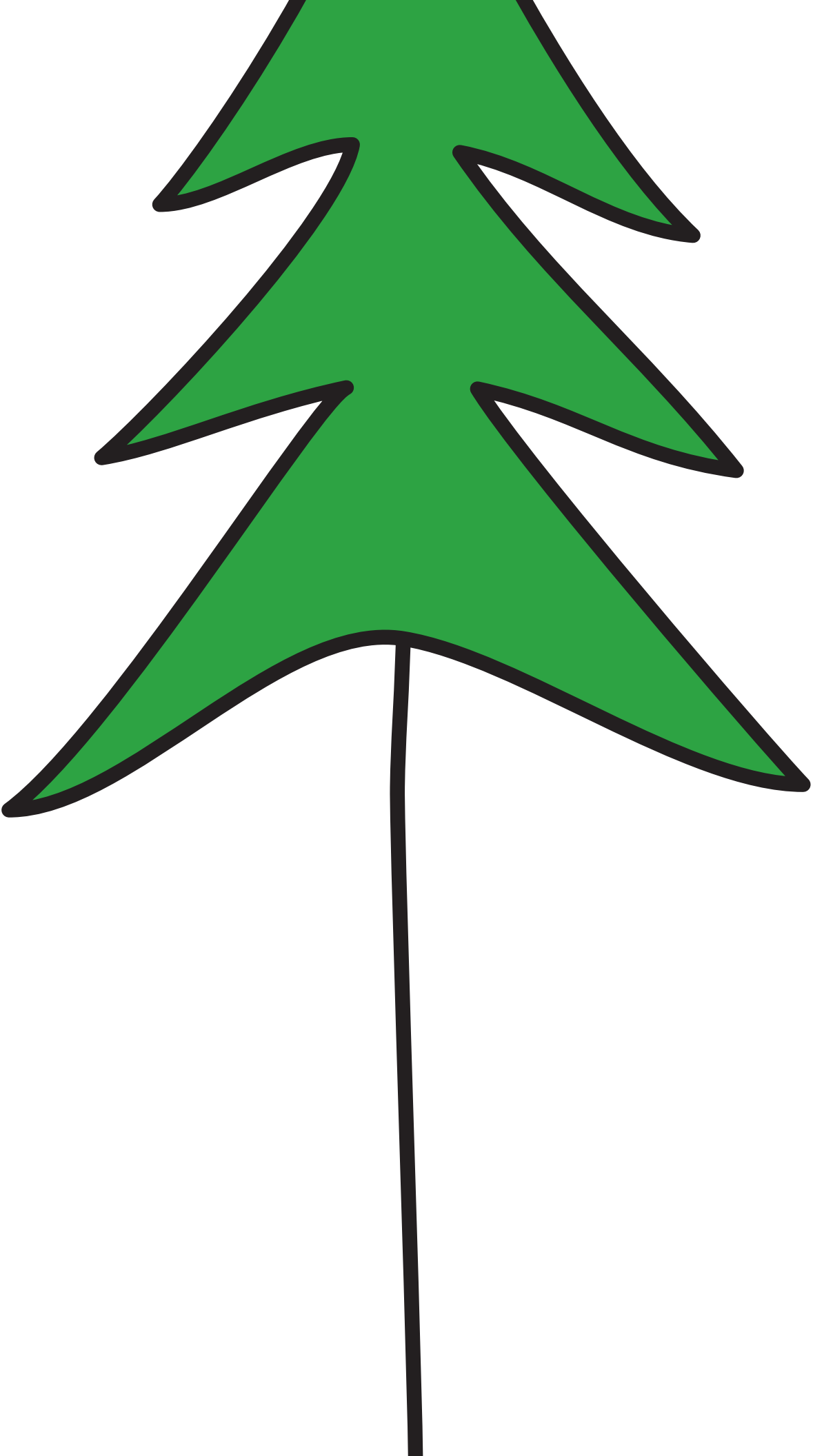


CANFOR'S FORESTRY PRINCIPLES





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# Letter from the President

Canfor has a long history of good forest stewardship. From the early days on Vancouver Island and the planting of the first seedlings in Englewood, to the challenges of practicing forestry in the boreal and sub-boreal forests of northern Alberta and British Columbia (BC), Canfor has been a leader in forest management.

But circumstances continue to change. What has been done in the past may not be appropriate for the future.

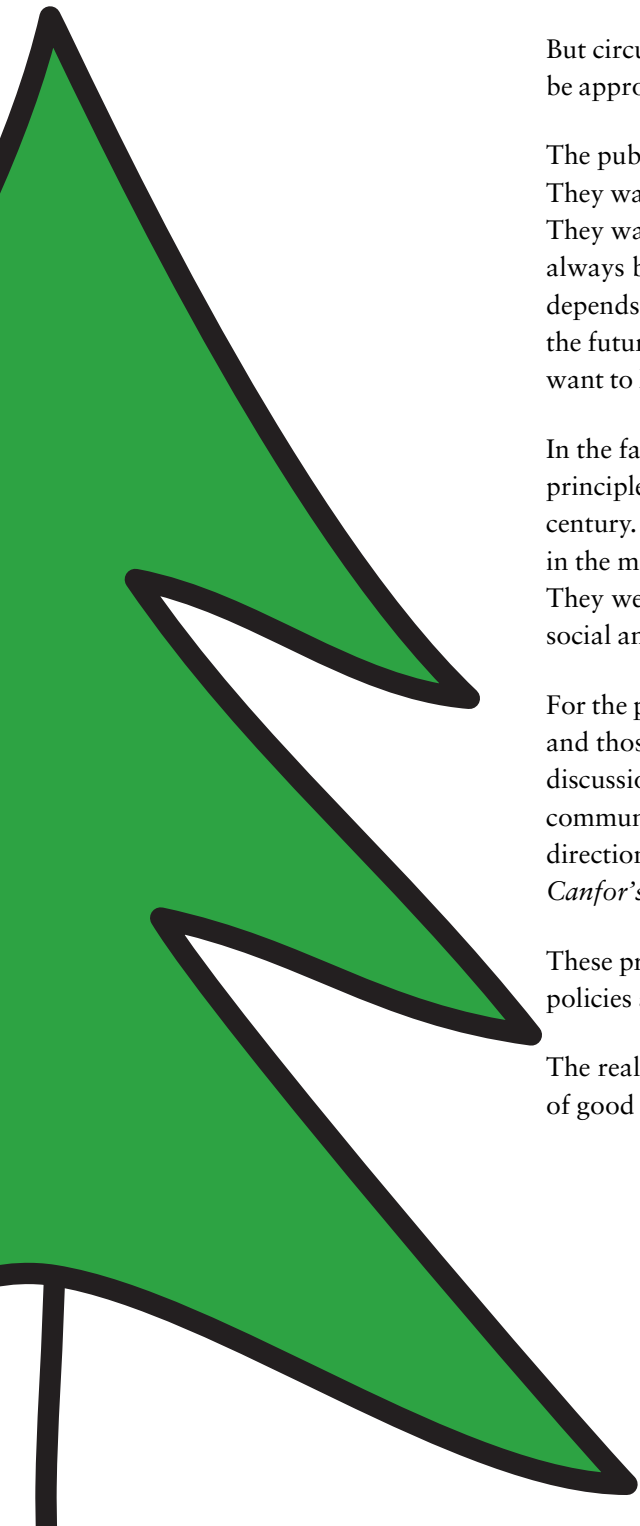
The public is concerned about the forests and they're asking many questions. They want to know if there will be forests for their children and grandchildren. They want to know if streams and lakes are being protected, and if there will always be places for wildlife to live in the forests. Many people whose livelihood depends on the forests want to know if there will be rewarding job opportunities in the future. Our customers have also heard the concerns of their customers, and want to know how Canfor plans to address them.

In the fall of 1998, I asked that a special task force be formed to develop principles for Canfor that would guide the management of our forests into the next century. The task force was mandated to ignore the hype and rhetoric so prevalent in the media, and to develop forestry principles based on ecosystem management. They were asked to use the best science available and to balance environmental, social and economic considerations in their recommended approach.

For the past eight months, the task force has toured Canfor forestry operations and those of other companies that are recognized leaders. They have had many discussions with experts from the scientific, academic and environmental communities and they have produced a number of drafts outlining possible directions the company could take. The final product of their work is entitled *Canfor's Forestry Principles*, which I am now pleased to present to you.

These principles will provide the foundation for forest management strategies, policies and operating procedures in all our operations.

The real challenge will be to carry out commercial forestry within the context of good science and broadly based ecosystem management. It is an expensive



proposition, and one that will only succeed if unnecessary costs and duplication by all parties involved in forest management are eliminated.

This will require new arrangements with our landlords. Ultimately, we must move from administrative, regulator-driven forestry to a results-based approach. Our foresters must be liberated to apply their professional skills, knowledge and creativity to achieve high standards of forest and environmental management in the most technologically advanced and efficient way.

Inevitably, at Canfor we will have to become more directly accountable for our forest management practices and outcomes. Accordingly, we shall pursue certification and validation by a credible outside body of our forest practices and approach to forest management.

Why are we taking this dramatic step? Because we believe a strong commitment to sustainable forestry and ecosystem management is important to our customers and the public, and therefore to our ability to successfully compete in the market. We also believe that an external validation process is an important discipline for us, as well as a valuable way for the public to gain confidence in our performance.

The principles are just the start. The true test will be their implementation and how we are judged in the years to come. It will not happen overnight and it can not be done by just a few people in Canfor. These principles have to become part of our day to day thinking and be embraced by all. Staff at all levels and in all areas will have a role to play and must be dedicated to these principles.

A challenge? Yes, very much so. A worthwhile endeavour? Absolutely, not only worthwhile, but also critical to Canfor's success in a very competitive world. I welcome this challenge and ask you to join me in making it work.



David Emerson  
*President and Chief Executive Officer*

*June 1999*

# Introduction

Canfor is a Canadian integrated forest products company with manufacturing facilities in British Columbia, Alberta and the USA. Our forestry operations in British Columbia and Alberta are located almost exclusively on public land. Therefore, public acceptance of our forestry practices is imperative for us to remain in business. We willingly accept the accountability that accompanies this public ownership and strive to manage our business in the best interests of both ourselves and the public.

We are privileged to manage some of the most diverse forest landscapes on earth. This diversity of ecosystems and tree species allows us to produce forest products, some with unique properties, which are in high demand in the global marketplace. Capturing value from this renewable resource is essential for the economic viability of our company and is critical to the economy of many communities. However, the forests where we operate are valued by society for more than just the products they produce, and we therefore recognize the need to manage them to provide a number of forest values. Forests in a natural state are becoming increasingly rare throughout the world. We support the creation of conservation areas which are representative of natural forests.

For several decades, the forests of British Columbia and Alberta have been managed under a policy of sustained yield of timber. Forest tenures were designed to yield a continuous harvest of timber in perpetuity through the practice of sustained yield forestry. This approach has enabled the development of a globally significant integrated forest products industry.

Society's attitude towards the value of forests and the approach to forest management has evolved. In response, there has been a shift in policy from managing for a sustained yield of timber to managing for a sustained yield of timber with an increasing number of constraints. These constraints were introduced to conserve or protect a range of non-timber values through a prescriptive set of regulations designed to limit the impact of timber management. Many constraints have been applied in response to specific environmental concerns and are justified. However, some constraints have been motivated by

economic or political reasons and have no scientific basis. Some of these constraints will clearly not achieve the intended ecological objectives and our forests may not be able to provide the range of values that are expected. We need results-based management rather than constraints. We need a new ecologically-based forest management paradigm.

While forest management policies have evolved, there has been no concurrent or significant change in the tenure or stumpage systems in British Columbia and Alberta. Forest companies holding tenures today have very little economic incentive or administrative opportunity to thoroughly manage for a wide range of public forest values. In British Columbia, the evolution of public policy has resulted in unacceptably high operating costs for the forest industry and forest practices that often do not meet stakeholder expectations. Our foresters, customers and shareholders justifiably question whether this approach is desirable or sustainable, either ecologically or economically. We need changes to both the tenure system and the stumpage system to provide the incentive for long-term forest management that is both environmentally sound and economically viable.

At Canfor, we will improve our understanding of the ecological processes that have produced our natural forests and will incorporate this knowledge into our daily operations. Social, economic and environmental values will be addressed within a framework of ecological processes and science to deliver desirable future forest conditions. We will include measurable ecological targets to help gauge our performance, and submit ourselves to independent audits to verify our progress.

Canfor wants and needs the trust of the public, both at home and abroad. We know that society expects professional foresters and forest companies to take greater care of the forests, and the public is asking us to show leadership in this regard. We have been leaders in many areas. We believe our new approach will help us maintain and enhance this trust and provide an expanded leadership role within the industry. It will enable Canfor to start the next century with a clear vision of a truly sustainable future. It is in our interest, as well as those of local communities, our employees and shareholders, to do so.

**ecosystem**

A complex system of living organisms (plants, animals, fungi, and micro-organisms), together with their abiotic environment (soil, water, and nutrients) that function together to circulate nutrients and create a flow of energy which creates biomass, a trophic structure in the living community, and a change in ecosystem form and function over time.

**sustained yield of timber**

A forest management regime that involves more or less continuous harvesting, balanced by growth, over managed forest units.

**tenure**

The condition, specified in terms of time and a defined forest area, by which a forest manager or owner holds rights to use, harvest or manage one or more forest resource(s).

# Challenges and Opportunities

As the Forestry Principles Task Force developed its draft set of principles, many challenges and opportunities were identified. These include:

## ECOLOGICAL

### *Challenges*

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- BC and Alberta have a wide range of forest ecosystems, from coastal temperate rainforest, through sub-boreal to true boreal. Canfor operates in many of these ecosystems and will need ecosystem-specific solutions to implement our vision.
- Identifying and maintaining ‘ecological integrity’ across Canfor’s diverse landscapes will require that we understand the ecological processes and manage for them. Specific research and monitoring is needed to achieve this.

### *Opportunities*

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- We have the opportunity to increase our knowledge of the ecosystems in which we operate and to move from administrative forestry to ecologically-based forestry.
- An ecological approach will enable Canfor to address a greater range of values.

## TECHNOLOGICAL

### *Challenges*

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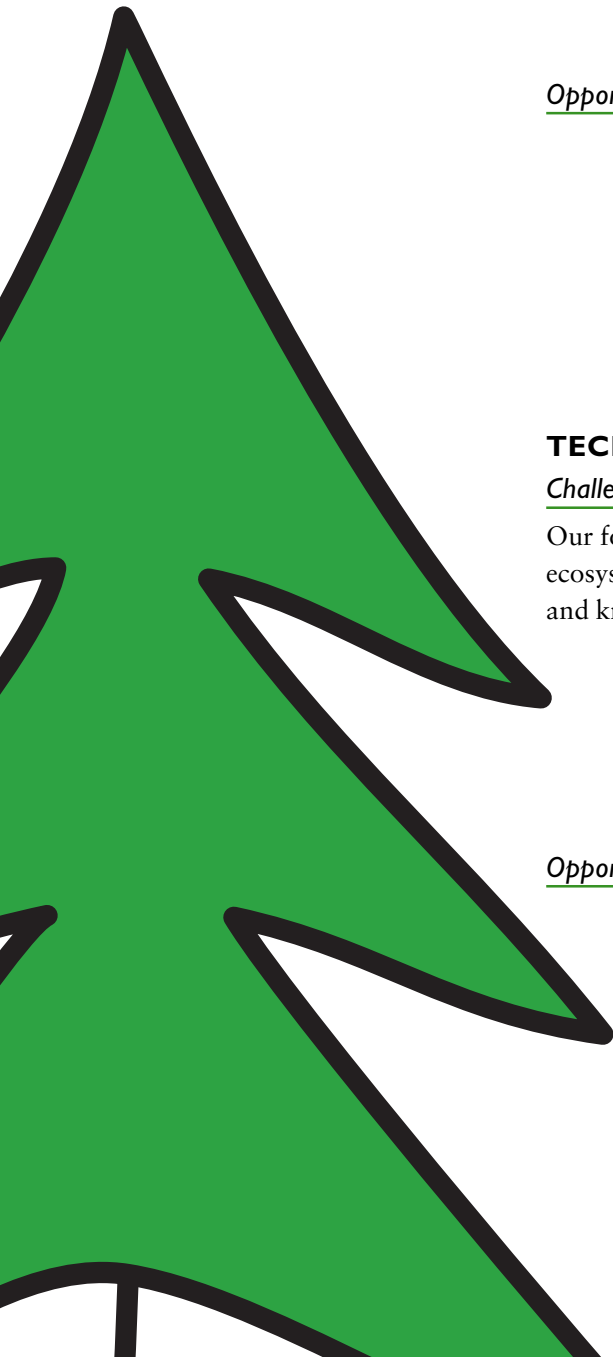
Our forest management strategies have always tried to respect the different ecosystem conditions, but we have often been constrained by factors of technology and knowledge such as:

- The lack of inventory information about timber and other forest values.
- The inadequacy of modeling and forecasting tools to predict future forest conditions.

### *Opportunities*

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- We have the opportunity to work with research and academic institutions and to participate in research and development projects to improve existing modeling tools, to adapt them to fit our local conditions and to help develop new tools. Funding sources are available to enhance our own financial resources.





## ADMINISTRATIVE/REGULATORY

### Challenges

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- The public process of land use planning and landscape unit planning is inadequate and incomplete.
- The tenure system (particularly volume-based) has limited our ability to plan and manage forest ecosystems for the long-term and at the broader landscape level.
- A number of current regulations limit innovative approaches to forest management because of governments' focus on management processes rather than on short and long-term results.

### Opportunities

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- Conditions within industry and government are at a point where major changes to the regulatory environment are necessary and desirable, i.e. tenure reform and the move towards results-based regulations.
- We have the opportunity to reduce the bureaucratic workload for both Canfor and government by taking on more of the workload and applying efficiencies.

## TIMBER SUPPLY

### Challenges

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- Implementation of forest ecosystem management may result in reduced timber harvest levels in some areas.

### Opportunities

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- The desired tenure changes could provide a more secure and longer-term timber supply for the company.
- Some form of zoning will allow us to enhance our timber growing capability on some lands while accommodating non-timber resources more effectively on other land.
- Improving public trust through our actions will enhance our access to present and future timber supply.

### **ecological integrity**

The quality of a natural, unmanaged or managed ecosystem in which the ecological processes and conditions are sustained within historical ranges and patterns of variation with genetic, species and ecosystem diversity assured for the future.

### **administrative forestry**

Institution of legal and political mechanism to regulate the rate and pattern of forest exploitation to ensure future supplies of forest products and other values. Usually based on legislation and regulation rather than on a knowledge of how forests grow, how they respond to management, and how ecosystems function.

### **modeling tools**

A representation of reality to describe, analyze or understand its behavior or functions; a mathematical representation of this relationship or behavior used to predict various outcomes.

### **landscape**

A large area encompassing a wide diversity of adjacent landforms, land cover, habitats and ecosystems.

### **zoning**

A process of designating areas in which forest management can occur at varying intensities.



## **COSTS**

### *Challenges*

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- The majority of Canfor's tenured timber volume is in British Columbia, the province with some of the highest fibre costs in North America. The overall cost of managing and harvesting the forest resource must decline if Canfor is to be profitable and successful in achieving our goals.

### *Opportunities*

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- The required reductions in bureaucratic processes will save time, money and personnel resources, e.g. administration of the Forest Practices Code in BC.

## **MARKETS**

### *Challenges*

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- The current strategy and focus of some environmental organizations is to target forest products customers in high-profile international markets to influence forest policy.

### *Opportunities*

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- We have the opportunity to implement certification initiatives that will maintain our access to markets.
- We will be better able to respond to public concerns and questions with enhanced information on ecological processes and improved ability to forecast the ecological consequences of management.



## PEOPLE/COMMUNITIES

### *Challenges*

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- Canfor's key stakeholders have different expectations and needs from the forest. For example, it will be difficult to meet the needs of Canfor's customers who want increased product volume while meeting the public's demand for more non-timber resources from the forest, such as wildlife and old growth.

### *Opportunities*

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- Foresters and others will have an opportunity to use their expertise in innovative ways, which will improve professional satisfaction, professional credibility and development. We will get our foresters back on the ground developing management solutions.
- We have the opportunity for improved relations with aboriginal people.
- Canfor will build stronger relationships with communities and environmental organizations.



# Forestry Goals

## OUR GOALS

- Canfor will be a global leader in the profitable production of forest products from sustainably managed forests.
- Canfor is committed to the conservation of soil, water and biodiversity and to the maintenance of ecosystem productivity in the forest areas where we operate.
- Canfor will use forest ecosystem management that encompasses entire forest landscapes and that forecasts the future condition of forests for 100 years or more.

### *Rationale*

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Canfor is a Canadian integrated forest products company that sells into the global marketplace. We are acknowledged as a leader in many areas, including many of our forestry activities. We intend to identify where our approaches are weak and to strengthen them. We will build on our strengths and leadership and leverage them to become a truly sustainable forest products business. We believe this is necessary if we are to expect broad support for our activities, both now and in the future. Only if we are globally competitive and profitable will we accomplish our goals of environmental leadership and sustainability. This is necessary if we are to provide security of employment to our employees, support for local communities and adequate returns to our shareholders.

We recognize that we are stewards of public forest land and therefore accept that we have a public responsibility. We intend to use the resource wisely, without compromising its value for future generations.

Canfor operates within extremely large forest regions and landscapes. Our activities, and those of other forest users, can have impacts at all scales — from the stand to the landscape through to the forest level — over long periods of time. We believe that we must identify and forecast the benefits that the forest is expected to provide both spatially and temporally.



# Future Forest Condition

An important component of forest ecosystem management is the need to forecast or predict future forest conditions. Forecasts should be made for one hundred years or more. By integrating our current understanding of ecosystems and natural disturbance patterns with human uses and values, an array of future forest conditions can be modeled and projected. The outcomes can be tested against an ecological baseline of what could occur naturally to ensure that our influence on the ecosystem through our management practices falls within the range of natural variability. This must be an ongoing process that will continually input new data and will adapt or adjust to changes in the ecosystem and to changing human values and uses. If successful, the result will be a future forest condition that will best meet the needs and wants of interested or involved communities while maintaining ecosystem structure, flows and benefits.

The pathway to forecasting future forest conditions includes:

- An understanding of the ecological processes and the natural historic and current disturbance patterns for each ecosystem.
- The establishment of an ecological baseline and a range of natural variation that could occur without human intervention.
- Recognition and incorporation of human values and uses.
- Identification of communities of interest, and providing these communities with information and an opportunity for involvement.
- Projection of possible outcomes or future forest conditions within the range of natural variability.
- Ongoing measurement and monitoring of key environmental, social and economic indicators.
- Ongoing research to validate assumptions and to test new theories.
- Ongoing checking to ensure the process is still on course, and if not, making changes to management strategies or practices as required.

## **biodiversity**

(biological diversity) — diversity of plants, animals and other living organisms in all their forms and levels of organization, including genes, species and ecosystems, and the evolutionary and functional processes that link them.

## **spatial**

Pertaining to the physical area, location, pattern and distribution.

## **temporal**

Pertaining to time.

## **range of natural variability**

The spectrum of conditions possible in ecosystem composition, structure, and function that may occur naturally considering both temporal and spatial factors that are under the influence of natural disturbance regimes, and patterns and processes of post disturbance ecosystem development.

# Forestry Principles

## ECOSYSTEM MANAGEMENT

*We will use the best available science to develop an understanding of ecological responses to natural and human-caused disturbances. We will incorporate this knowledge into higher level and operational plans by applying ecosystem management principles to achieve desired future forest conditions.*

### Rationale

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An understanding of ecological responses will allow us to plan and develop stand, landscape and forest-specific approaches while moving towards our goal of using ecosystem management to achieve desired future forest conditions. Ecosystem management will enable us to emulate natural disturbances to manage forests for a range of values. We need data and modeling tools to assist in forecasting a range of management options and their ecological consequences. The feedback from these predictive tools will facilitate the adjustment of our actions through the process of adaptive management. Our long-term intent is to practice sustainable forest management.

All elements in nature vary in size, shape and spatial relationship according to some frequency distribution. Successful ecosystem management will incorporate a wide range of variability. It is important not to implement similar forest practices everywhere.

This also means that ecosystem management may include a range of management systems at varying intensities, i.e. some type of zoning. Depending upon other values and uses, management strategies could range from harvesting with natural reforestation and no follow-up treatments, to more enhanced forest management by planting with genetically superior seedlings and with a number of stand tending activities. However, all of these systems or strategies of forest management would ensure the protection of the soil and water at the stand level and the maintenance of biodiversity and ecosystem productivity at the landscape level.

## SCALE

*We will define objectives over a variety of time intervals (temporal scales), and at spatial scales of stand, landscape and forest.*

### *Rationale*

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Natural variability occurs as a dynamic process over a range of time intervals (temporal scales), from short-term to extended-rotation time periods, and at spatial scales of stand, landscape and forest. It is the variability within and between these scales which produces ecological diversity and allows for the management of a range of conditions, from early successional to old growth.

Variability may occur in the form of:

- opening (patch) size,
- shape, residual amount and composition of,
  - understorey
  - overstorey
- landscape pattern,
- age class distribution, and
- rate, type and severity of disturbance.

## ADAPTIVE MANAGEMENT

*We will use adaptive management to continually improve forest ecosystem management. This will require the development and implementation of collaborative research and monitoring programs.*


### *Rationale*

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The scientific understanding of non-timber values of forest ecosystems is currently limited. However, there is a growing body of scientific information that describes natural variability and the relationships between natural and human-caused disturbances. In order to meet the long-term challenges of ecosystem management, research is necessary to establish a baseline for natural variability and also to measure and compare responses between forest management practices and natural disturbances.

## **sustainable forest management**

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.



Currently, there is no adequate monitoring program that can assess ecologically-based forest management at a variety of scales. Monitoring, including the measurement of variables and responses, is essential to the adaptive management process. Furthermore, research and monitoring are expensive and require a broad range of scientific expertise.

Canfor has strategically used adaptive management on an informal basis. We will formalize our adaptive management strategy and will actively seek collaborative research that is directed toward understanding natural ecological systems. We are currently engaged in practical research projects with the Forest Engineering Research Institute of Canada (FERIC), Forintek, the Northern Interior Vegetation Management Association (NIVMA) and members of the research community on the Ecosystem Management by Emulating Natural Disturbance (EMEND) project. Other potential research partnerships include the University of Northern British Columbia, the Network of Centres of Excellence (NCE) at the University of Alberta and the University of British Columbia, where some excellent forecast models are being developed.

## **OLD GROWTH**

*We will include old growth and old growth attributes as part of our management strategies and philosophy in the forests where we operate.*


### ***Rationale***

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Old growth stands or stands that contain old growth attributes provide biodiversity and habitat for a range of species. The natural variability of forests normally includes some old growth. The age and condition of old growth or the attributes that make up old growth vary from region to region or by forest type. However, they typically include some of the following characteristics:

- multilayered canopy with a variety of species,
- low to moderate canopy closure,
- several age classes,
- some large, dominant trees in an overstorey,
- snags and green trees with broken tops,
- high incidence of decay,
- susceptibility to insect attack, and
- downed woody debris.





Forest management strategies that maximize timber yield often replace old growth stands with younger age classes and create normalized forests, i.e. an even distribution of age classes. Some stands are maintained as primary forests in buffers, riparian areas, on unstable slopes and in other permanent reserves including protected areas. However, this alone may not guarantee the maintenance of old growth attributes. Therefore, it is important to manage for old growth attributes at various levels; stand, landscape and forest. Strategies to manage for old growth attributes may include lengthening rotations and creating old growth from younger forests managed specifically for that purpose.

## TIMBER RESOURCE

*Canfor will ensure a continuous supply of affordable timber in order to carry out its business of harvesting, manufacturing and marketing forest products. Canfor will strive to maximize the net value of the fibre extracted for sustained economic benefits for employees, communities and shareholders.*

### Rationale

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Canfor is a significant market pulp and kraft paper producer, and is one of the largest lumber producers in the world. Each year, the company requires a substantial, uninterrupted supply of affordable wood fibre for its core manufacturing facilities. While Canfor's core manufacturing facilities may change, substantial volumes of timber will continue to be required annually.

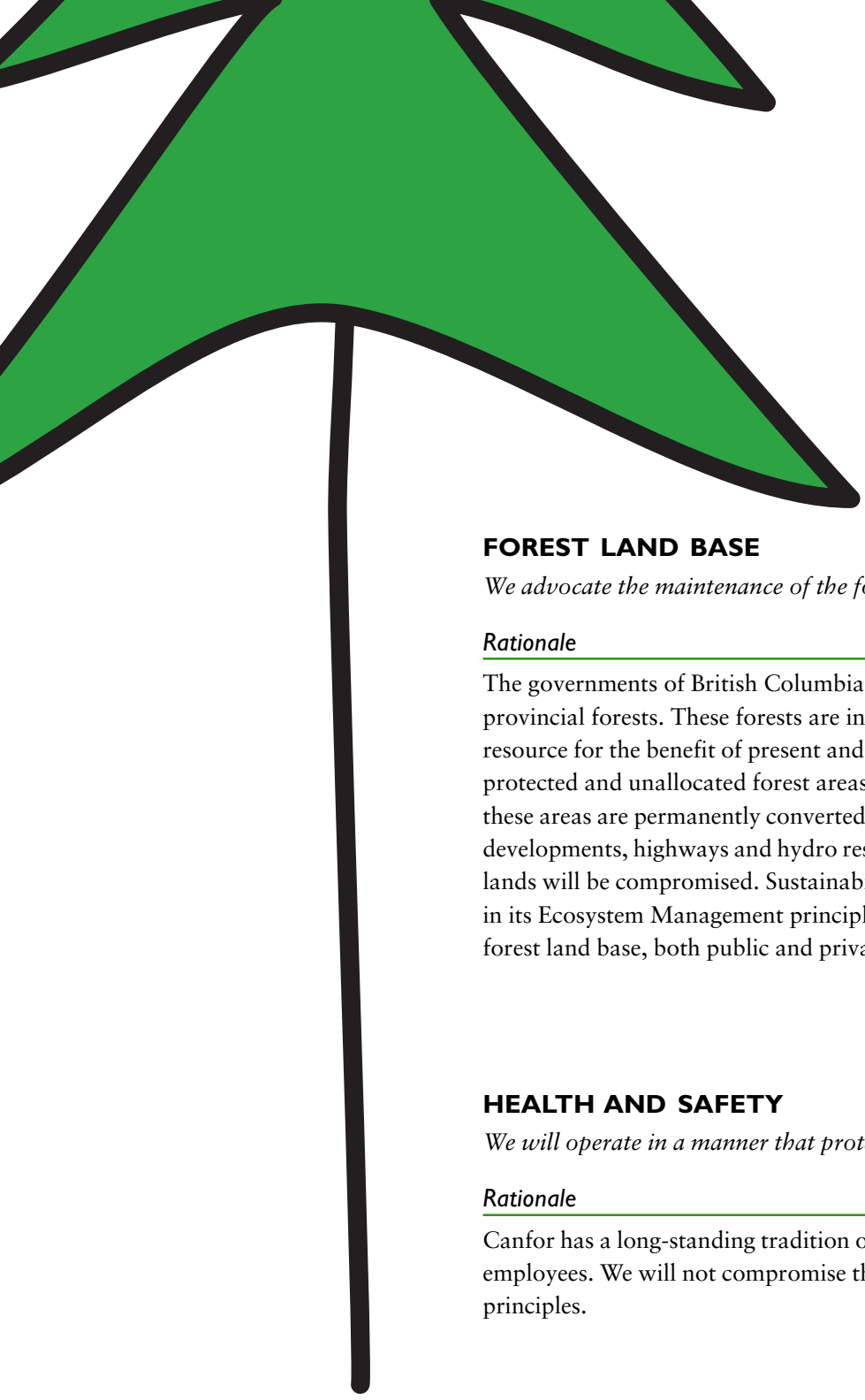
Canfor is committed to continually improving upon the value of the raw material it sources from the forest. We recognize that our wood fibre supply has special properties. We will constantly strive to develop suitable markets and to manufacture products that provide higher economic margins to the use of the fibre. In addition, we will work on utilizing the whole log and will reduce the amount of fibre and bark burned as waste from our manufacturing processes.

### net value

A 'before tax' value or profit margin remaining after all operating and administrative expenses of a particular activity or operation have been deducted. Usually expressed as a percentage of sales revenue.

### riparian areas

Those terrestrial areas where the vegetation and soil conditions are products of the combined presence and influence of perennial and/or intermittent water, associated high water tables, and soils that exhibit some wetness characteristics. Normally includes rivers, streams, lakes, ponds, springs, marshes, bogs and wet meadows.



## **FOREST LAND BASE**

*We advocate the maintenance of the forest land base as an asset for the future.*

### *Rationale*

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The governments of British Columbia and Alberta have designated areas as provincial forests. These forests are intended to be managed as a renewable resource for the benefit of present and future generations. They may include protected and unallocated forest areas as well as industrially managed forests. If these areas are permanently converted to non-forest for uses such as housing developments, highways and hydro reservoirs, society's future options on these lands will be compromised. Sustainability of forest values as promoted by Canfor in its Ecosystem Management principle is inherently linked to security of the forest land base, both public and private.

## **HEALTH AND SAFETY**

*We will operate in a manner that protects human health and safety.*

### *Rationale*

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Canfor has a long-standing tradition of promoting health and safety for our employees. We will not compromise this tradition as we implement these forestry principles.

## **ABORIGINAL PEOPLE**

*We will pursue business partnerships and cooperative working arrangements with aboriginal people to provide mutual social, cultural and economic benefits and to address mutual interests.*

### **Rationale**

---

Canfor wants to be a leader in establishing business relations with aboriginal people. Our approach will be based on sound business practices and decisions while working together to address the issues and needs of both parties. Canfor will be open to the development of partnerships and working arrangements with aboriginal people that are mutually beneficial and increase value to our shareholders.

Cooperative management of the forest will require a variety of approaches, depending upon the interests and capacity of aboriginal people and Canfor in each location. It may mean consulting with aboriginal people to gain information about their traditional knowledge of an area and to seek input into our planned operations. It may involve Canfor and aboriginal people working together to develop forestry plans that address the needs of both parties. It might result in aboriginal people providing contracted services to Canfor. At a higher level, cooperative management could result in business partnerships between Canfor and aboriginal people to manage the forest under some tenure arrangement.

Canfor believes that the development of cooperative working relationships with aboriginal people will help provide certainty of timber supply for our manufacturing facilities. This, in turn, will help provide the stable business climate needed to attract investment, which ultimately is needed to sustain our business and the communities where we operate. Again, all of these arrangements must be based on good, sound business practices and must be mutually beneficial to both aboriginal people and Canfor.

**cooperative**  
A willingness and ability  
to work with others.



## **COMMUNITIES**

*We will engage members of the public, communities and other stakeholders in the delivery of the Forestry Principles. The process will be open, transparent and accountable.*

### ***Rationale***

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Canfor operates on publicly owned forest land in British Columbia and Alberta under a number of tenure agreements. These tenure agreements, and the legislation and regulations which authorize them, reflect the public ownership of the forest resource and provide considerable opportunity for the public to be involved. Existing land use planning processes also require extensive public input. As well, public input is sought on individual forest management plans at each operation.

The forest sector is crucially important to the communities where we operate. In addition, the public has a right to make its wishes known regarding the social, economic and environmental benefits it wants to derive from public forests. Yet, in spite of these opportunities for public involvement it is not always as effective as it might be. While the reasons for this are many and complex, we believe that the process of public involvement is very important and we are committed to finding ways to improve it. This will require an open, transparent and accountable process. Canfor is committed to developing this, and we accept the challenge it represents.



## ACCOUNTABILITY

*We will be accountable to the public for managing forests to achieve present and future values. We will use credible, internationally recognized, third party verification of our forestry operations as one way of demonstrating our performance.*

### Rationale

---

Canfor operates primarily on public land and is therefore accountable to the public and public agencies (i.e. government) for forest stewardship. Some members of the public remain skeptical about the ability of companies and government to conduct environmental audits free of prejudice or bias. Similar concerns are being expressed by our customers and in turn by their customers. As the concerns of society about environmental issues heighten, earning and maintaining the trust of the public will become even more important. Similarly, maintaining the confidence of customers will be increasingly important.

Verification of our forestry practices by an independent auditor is an effective way to demonstrate the validity of our practices and to alleviate these concerns. A number of certification initiatives have emerged for conducting such audits, each of which has different attributes. We are committed to implementing one or more of these certification initiatives and will submit our operations to external audits.

### community

A group of people living in the same locality and under the same government; a group of people having similar or common interests. There are also ecological communities which consist of a group of plants and animals living and interacting with one another in a specific region under relatively similar environmental conditions.

# Glossary of Terms

## **ADAPTIVE MANAGEMENT**

A learning approach to management that incorporates the experience gained from the results of previous actions into decisions. It is a continuous process requiring constant monitoring and analysis of the results of past actions which are used to update current plans and strategies.

## **ADMINISTRATIVE FORESTRY**

Institution of legal and political mechanism to regulate the rate and pattern of forest exploitation to ensure future supplies of forest products and other values. Usually based on legislation and regulation rather than on a knowledge of how forests grow, how they respond to management, and how ecosystems function.

## **AUDIT**

A planned, independent and documented assessment to determine whether agreed upon requirements are being met.

## **BIODIVERSITY (BIOLOGICAL DIVERSITY)**

Diversity of plants, animals and other living organisms in all their forms and levels of organization, including genes, species and ecosystems, and the evolutionary and functional processes that link them.

## **CERTIFICATION**

A system of rules or procedures acknowledging conformance to a standard.

## **COMMUNITY**

A group of people living in the same locality and under the same government; a group of people having similar or common interests.

## **CONSERVATION**

The controlled use and systematic maintenance, enhancement, restoration and/or protection of natural resources, such as forests, soil, and water systems for present and future generations.



### **CONSERVE**

To protect from permanent loss or irreparable harm; preserve; to use carefully or sparingly.

### **CONSTRAINT**

A restriction which limits or regulates the ability or flexibility to perform a prescribed course of action or inaction.

### **COOPERATIVE**

A willingness and ability to work with others.

### **DATA**

Factual information, especially information organized for analysis or used to reason or make decisions; values derived from scientific experiments.

### **DISTURBANCE**

A discrete force that causes significant change in structure and/or composition through natural events such as fire, flood, wind or earthquake; mortality caused by insect or disease outbreaks or by human-caused events such as the harvest of the forest. Disturbances can occur at very small scales or large scales.

## **ECOLOGICAL INTEGRITY**

The quality of a natural, unmanaged or managed ecosystem in which the natural ecological processes are sustained with genetic, species and ecosystem diversity assured for the future.

### **ECOSYSTEM**

A complex system of living organisms (plants, animals, fungi, and micro-organisms), together with their abiotic environment (soil, water, and nutrients) that function together to circulate nutrients and create a flow of energy which creates biomass, a trophic structure (feeding relationships) in the living community, and a change in ecosystem form and function over time.

### **ECOSYSTEM MANAGEMENT**

A management system which recognizes and incorporates the natural variability of an ecosystem and attempts to emulate these responses with man-made disturbances while managing forests for a range of values.



**ECOSYSTEM PRODUCTIVITY**

The health, vitality and rates of biological production in forest ecosystems.

**ENGAGE**

Actively involve in a meaningful way.

**FOREST STAND**

An area of forest that is distinct from the surrounding forest by reason of some combination of topography, species composition, age or other feature; basic management unit in silviculture.

**INTEGRATED FOREST PRODUCTS COMPANY**

A company which has facilities or capabilities to harvest and process logs into a range of marketable products such as lumber and pulp, and including by-products such as chips.

**LANDSCAPE**

A large area encompassing a wide diversity of adjacent landforms, land cover, habitats and ecosystems.

**MODELING TOOLS**

An ideal representation of reality developed to describe, analyze or understand its behaviour or functions; a mathematical representation of this relationship or behavior used to predict various outcomes.

**MONITORING**

The process of checking, observing and measuring outcomes for key variables or specific ecological phenomena against a predefined quantitative objective or standard.

**NET VALUE**

A 'before tax' value or profit margin remaining after all operating and administrative expenses of a particular activity or operation have been deducted. Usually expressed as a percentage of sales revenue.

**NORMALIZED FOREST**

A conceptual idea of a forest condition in which all age classes are equally represented.

**OVERSTOREY**

The uppermost layer of foliage in a forest having more than one horizontal layer of foliage. This layer of the forest is instrumental in determining the amount of light able to reach the forest floor and the understorey.





## **PARADIGM SHIFT**

A significant change in thought and action.

## **PRIMARY FOREST/ NATURAL FOREST**

A forest area that has developed free from influence of industrial human use. The primary/natural forest may include, but is not necessarily equivalent to, an old-growth forest.

## **RANGE OF NATURAL VARIABILITY**

The spectrum of conditions possible in ecosystem composition, structure, and function that may occur naturally considering both temporal and spatial factors.

## **RIPARIAN AREAS**

Those terrestrial areas where the vegetation and soil conditions are products of the combined presence and influence of perennial and/or intermittent water, associated high water tables, and soils that exhibit some wetness characteristics. Normally includes rivers, streams, lakes, ponds, springs, marshes, bogs and wet meadows.

## **ROTATION**

Broadly, the time needed from regeneration of a crop of trees through to harvestable timber. Can be classified under financial, technical, biological or ecological parameters.

## **SCALE**

Defined on the basis of elements such as size, shape and distribution of ecosystem components.

## **SILVICULTURE**

The art, science and practice of controlling the establishment, composition, health, quality and growth of vegetation of forest stands.

## **SILVICULTURE PRESCRIPTION**

A site-specific operational plan that prescribes the nature and extent of any timber harvesting and silviculture activities that are designed to achieve required forest management objectives, including reforestation of a free-growing stand to specified standards.

## **SPATIAL**

Pertaining to the physical size, location, pattern and distribution.

## **STAKEHOLDER**

Individual, organization or other entity concerned with or by management activities on a given forest area.

## **STUMPAGE**

Price charged for the right to harvest timber from publicly owned forest land.



### **SUSTAINABILITY**

The ability of an ecosystem to maintain ecological processes and functions, biological diversity, and productivity over time.

### **SUSTAINED YIELD OF TIMBER**

A forest management regime that involves more or less continuous harvesting, balanced by growth, over managed forest units.

### **SUSTAINABLE FOREST MANAGEMENT**

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.

### **TEMPORAL**

Pertaining to time.

### **TENURE**

The condition, specified in terms of time and a defined forest area, by which a forest manager or owner holds rights to use, harvest or manage one or more forest resources.

### **UNDERSTOREY**

The trees and other woody species growing under the canopies of larger adjacent trees and other woody growth.

### **ZONING**

A process of designating areas in which forest management can occur at varying intensities.

For more information about Canfor's Forestry Principles, e-mail: [principles@mail.canfor.ca](mailto:principles@mail.canfor.ca)





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