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Forestry and Environmental Consulting Services

Draft 3

Incremental Silviculture Strategy For British Columbia

Working Paper 3:
**Government's Goals,
Proposed Guiding Principles**

PREPARED FOR

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Incremental Silviculture Strategy For British Columbia

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This document is one of seven reports prepared as background to the preparation of an incremental silviculture strategy for British Columbia.

The working papers are individually subtitled as follows:

- *Working Paper 1: Project Information, References*
- *Working Paper 2: Concepts of Strategy and Planning, Proposed Planning Framework*
- *Working Paper 3: Government's Goals, Proposed Guiding Principles*
- *Working Paper 4: Proposed Log Quality Framework, Timber Supply and Demand*
- *Working Paper 5: Proposed Financial and Socio-economic Analysis Framework*
- *Working Paper 6: Summary of TSA Basic Data*
- *Working Paper 7: Review of TSA Issues and Planning Processes*

This report covers two topics:

Government's Goals and Strategies

The review of planning concepts concluded that implicit and explicit government strategies exist and that planners can “find” them by analyzing the pattern of decisions and actions taken by government (see *Working Paper 2: Concepts of Strategy and Planning, Proposed Planning Framework*). This section undertakes such an analysis by reviewing the following three potential sources of information:

1. Government-Approved Statements of Principles;
2. Government Funding Decisions; and
3. Other Actions of Government.

Proposed Guiding Principles

This part:

- introduces and discusses the concept of guiding principles;
- reviews existing statements of principles; and
- proposes a set of guiding principles for incremental silviculture.

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1 GOVERNMENT'S GOALS AND STRATEGIES

The review of planning concepts concluded that implicit and explicit government strategies exist and that planners can “find” them by analyzing the pattern of decisions and actions taken by government (see *Working Paper 2: Concepts of Strategy and Planning, Proposed Planning Framework*). This paper undertakes such an analysis by reviewing the following three potential sources of information:

1. Government-Approved Statements of Principles;
2. Government Funding Decisions; and
3. Other Actions of Government.

1.1 Strategies Evident From Government-Approved Statements of Principles

Statements

Appendix A, page 15, contains the full text of relevant statements of principles. The following extracts are pertinent here.

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<u>Source</u>	<u>Statement</u>
Ministry of Forests Act	The purposes and functions of the ministry are...to (a) encourage maximum productivity of the forest and range resources in the Province...
Forest Practices Code of British Columbia Act	...sustainable use includes...managing the forests to meet present needs without compromising the needs of future generations...
Forest Renewal Act	The purpose of this Act is to renew the forest economy of British Columbia, enhance the productive capacity and environmental value of forest lands, create jobs, provide training for forest workers and strengthen communities.
National Forest Strategy (to which BC is signatory)	Continued economic benefits must be maintained for the communities, families and individual Canadians who depend upon the forest, both for their livelihood and way of life.
Land Use Charter (approved in principle by government)	... the Province shall ensure that present-day decisions do not compromise the ability of future generations to meet their own environmental and economic needs. The Province shall ensure that renewable resources are used in a manner that is sustainable over the long term.
Forest Renewal Plan (a government initiative)	The goals of the Forest Renewal Plan are: <ul style="list-style-type: none"> • renewing the land and keeping the forests healthy • investing in the forests which generate much of B.C.'s wealth • ensuring sustainable use and enjoyment of B.C. forests • ensuring the continued availability of good forest jobs • ensuring stability for communities that rely on the forests
Economic and Social Objectives of the Crown (stated by the Minister of Forests)	...any decreases in allowable annual cut at this time should be no larger than are necessary to avoid compromising long-run sustainability.
AAC Rationale Statements (issued by the Chief Forester, in keeping with the above objectives of the Crown)	In keeping with the objectives of good forest stewardship, AACs in British Columbia have been and continue to be determined so as to ensure that current and mid-term harvest rates will be compatible with a smooth and orderly transition towards the usually (but not always) lower long-term harvest rates. Timber supplies should remain sufficiently stable that there will be no inordinately adverse impacts on current or future generations. To achieve this, the rate set must not be so high as to cause later disruptive shortfalls in supply, nor so low as to cause immediate social and economic impacts that are unnecessary to maintain forest productivity and future harvest stability.
Clayoquot Scientific Panel (report accepted by government)	Restoration of historical degradation is a necessary part of a healthy human relationship with the land.

<u>Source</u>	<u>Statement</u>
Jobs and Timber Accord (a government initiative)	...the greatest determining factors in sustaining and creating forestry jobs are investments aimed at increasing the growth, yield and value of available timber, and value added to that timber. Innovative forestry practices agreements, designation of appropriate high intensity areas for timber production, and the establishment of regional and provincial timber targets are important to achieving this objective.

Implied Goals and Strategies

The following government goals and strategies are implicit in the government-approved statements of principle in the preceding section.

1. Goal - Sustainable resource use.¹

Strategies:

- Restore areas degraded by past harvesting to full productivity (e.g., backlog NSR).
- Wherever possible, maintain future harvest rates and quality at or above current levels.

2. Goal - Community stability.²

Strategies:

- Ensure a smooth and orderly transition towards the usually (but not always) lower long-term harvest rates.
- Wherever possible, maintain future harvest rates and quality at or above current levels.
- Wherever possible, reduce the fluctuation in harvest rates.
- Provide local well-paying jobs.

¹ Sustainable resource use is defined here as “not compromising the ability of future generations to meet their own environmental and economic needs.”

² Simons and Cortez (1991) define a local community as “a geographic area whose residents participate in interdependent economic, social, and political institutions and activities, and share a variety of public and private services.” (3) They conclude that “...stability in a community exists if the majority of the community members are generally satisfied with the economic, social, political, cultural and environmental conditions that exist, where the current state of affairs (or status quo) can involve zero, positive or a tolerable limit of negative change. If the majority of the community is dissatisfied with the current conditions, then the status quo is not stable.” (6)

1.2 Strategies Evident From Government Funding Decisions

Funding Decisions

The pattern of funding decisions on or related to incremental silviculture taken by government is a key indicator of government strategy.

The provincial government has consistently funded incremental silviculture programs since 1979. From 1979 to 1995 the province often shared funding with Canada. Table 1 contains a funding/program history together with key statements pertinent to finding the implicit strategies of government.

Period	Program Name	Incremental Silviculture (\$ 000 000's)	Key Statements
1979-1984	IFMSA	50.0	<p>The purpose of this Agreement is to undertake initiatives to intensify forest management in the Province so as to encourage the long-term economic viability of the forest sector of the provincial economy.</p> <p>The objective of this Agreement is to enhance the forest resource base of the Province through the implementation of intensive forest management programs.</p> <p>Specifically the objectives of this Agreement are to:</p> <ul style="list-style-type: none"> (a) strengthen the job creating potential of the provincial forest resource; (b) increase the wood yield from provincial forests beyond that secured by the basic forestry program of the Ministry of Forests; and (c) ensure that the annual rate of harvest of this renewable resource is sustained and increased. <p>(Canada & BC, 1980:2)</p>
1985-1990	FRDA	Backlog 199.5 Intensive 86.0	<p>The objective of this Agreement is to manage the forest resource of the Province, in order to sustain and increase the forest resource and strengthen the employment potential of the forest industry....</p> <p>(Canada & BC, 1985:7)</p>
1991-1995	FRDA II	121.0	<p>The objective of this Agreement is to promote the sustainable development of the forest resources of British Columbia by enhancing the environmental health of the forests, stimulating the economic and social prosperity of British Columbia and Canada, and addressing the future growth of the forestry community.</p> <p>To achieve the objective of this Agreement, the programs undertaken shall:</p> <ul style="list-style-type: none"> (a) improve the value, quality and health of young forests through stand tending activities; <p>(Canada & BC, 1991:3)</p>

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Period	Program Name	Incremental Silviculture (\$ 000 000's)	Key Statements
1994 - Present	Forest Renewal Plan	400.0/yr, a portion of which is invested in incremental silviculture	<p>The goals of the Forest Renewal Plan are:</p> <ul style="list-style-type: none"> renewing the land and keeping the forests healthy investing in the forests which generate much of B.C.'s wealth ensuring sustainable use and enjoyment of B.C. forests ensuring the continued availability of good forest jobs ensuring stability for communities that rely on the forests <p>(British Columbia, 1994:6)</p>

Table 1. Incremental Silviculture Funding

Implied Goals and Strategies

The following goals and strategies are implicit in the funding statements given in the preceding section.

1. Goal - Sustainable resource use.

Strategies:

- Restore areas degraded by past harvesting to full productivity (e.g., backlog NSR).
- Increase the wood yield beyond that obtainable from basic forestry.
- Keep forests healthy.

2. Goal - A strong forest sector.

Strategies:

- Improve future forest quantity and value
- Create local, well-paying, skilled jobs.

1.3 Strategies Evident From Other Actions of Government

Confirmation of Indicated Strategies

In addition to statements of principle and funding decisions, the actions of government also can indicate government strategy. Finding such strategy involves analyzing government actions to uncover one or more patterns within a set of decisions. Primary sources of material for analysis are government news releases and internal ministry documents. A cursory review of such

material found several initiatives not covered in the preceding sections, but did not uncover any strategies which were not already evident from the earlier analyses. The initiatives found were:³

1. **The Bid Proposal Sales Evaluation Pilot Program**, the policy objectives of which "...are to encourage and promote greater employment and community stability through economically sound and viable lumber remanufacturing and production of specialty products, to provide opportunities for a wide range of innovative, entrepreneurial, independent and smaller firms, and to award sales competitively." (BC MOF, 1997i) This program supports the goals of community stability and strengthening the forest sector of the economy.
2. **Innovative Forest Practices Agreements**, a component of the Jobs and Timber Accord, through which the government will "...be getting more productivity from the land while demonstrating our commitment to jobs and community stability." (BC MOF, 1997j) This program supports the goals of sustainable use and of community stability.
3. **The Community Forest Pilot Project**, another component of the Jobs and Timber Accord, which will develop a tenure model for community forests. This form of tenure "...is expected to contribute to the long-term economic stability of communities that rely on our forests for their livelihood." (BC MOF, 1998a) This program supports the goals of sustainable use and of community stability.

Desire to Set Targets

Government has expressed a need for and desire to set targets on several occasions.

In 1995, the Minister of Forests stated in *A 2020 Vision for the Forest Sector*:

...we need to develop explicit targets for where we want to go.

...we need to pursue three targets simultaneously:

- a target for maintaining the health and integrity of the forest environment;
- a target for the annual timber harvest from Crown and private lands in B.C.; and
- a target for forest sector employment levels.

...I think it would be premature and presumptuous for me to state such a target now. Targets must be "plausible challenges", and I think we need to do more work with various stakeholders before we put our first target up.

My notion of targets is a dynamic one. We will, in an iterative way, want to revise them from time to time as we learn more about our forests, and as we learn more about our capacity to respond to challenges. (Petter, 1995 - bold emphasis added)

The Jobs and Timber Accord (British Columbia, 1997:2) reiterates the government's desire to set targets. One of its general principles is:

That the greatest determining factors in sustaining and creating forestry jobs are investments aimed at increasing the growth, yield and value of available timber, and value

³ Two other strategies, the AAC Mitigation Strategy and the Enhanced Forest Management Pilot Project, were found to be internal Ministry of Forests' strategies and so are not included here.

added to that timber. Innovative forestry practices agreements, designation of appropriate high intensity areas for timber production, and the establishment of regional and provincial timber targets are important to achieving this objective.

It is reasonable, therefore, that the strategic programming of government's goals and strategy include the setting of targets. In this project, because government itself has not specified targets, the concept of "working" targets is used.

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2 PROPOSED GUIDING PRINCIPLES

2.1 Concepts and Need

What are “Principles”?

The word “principle” has two definitions that are relevant to this exercise; one is *a personal or specific basis of conduct or operation*; the other is *a basic doctrine*.

When taken to mean a personal or specific basis of conduct or operation, *principles* are similar to *values* or *beliefs* and can arouse an emotional response, for or against them. When taken to mean a basic doctrine, “principles” are analogous to concepts or fundamentals.

While at times an end to themselves, principles more often set the subjective context for decisions, either as values, beliefs or concepts. Such principles guide both the choice of more objective goals as well as the means by which they are achieved. Guiding principles should avoid including procedural elements. They are a constant consideration whenever choices or decisions are made, which is why they are termed *guiding* principles.

Do We Need a Statement of Guiding Principles?

While not addressed by every writer, the subject of values (principles) regularly appears in the management literature – commonly in association with corporate mission statements, but also with respect to the development of strategy. Values may be either internal, typically focused on as those held by corporate executives, or external, sometimes referred to as social expectations. As an example, Kenneth R. Andrews of the Harvard Business School, holds that two of the four components of strategy are “Personal values and aspirations” and “Acknowledged obligations to people in society other than shareholders.” (Moore, 1992:11) From the aspect of evaluating strategy, Andrews proposes that one should regularly ask ten important questions. One of these is, “Is the strategy appropriate to the personal values and aspirations of the key managers?” (Moore, 1992:12) Hammer, on the other hand, focuses on the values and beliefs of employees, and how these “...must be consistent with and support the design of the company’s business processes....” (1996:214)

In conclusion, while a statement of principles is not essential to the formation of strategy, its presence is often beneficial. Furthermore, a statement of principles may be useful in large organizations where there may be a wide range of values held by employees. Understanding the value set that guides the development of strategy can be useful to understanding, accepting, and implementing the strategy itself.

Many others have set out statements of principles in related subject areas, as the next section shows. This also lends credence to the usefulness of having a set of guiding principles to set the context for an incremental silviculture strategy.

2.2 Existing Statements of Principles

Introduction

Existing statements of principles are useful background to developing a statement of principles specifically for incremental silviculture. A review of the more recently developed statements applicable to forestry was undertaken. Those found to potentially be applicable are quoted in Appendix A, page 15. Quotations are taken from the following:

- United Nations - Conference on Environment and Development;
- Canadian Council of Forest Ministers - National Forest Strategy;
- Province of BC legislation
 - Ministry of Forests Act
 - Forest Practices Code of British Columbia Act
 - Forest Renewal Act;
- Commission on Resources and the Environment (CORE) - Land Use Charter for British Columbia;
- Province of BC - Forest Renewal Plan;
- Forest Renewal BC (FRBC) - Land Management Handbook;
- Province of BC - Jobs and Timber Accord;
- Minister of Forests - Economic And Social Objectives of the Crown;
- Chief Forester of British Columbia - AAC rationale statements;
- Scientific Panel for Sustainable Forest Practices in Clayoquot Sound - A Vision and Its Context; and
- Forest Alliance of British Columbia.

Conclusions Regarding Existing Statements of Principles

There are a number of themes that consistently appear in the existing statements of principles that are relevant to the development of a set of guiding principles for an incremental silviculture program. These are:

- maintaining ecosystem health, including that of the global ecosystem;
- respecting the culture and rights of aboriginal peoples;
- economic and social needs and benefits, including spiritual and cultural aspects and the need for community stability and well-paying jobs;

- the moral obligations towards future generations, including those associated with sustainable use, preserving BC's forest heritage and biological diversity, and restoration of past damage; and
- protecting and enhancing the productivity of forests, including the timber and non-timber forest resources.

2.3 Other Factors Not in Existing Statements

The existing statements of principles were generally developed for circumstances that may envelop incremental silviculture but were not specifically for it. The wider literature review reveals some additional principles that merit consideration. These are:

- the role of professional judgement;
- the need to maintain a wide and stable base of silvicultural contractors;
- expenditures must be fiscally responsible and economically efficient; and
- the broad role of incremental silviculture towards many objectives.

The Role of Professional Judgement

Academic literature in particular refers to the role of professionals in sorting out the confusing and often conflicting array of objectives and demands placed on the forest resource. Citing the new Chief of the US Forest Service Mike Dombeck as saying, "Most resource issues today are less dependent on technical matters than they are on social and economic factors," Clark Binkley, Dean of the Faculty of Forestry, UBC, then asks, "If forest management now has as much to do with values as with science, what then is the appropriate role of the professional forester?" (Binkley, 1997:1)

In comparing European to British Columbian silviculture, Weetman finds that one cannot simply adopt European practice here. "It is up to the individual silviculturist to show a high degree of professionalism and understanding of the forest." (Weetman, 1996:7) He concludes by quoting Smith, "The variability is great enough that decisions about silvicultural treatment are best made by competent practitioners on the ground," and in his own words, "There is a unique Canadian application of the broad silviculture principles on which both European and the American systems are based." (17)

Brumelle et al, in a paper on evaluating silviculture investments, find "The bewildering array of choices for these silvicultural strategies and the attributes of their underlying activities make the selection and implementation of silvicultural treatments a difficult task. This task is further complicated by the lack of precise understanding of the quantitative impact of these strategies on the forest or stand ecosystem." They then discuss the need to understand and accommodate the "other objectives required by stakeholders. ... Ignoring these considerations may result in a less successful mixture of treatments." (1991:809)

Given that some think the technical issues are still highly demanding and yet the Chief of the US Forest Service thinks these are lesser issues in comparison to social and economic factors, the role of the professional in such an environment merits recognition in the guiding principles.

The Need for a Stable Contractor Base

Because most incremental silviculture funding is currently via the Forest Renewal Plan, Forest Renewal BC's *1997/98 Land Based Programs Handbook* is the current source regarding principles of investing in enhanced forestry activities. Included in its statement of forest management principles is the following reference to the need for a stable contractor base.

Balance

The full range of silviculture activities should be considered in order to achieve management objectives. A balanced portfolio of regeneration, stand tending, and forest health activities will develop a diversified, stable base of employment and maintain technical expertise. (1997b:8)

Similar statements have existed in Ministry of Forests' program guidelines in previous years when the ministry held the funding responsibility directly.

Responsible and Efficient Expenditure

Responsible and efficient expenditure of public funds is such a basic principle that it almost goes without saying. It is often implicit in many statements of responsibility and authority. For example, the *Ministry of Forests Act* charges the ministry to "encourage maximum productivity of the forest and range resources in British Columbia." This cannot be achieved without responsible and efficient expenditure of any funds the legislature makes available to it.

Because most incremental silviculture funding is currently via the Forest Renewal Plan, Forest Renewal BC's *1997/98 Business Plan* contains principles of investing in enhanced forestry activities. Included in its statement of guiding principles for spending is the following reference to the need for wise spending.

Wise spending:

Projects funded by Forest Renewal BC should demonstrate economy of delivery, efficiency of operation, and effectiveness in achieving desired results.

Including a statement in the guiding principles for incremental silviculture addressing the need for responsible and efficient expenditure gives full acknowledgment to this often implicit requirement.

The Broader Role of Incremental Silviculture

The focus of this project is the use of an incremental silviculture strategy in managing the timber resource. However, forests are the foundation of a wealth of other resources in addition to timber, having values ranging from local to global. Not only can incremental silviculture be used to

directly manage for many of these, it must at a minimum be used indirectly in their management. In today's complex environment for forest management, these other resources must be planned for and accommodated while managing the timber resource. Therefore, the broader role of incremental silviculture merits recognition in the guiding principles.

2.4 Proposed Guiding Principles

The following guiding principles for incremental silviculture in British Columbia are proposed for consideration. They are founded on the consistent themes generally appearing in related statements of guiding principles. **The italicized key principles constitute the fundamental basis for the proposed strategy.**

Forest Management

1. *Forest management is a long term activity and, because the distant future cannot be foretold, the best and only course of action in managing the timber resource is that which minimizes risk and maintains options.*
2. The short, mid and long term are of equal importance in the development of incremental silviculture plans and priorities. Each time period merits consideration within the context of the specific needs and available management options in each forest management unit.
3. New information and changing values will warrant continual reassessment of higher level, management unit level, and stand level objectives. Tomorrow's choices may be different from today's, necessitating adaptive management.
4. The selection of incremental silviculture treatments, treatment regimes, priorities and investments is a matter of professional judgment involving consideration of, among other things:
 - these guiding principles;
 - higher level plans and objectives, including social objectives, and the achievement of balance between objectives;
 - the potential mix of benefits to be derived at all levels, from the stand to the global;
 - the best available local knowledge of treatment responses, or experience elsewhere if local knowledge is insufficient;
 - investment requirements and potential economic consequences, including the practical and theoretical limits to available analysis tools;
 - risks and uncertainties; and
 - in the absence of complete and reliable information, those choices constituting common sense and best professional judgment.

Environmental

5. *British Columbia's forests are important locally, provincially, nationally and globally, and should be managed in this context.*
6. British Columbia's integrated resource management forests are a renewable resource and can be maintained as such only by using practices which ensure long-term ecosystem health.
7. British Columbia has a unique richness of biological diversity which warrants care and preservation, including maintaining all stages of successional forest across the landscape.

Socio-economic

8. *Each generation of British Columbians becomes the steward of the province's forest resources and has a moral obligation to preserve this heritage for future generations by restoration of historical degradation and by passing on forest resources undiminished or enhanced in growing potential, yield and value.*
9. A healthy environment and a healthy economy are essential to the social, cultural, material, physical and spiritual well-being of British Columbians.
10. Aboriginal culture and rights must be respected.
11. Communities, interest groups and individuals have the right to access information, to be involved in forest planning, and to monitor performance.
12. Community stability and well-paying jobs (capable of supporting families) are stated social objectives of government, to be supported through investment in the forest and in jobs by means of undertaking incremental silviculture activities.
13. A balanced portfolio of regeneration, stand tending, and forest health activities is necessary to maintain a diversified, stable base of contractors with high levels of expertise.
14. Incremental silviculture expenditures must be fiscally responsible and the most economically efficient possible, within the context of social or other non-quantifiable objectives as may be established by government.

The Role of Incremental Silviculture

15. Incremental silviculture has a valid and important role in:
 - adding growth, yield and value to the timber resource;
 - contributing to the long term sustainability of the timber resource;
 - assisting in a smooth transition from primary to secondary forests;
 - ensuring long-term ecosystem health, including that of the global ecosystem;
 - strengthening the health of forests;
 - restoring forests that have been degraded;
 - managing stand and forest level biodiversity;
 - managing habitat for a wide range of flora and fauna;
 - managing watersheds and riparian areas for water quantity and quality;

- enhancing the inherent beauty of forests;
- enhancing the productive capacity of forests for other commercial uses in addition to the timber resource;
- providing stable, well-paying jobs; and
- assisting in stabilizing communities.

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APPENDIX A: EXISTING STATEMENTS OF PRINCIPLES

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Contents

This appendix contains quotations from the following existing statements of principles that have relevance to incremental silviculture. With one exception (Forest Alliance), all of these come from or have been endorsed by the Province of BC or the government of Canada. They are presented roughly in the order of global, national, and provincial perspectives.

- United Nations - Conference on Environment and Development;
- Canadian Council of Forest Ministers - National Forest Strategy;
- Province of BC legislation
 - Ministry of Forests Act
 - Forest Practices Code of British Columbia Act
 - Forest Renewal Act;
- Commission on Resources and the Environment (CORE) - Land Use Charter for British Columbia;
- Province of BC - Forest Renewal Plan;
- Forest Renewal BC (FRBC) - Land Management Handbook;
- Province of BC - Jobs and Timber Accord;
- Minister of Forests - Economic And Social Objectives of the Crown;
- Chief Forester of British Columbia - AAC rationale statements;
- Scientific Panel for Sustainable Forest Practices in Clayoquot Sound - A Vision and Its Context; and
- Forest Alliance of British Columbia.

A.1 United Nations - Conference on Environment and Development

The Clayoquot Scientific Panel, in developing its own set of guiding principles, considered the principles subscribed to by many nations at the 1992 United Nations Conference on Environment and Development (the 'Earth Summit'). Because of this, and because the work of the Scientific

Panel is considered on page 23, the principles emanating from the Earth Summit are not separately considered. Presumably, doing so would yield more or less the same set of principles as arrived at by the Panel.

A.2 Canadian Council of Forest Ministers - National Forest Strategy

British Columbia is signatory to the *Canada Forest Accord*. The Accord adopts the values, vision and goals of the 1992 *National Forest Strategy*. The strategy was developed under the auspices of the Canadian Council of Forest Ministers and is intended as a guide for the entire forest community in Canada.

The values and goal statements of the accord are relevant to the principles of an incremental silviculture strategy.

We believe:

- Our forest heritage is part of our past, our present and our future identity as a nation.
- It is important to maintain a rich tapestry of forests across the Canadian landscape that sustains a diversity of wildlife.
- Healthy forest ecosystems are essential to the health of all life on earth.
- Continued economic benefits must be maintained for the communities, families and individual Canadians who depend upon the forest, both for their livelihood and way of life.
- The spiritual qualities and the inherent beauty of our forests are essential to our physical and our mental well-being.
- Our role as stewards is to ensure intelligent, sensitive use of the forest for the environmental, economic, social and cultural well-being of all Canadians.
- Canadians are entitled to participate in determining how their forests are used and the purposes for which they are managed.

Our Goal:

Our goal is to maintain and enhance the long-term health of our forest ecosystems, for the benefit of all living things both nationally and globally, while providing environmental, economic, social and cultural opportunities for the benefit of present and future generations.

A.3 Province of BC - Legislation

Ministry of Forests Act

Section 4 of the *Ministry of Forests Act* sets out the purposes and functions of the ministry as follows.

The purposes and functions of the ministry are, under the direction of the minister, to

- (a) encourage maximum productivity of the forest and range resources in the Province;
- (b) manage, protect and conserve the forest and range resources of the Crown, having regard to the immediate and long term economic and social benefits they may confer on the Province;
- (c) plan the use of the forest and range resources of the Crown, so that the production of timber and forage, the harvesting of timber, the grazing of livestock and the realization of fisheries, wildlife, water, outdoor recreation and other natural resource values are coordinated and integrated, in consultation and cooperation with other ministries and agencies of the Crown and with the private sector;
- (d) encourage a vigorous, efficient and world competitive timber processing industry in the Province; and
- (e) assert the financial interest of the Crown in its forest and range resources in a systematic and equitable manner.

Forest Practices Code of British Columbia Act

The preamble to the *Forest Practices Code of British Columbia Act* sets out its purpose (note: Bill 47, 1997 changes shown in brackets):

WHEREAS British Columbians desire sustainable use of the forests they hold in trust for future generations;

AND WHEREAS sustainable use includes

- (a) managing the forests to meet present needs without compromising the needs of future generations,
- (b) providing stewardship of forests based on an ethic of respect for the land,
- (c) balancing (economic,) productive, spiritual, ecological and recreational values of forests to meet the economic (, social) and cultural needs of peoples and communities, including First Nations,
- (d) conserving biological diversity, soil, water, fish, wildlife, scenic diversity and other forest resources, and
- (e) restoring damaged ecologies;

THEREFORE HER MAJESTY

Forest Renewal Act

Section 2 of the *British Columbia Forest Renewal Act* sets out its purpose:

The purpose of this Act is to renew the forest economy of British Columbia, enhance the productive capacity and environmental value of forest lands, create jobs, provide training for forest workers and strengthen communities.

A.4 CORE - Land Use Charter for British Columbia

In 1993 the government of British Columbia approved in principle a Land Use Charter proposed by the Commission on Resources and Environment (CORE). The charter is quoted below in its entirety except for the Decision Making section which is not relevant to this exercise.

Land Use Charter

THE PROVINCIAL COMMITMENT

The Government of British Columbia is committed to:

- protecting and restoring the quality and integrity of the environment, and
- securing a sound and prosperous economy for present and future generations.

This commitment is made to the people of British Columbia and to the global community. A healthy environment and a healthy economy are essential to the social, cultural, material, physical and spiritual well-being of British Columbians. Furthermore, the Province recognizes its obligation to protect, manage and use its resources and environment to fulfill its responsibility to global well-being. Finally, the Province shall ensure that present-day decisions do not compromise the ability of future generations to meet their own environmental and economic needs.

PRINCIPLES

SUSTAINABLE ENVIRONMENT

A healthy environment is the foundation upon which a sound economy and society depend. The essential role that ecosystems play in supporting our society establishes an environmental imperative that must be respected in all land, resource, and economic decisions. Our priority must be to maintain natural systems for present and future generations.

1. The Province shall maintain and enhance the life-supporting capacity of air, water, land and ecosystems. The Province shall respect the integrity of natural systems, and will seek to restore previously degraded environments.
2. The Province shall conserve biological diversity in genes, species and ecosystems.
3. The Province shall attempt to anticipate and prevent adverse environmental impacts. When making land and resource decisions, the Province shall exercise caution and special concern for natural values, recognizing that human understanding of nature is incomplete.
4. The Province shall ensure that environmental and social costs are accounted for in land, resource use and economic decisions.

5. The Province shall recognize its responsibility to protect the global environment, to reduce consumption to sustainable levels, to avoid importing or exporting ecological stresses, and to help meet the global challenge of sustainably supporting the human population.
6. The Province shall protect the environment for human uses and enjoyment, and will also respect the intrinsic value of nature.

SUSTAINABLE ECONOMY

Our ability to sustain a quality environment depends upon our ability to foster a strong and sustainable economy. Such an economy is more efficient, and derives greater social benefits from the use of fewer environmental assets. In addition, a sustainable economy can provide the means for increased environmental protection and conservation, while offering society alternatives to undue exploitation of natural resources.

1. The Province shall promote a dynamic and competitive economy that maintains options for future land and resource uses.
2. The Province shall encourage diversified economic development that increases the employment and other benefits derived from a given stock of resources.
3. The Province shall encourage development that reduces waste and makes efficient use of resources.
4. The Province shall encourage optimum use of natural systems and resources, consistent with their inherent capability to support our economic, social and environmental needs.
5. The Province shall ensure that renewable resources are used in a manner that is sustainable over the long term.
6. The Province shall ensure that the use of non-renewable resources avoids their exhaustion, and addresses the needs of future generations.
7. The Province shall stimulate environmentally sound economic activity and innovation through a system of economic instruments.
8. The Province shall provide a regulatory framework which promotes stability and predictability for business and investment.

SOCIAL SUSTAINABILITY

Social equity requires that the concerns of individuals and communities are respected as environmental and economic needs are balanced.

1. The Province shall aim for a fair distribution of the costs and benefits of land use decisions. The Province is committed to social stability, and will support economic and social measures to address the economic effects of land use decisions.
2. The Province shall promote a good quality of life by fostering opportunities to:
 - a) earn a living;
 - b) obtain education and training;
 - c) access social, cultural and recreational services; and
 - d) enjoy a quality environment.
3. In addition, equity requires that land use and related resource and environmental decisions be made in a fair and open manner.

ABORIGINAL PEOPLES

Aboriginal title and the inherent rights of Aboriginal people to self government are recognized.

Land use decision-making shall incorporate, support and not interfere with negotiations on Aboriginal self government and treaties. Aboriginal peoples shall be encouraged to be active participants in decision-making.

SHARED RESPONSIBILITY

Achieving a sustainable society is everyone's responsibility — from individuals, businesses, and non-government organizations, to all levels of government, Aboriginal peoples, and the global community. The Province shall encourage all parties to protect the environment and build a sustainable economy. Our success depends upon the independent and cooperative initiatives of all British Columbians.

A.5 Province of BC - Forest Renewal Plan

The Province of British Columbia announced the Forest Renewal Plan on April 14, 1994. The plan has two major priorities: giving back to the forests and increasing the jobs and value added from each tree harvested. The plan cites its goals as follows:

The goals of the Forest Renewal Plan are:

- renewing the land and keeping the forests healthy
- investing in the forests which generate much of B.C.'s wealth
- ensuring sustainable use and enjoyment of B.C. forests
- ensuring the continued availability of good forest jobs
- ensuring stability for communities that rely on the forests

In the news release announcing the plan the Premier of British Columbia states, "We must increase the number of jobs and value from the trees we harvest." Although this is stated in connection with the manufacturing side of the forest sector, it can also hold true for the forestry side; that is, we must increase the value of the trees to be harvested.

A.6 Forest Renewal BC - Land Management Handbook

Forest Renewal BC's *1997/1998 Land-Based Handbook* contains the following forest management principles with respect to its Enhanced Forestry Program. These may be regarded

as the most current statement of principles with respect to incremental silviculture, and therefore are a starting point for developing a new set of guiding principles.

In identifying Enhanced Forestry Program priorities and developing investment plans in future years, the corporation will be guided by the following principles:

Diversified Portfolio of Forest Products

British Columbia can minimize risk and better respond to changing market conditions by treating stands to ensure that forests produce a diversified portfolio of products. Management units within the provincial land base may target specific products as part of that overall diversified portfolio.

Balance

The full range of silviculture activities should be considered in order to achieve management objectives. A balanced portfolio of regeneration, stand tending, and forest health activities will develop a diversified, stable base of employment and maintain technical expertise. Treatments to regenerate backlog not-satisfactorily restocked (NSR) sites and maintain the health and vigor of forest stands often represent excellent opportunities for achieving investment, timber supply, and social objectives.

Forest Planning

A management plan should guide stand-level operations in timber supply areas (TSAs) or on tree farm licences (TFLs). Management plans should specify what future forest conditions are desired, and identify the management regimes and forest structure necessary to achieve those conditions.

Timber Supply Considerations

Management-unit priorities should address Timber Supply Review (TSR) needs and considerations, and silviculture activities should be designed to ensure that management assumptions are met (e.g., the Fraser TSA assumes 1,000 hectares [ha] of fertilization per year in order to maintain timber supply goals).

Stand Treatment

Stand-level treatments should be clearly linked to TSA and TFL objectives or regional/subregional silviculture strategies, as appropriate. They should be selected to meet local economic, social and environmental objectives while adhering to sound biological principles. Stand Management Prescriptions (SMPs) should reflect, as nearly as possible, the future objectives of the forest management unit, within the parameters of local site and stand conditions.

Forest Structure

The density-management regimes and forest structure necessary to achieve TSA and TFL objectives should be defined. In the absence of specified management-unit objectives, the stand density in managed and unmanaged second-growth stands should vary widely, in order to ensure adequate diversity in future forest structure and habitat conditions.

Silviculture for Multiple Objectives

Silviculture treatments can be used to maintain riparian areas, enhance biodiversity, create employment, promote community stability, enhance volume and value, modify animal and insect habitat quality, and improve visual quality. When enhanced forestry investment opportunities are being considered, total treatment benefits should be evaluated.

Risk

When enhanced forestry investments are planned, the impact of proposed treatments on stand and forest health must be considered. Areas for potential inclusion in Regional Investment Plans should have a low risk of significant losses due to fire, insects, disease or mammals. The risk of the stand being alienated for other single uses in the near future should also be low.

A.7 Province of BC - Jobs and Timber Accord

The 1997 *Jobs and Timber Accord* between the Province of BC and seventeen major forest companies, contains principles that are directly relevant to incremental silviculture.

From the preamble:

Whereas Industry and Government agree that the creation of new economically viable jobs and the sustaining and enhancement of the existing base of jobs are key priorities for the publicly owned forest resources of the province;

From the general principles:

- That the partners to this Accord are committed to the principles of environmental sustainability and no aspect of this Accord will undermine compliance with environmental standards.
- That the greatest determining factors in sustaining and creating forestry jobs are investments aimed at increasing the growth, yield and value of available timber, and value added to that timber. Innovative forestry practices agreements, designation of appropriate high intensity areas for timber production, and the establishment of regional and provincial timber targets are important to achieving this objective.

A.8 Minister of Forests - Economic and Social Objectives of the Crown

The Minister of Forests expressed the economic and social objectives of the Crown to the Chief Forester in a letter dated July 28, 1994. The following extracts from this letter are pertinent to establishment of a set of principles for incremental silviculture.

The government's general social and economic objectives for the forest sector are made clear in the goals of the Forest Renewal Program.

...I would emphasize the particular importance the government attaches to the continued availability of good forest jobs and to the long-term stability of communities that rely on forests.

... any decreases in allowable cut at this time should be no larger than are necessary to avoid compromising long-run sustainability.

... you should also consider important local social and economic objectives that may be derived from the public input on the Timber Supply Review discussion papers where these are consistent with the government's broader objectives.

A.9 Chief Forester - AAC Rationale Statements

In determining the AAC for a management unit, the chief forester expresses in each AAC rationale statement the principles he has used to guide his decision. Although these are individualized to each management unit, there are certain generic principles that generally appear. Those that may be relevant to the development of a set of principles for incremental silviculture are paraphrased below:

- In considering the factors required to be taken into account, the chief forester attempts to reflect as closely as possible operability and forest management factors that are a reasonable extrapolation of current practices. It is not considered appropriate to base decisions on unsupported speculation with respect to factors that may increase or decrease timber supply.
- It is inappropriate to attempt to speculate on the impacts on timber supply that will result from land-use decisions that have not yet been taken by government, or that will result from the implementation of land use decisions where further implementation decisions are still required.
- AAC determinations must be made in spite of uncertainties in data. However, uncertainties must be taken into account in the decision.
- An AAC should not be taken in any way as limiting the Crown's obligation under the June 1993 Delgamuukw decision of the BC court of appeal regarding aboriginal rights.
- In keeping with the objectives of good forest stewardship, AACs in British Columbia have been and continue to be determined so as to ensure that current and mid-term harvest rates will be compatible with a smooth and orderly transition towards the usually (but not always) lower long-term harvest rates. Timber supplies should remain sufficiently stable that there will be no inordinately adverse impacts on current or future generations. To achieve this, the rate set must not be so high as to cause later disruptive shortfalls in supply, nor so low as to cause immediate social and economic impacts that are unnecessary to maintain forest productivity and future harvest stability.

A.10 Scientific Panel for Sustainable Forest Practices in Clayoquot Sound - A Vision and its Context

In 1995, the Scientific Panel for Sustainable Forest Practices in Clayoquot Sound published a set of general principles in *A Vision and Its Context: Global Context for Forest Practices in Clayoquot Sound*. In devising these principles, the Panel reviewed global concerns and agreements, particularly those stemming from the United Nations Conference on Environment and Development at Rio de Janeiro in June 1992 (the 'Earth Summit'), as well as Canada's and British

Columbia's actions towards meeting these international agreements. While all the Panel's guiding principles are cited below, principles 3, 4, 5, and 9 appear the most relevant to the development of a set of principles for incremental silviculture.

General principles:

1. The world is interconnected at all levels; attempts to understand it entail analyzing its components and considering the whole system.
2. Human activities must respect the land, the sea, and all the life and life systems they support.
3. Long-term ecological and economic sustainability are essential to long-term harmony.
4. The cultural, spiritual, social, and economic well-being of indigenous peoples is a necessary part of that harmony.
5. Restoration of historical degradation is a necessary part of a healthy human relationship with the land.
6. Standards must accommodate new information and changing social values.
7. Information on the resources of Clayoquot Sound and understanding of its forest ecosystems is incomplete.
8. Standards cannot be designed to meet all situations that will be encountered on the ground.
9. British Columbia can and should show leadership in the management of forest ecosystems. (British Columbia is one of the most biologically diverse regions in the northern hemisphere. British Columbians have a moral obligation to maintain that diversity for future generations.)

A.11 Forest Alliance - Principles of Sustainable Forestry

The Forest Alliance of BC issued its *Principles of Sustainable Forestry* containing the following introductory statements and principles.

Since February 1992, sixteen of B.C.'s major forest companies have signed the Forest Alliance Principles of Sustainable Forestry.

The Principles are designed to protect the environment, and ensure human health and safety, while maintaining a forest industry that remains competitive in a rapidly changing world.

By applying the Principles of Sustainable Forestry the signatory companies will sustain sufficient commercial, cultural, and spiritual values in forested lands to satisfy society's needs. These needs will change with time and the companies will change with them.

The great variety of British Columbia's forests makes it necessary to develop site-specific management plans. The Principles of Sustainable Forestry will be interpreted within each unique region as they are applied across the province.

All employees and contractors will be trained in the application of these Principles in the field. Qualified personnel will ensure compliance in all operational aspects, including planning, road building, logging and maintenance and silviculture.

The Principles are as follows:

- **Soil Conservation and Logging Roads:** All logging roads will be constructed and maintained or deactivated to engineering standards that provide for long-term erosion control. We will not build roads where major erosion is likely to occur.
- **Watershed Management:** In cooperation with other tenure holders in the area, we will plan our logging operations on a watershed basis to minimize soil erosion, stream siltation and flooding caused by excess run-off.
- **Fish Habitat:** We will protect fish habitat by carefully planning operations along waterways, using buffer strips or other measures to preserve water quality and stream-bank stability.
- **Wildlife Habitat:** We will manage the forest to retain wildlife habitat by measures such as leaving wildlife corridors, protecting critical areas, and leaving wildlife trees standing where safety permits.
- **Biological Diversity:** We will protect the biological diversity of managed lands by ensuring the representative stages of forest succession, including old-growth, are present throughout each forest ecosystem.
- **Climate Change:** We will minimize our net contribution of greenhouse gases through energy efficiency, wildfire control, soil conservation, and rapid reforestation of harvested lands.
- **Burning:** We will burn only when it is prescribed for reforestation, fire hazard control, forest health or the enhancement of wildlife habitat.
- **Other Commercial Values:** We will manage forest lands to sustain other economically important activities such as tourism, livestock grazing, hunting, fishing, trapping, honey production, and berry, foliage and mushroom picking.
- **Visual Impact:** We will make visual impact management a key element of planning along major travel corridors, near recreation areas and around communities.
- **Inventory of Forest Resources:** We will work with government to ensure that there are accurate, up-to-date inventories of all forest resources on which to base forest management plans and to help determine the allowable annual cut (AAC).
- **Harvesting Practices:** We will choose harvesting practices and equipment that are designed to minimize erosion, soil compaction, and damage to remaining vegetation and wildlife habitat.
- **Clearcutting and Selection Logging:** Where clearcutting is silviculturally appropriate it will be done in a manner that satisfies all the requirements of the Principles of Sustainable Forestry. We will use other silvicultural systems, such as partial cutting, where they are silviculturally more appropriate, and can be done safely.
- **Wood Utilization:** We will use all commercially viable wood cut during logging operations provided that it is balanced with the need to leave large woody debris for wildlife habitat and with the need to leave organic matter for future generations of forests.
- **Forest Renewal:** We will ensure that all logged lands are reforested either by natural regeneration or by planting with appropriate species. Silviculture treatments such as brushing and thinning will be used where prescribed to ensure the survival of the new forest and to improve quality wood production.
- **Use of Pesticides:** We will minimize the use of pesticides. Alternate methods of pest and weed control will be used wherever practical and environmentally safe.
- **Recreation:** We will manage forest land with concern for recreational use by the public. This will include the appearance of roadsides and harvested areas, and assistance in providing campsites, picnic areas, boat ramps and trails.

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- **Public Involvement:** We recognize the right of communities and individuals to access information, to be involved in forest planning and to monitor industrial performance. We will encourage and participate in initiatives that involve the public in an informed and effective manner.
- **Communities:** We will work closely with local communities to assist them in attaining stability, employment, economic viability, and a high quality of life.
- **Environmental Programs:** We will employ environmentally appropriate practices in our operations. This will include recycling programs, waste oil recovery, solid waste reduction and management, energy efficiency, pollution control, the appearance of industrial sites and a positive attitude towards environmental programs.
- **Research:** We will support research programs, including demonstration projects, that will lead to increased yield from managed forests, the generation of value-added products, and protection of the environment.
- **Monitoring:** We support an independent forest practices monitoring system that will report its findings to industry and the public.

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