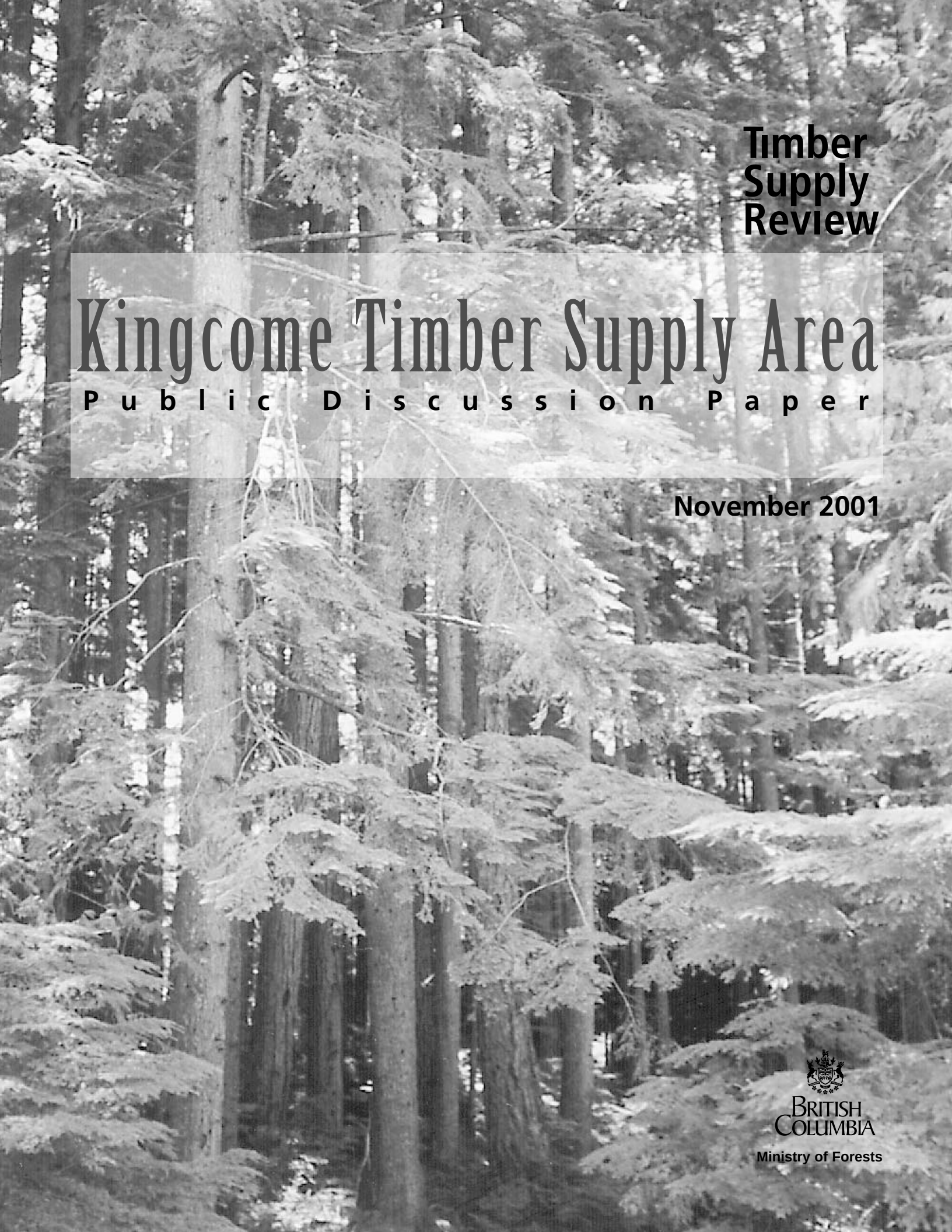


Timber Supply Review

Kingcome Timber Supply Area

Public Discussion Paper

November 2001

BRITISH COLUMBIA
Ministry of Forests

Introduction

Welcome to the Timber Supply Review in the Kingcome Timber Supply Area. The British Columbia Forest Service reviews the timber supply* for all timber supply areas* (TSAs) and tree farm licences* (TFLs) in the province at least once every five years. This review examines the impacts of current forest management practices on the timber supply, economy, environment and social conditions of the local area and the province. Based on this review, the chief forester will determine the allowable annual cut* (AAC) for the Kingcome TSA.

The Timber Supply Review considers:

Economic, environmental and social factors, information about current forest management practices and public input.

The Timber Supply Review produces:

- A new AAC for the next five years
- A list of the information to be improved for future timber supply forecasts

Timber Supply Review in the Kingcome TSA

With the release of the *2001 Kingcome TSA Analysis Report,* the British Columbia Forest Service has completed the second step in its Timber Supply Review (see steps below). The Analysis Report contains a timber supply analysis with harvest-level forecasts and a socio-economic analysis. This discussion paper summarizes the report, provides an overview of the Timber Supply Review process and encourages British Columbians to provide comments during the 60-day public review period. **Public comments will be accepted until Jan. 28, 2002.**

Before setting a new AAC, the chief forester will review all relevant reports and public input. The chief forester's AAC determination will be outlined in a rationale statement that, along with the summary of public input, will be available to the public upon release. Following the release of the chief forester's determination, the minister of forests will apportion the AAC to the various licences and programs.

* **Timber supply** – the amount of timber that is forecast to be available for harvesting over a specified time period, under a particular management regime.

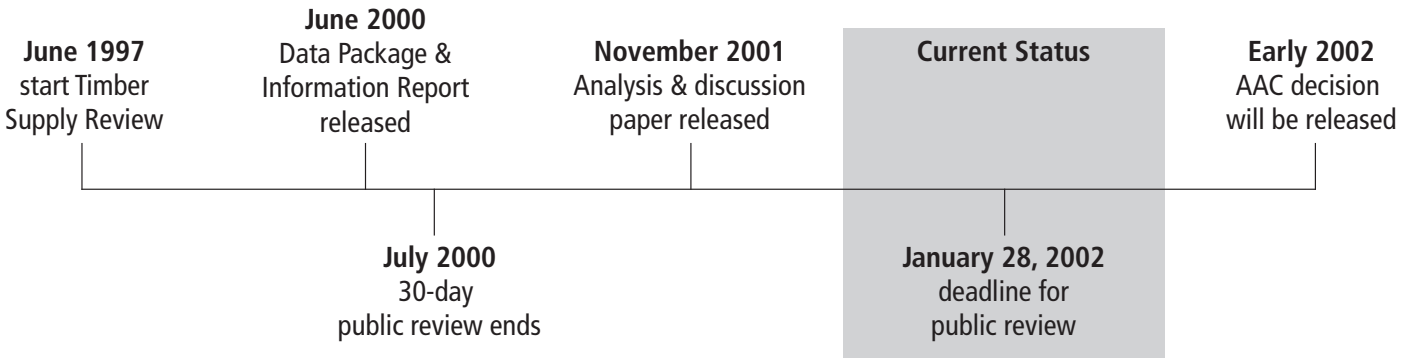
* **TSA** – an integrated resource management unit established in accordance with Section 7 of the Forest Act.

* **TFL** – provides rights to harvest timber, and outlines responsibilities for forest management, in a particular area.

* **AAC**– the rate of timber harvest permitted each year from a specified area.

Review Process for the Kingcome TSA

Figure 1. Steps in the timber supply review process for the Kingcome TSA



*** Culturally modified tree**—a tree showing evidence of aboriginal forest use.

Description of the TSA

The Kingcome TSA covers northern Vancouver Island, as well as the adjacent Queen Charlotte Straits and the mainland. Most of the TSA is on the mainland. Administered by the forest district office in Port McNeill, the Kingcome TSA covers about 1.1 million hectares, and is one of six TSAs in the Vancouver Forest Region.

More than half of the TSA's estimated population of 14,495 lives in the two largest communities of Port Hardy and Port McNeill. Other communities include Port Alice, Alert Bay, Coal Harbour, Holberg, Winter Harbour, Sointula and Woss. Eighty per cent of the population lives on the Vancouver Island portion of the TSA.

First Nations

Eleven First Nations bands have traditional territories within the Kingcome TSA. They are: Quatsino First Nation, Gwa'Sala-'Nakwaxda'xw First Nation, Kwakiutl First Nation, Da'Naxda'xw First Nation, Tlatlasikwala First Nation, Mamalillikulla-Qwe'Qwa'Sot' Enox First Nation, Tsawataineuk First Nation, Gwawaenuk Tribe, Kwicksutaineuk/ah'kwaha'mis First Nation, Namgis First Nation and Tlowitsis Tribe.

The First Nations population is estimated at 4,200 people, of which about 1,900 people reside on reserves within the Port McNeill Forest District. Although the traditional territories of several bands are located on the mainland, due to historic relocations the majority of First Nations people now reside in settlements on Vancouver Island or Cormorant Island.

The Kingcome TSA contains numerous known sites and areas of cultural significance for First Nations, including large numbers of culturally modified trees*. Information from completed cultural heritage inventory studies, archaeological impact assessments and traditional-use surveys will be considered in the upcoming allowable annual cut determination.

The natural resources

The forests of the Kingcome TSA provide a wide range of forest land resources, including forest products (timber and other products like mushrooms), minerals, recreation and tourism amenities, community water supplies, and diverse fish and wildlife habitats.

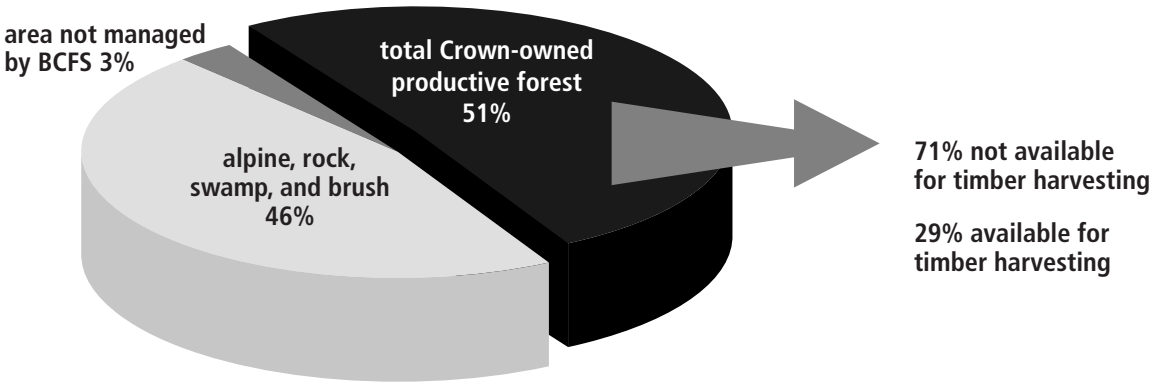


Figure 2. Breakdown of land base for Kingcome TSA

The Forest Practices Code outlines a process for identifying species at risk that require special management. Currently, a number of species identified as at risk may be found in the Kingcome TSA, including the northern goshawk, marbled murrelet, Keen's long-eared myotis and grizzly bear.

As Figure 2 shows, about 51 per cent of the Kingcome TSA land base is considered productive Crown-owned forest land (approximately 586,000 hectares) managed by the British Columbia Forest Service. Currently, about 29 per cent of this is considered available for harvesting (the timber harvesting land base*).

Environmental values

Current forest management follows the standards set out by the Forest Practices Code. These standards are designed to maintain a range of biodiversity and wildlife values. In the Kingcome TSA, about 71 per cent of the productive Crown-owned forest land is not considered available for timber harvesting and will provide for many environmental values. Forested area both inside and outside the timber harvesting land base will help maintain critical forest habitats for many species. Forest cover requirements for stream, lake and wetland management, biodiversity, scenic areas, community watersheds, recreation features and protection of unstable terrain were included in the analysis.

Land-use planning

Two land-use planning processes will provide direction for resource management and for the establishment of new protected areas in the Kingcome TSA. One is the Vancouver Island Land Use Plan, which covers the Vancouver Island portion of the TSA. New protected areas were announced in 1995, and, more recently, specific resource management objectives and strategies were approved. Some of these directly influence forest management and have been reflected in this timber supply analysis.

A second planning process is the Central Coast Land and Resource Management Plan (CCLRMP), which covers about 4.8 million hectares on the west coast, including the mainland portions of the Kingcome TSA. In April 2001, agreement was reached on the first phase of the

* **Timber harvesting land base** – Crown forest land within the timber supply area where timber harvesting is considered both acceptable and economically feasible.

* **Partition** – A portion of the AAC that is attributed to certain types of timber and/or terrain.

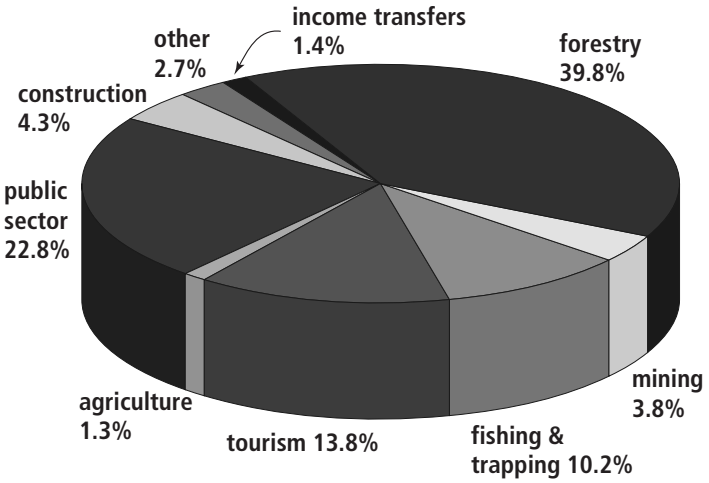


Figure 3. Experienced labour force by sector (1996), Kingcome TSA

plan. Government recently endorsed the intent of the first phase, and has provided direction to streamline the completion of the plan by spring 2003. Approved land-use decisions from this planning process will be incorporated into future timber supply reviews. In the meantime, resource development continues to be deferred in proposed protection areas in the Kingcome TSA.

Current allowable annual cut

Following the last Timber Supply Review, the chief forester set the AAC in the Kingcome TSA at 1.399 million cubic metres, a decrease of about 22 per cent from the previous AAC. The current AAC includes three partitions*:

- 1.244 million cubic metres for coniferous trees.
- 25,000 cubic metres for deciduous trees.
- 130,000 cubic metres for trees on sites with low timber productivity.

The AAC is apportioned by the minister of forests to various licences.

Socio-economic profile

Regional economy

The forest industry in the Kingcome TSA is an important source of employment and income for local residents. Other important sources include the public and tourism sectors (see Figure 3).

In 1996, the forest sector, including harvesting, silviculture and forest products manufacturing, accounted for nearly 40 per cent of total employment. The forest sector was also the source of 47 per cent of the income in the area.

The public sector is the second-largest employer in the Kingcome TSA, accounting for 23 per cent of total employment and 18 per cent of the region's income. The tourism sector, which includes both business and leisure travel, supports 14 per cent of the total labour force, and accounts for about seven per cent of the total income in the area.

From 1998 to 2000, an average of about 1.118 million cubic metres per year was harvested in the Kingcome TSA. During the same period, a total of 16 small- to medium-sized operations (shake and shingle, lumber, and pole mills) within the TSA processed

Forest Industry economic contribution	TSA	Provincial
Direct employment (person years)	313	1,364
Total employment (person years)	514	3,018
Total employment income ($1999 millions per year)	20.9	115.2
Provincial government revenues ($1999 millions per year)	n.a.	49.5

Table 1. Local and provincial economic information associated with the average 1998-2000 annual harvest.

an average of about 110,000 cubic metres annually. The Port Alice pulp mill, located just outside the TSA, relies on the Kingcome TSA and other coastal TSAs for its timber supply.

Table 1 illustrates the potential contribution of the forest industry associated with the Kingcome TSA timber harvest to both the regional and provincial economies. Figures in this table are based on the average 1998-2000 annual harvest of about 1.118 million cubic metres.

Timber supply forecasts

A timber supply computer model was used to project several possible timber supply forecasts for the next 250 years. The base case forecast illustrates the effect of current forest management practices on timber supply, using the best available information.

The base case forecast is not a recommendation for an AAC, but rather it is one of many sources of information the chief forester will consider when setting the AAC.

The base case forecast for the Kingcome TSA indicates an initial harvest of 1.319 million cubic metres, which is 5.7 per cent lower than the current AAC. The base case forecast indicates that the harvest level then declines for six decades to a mid-term level of 740,445 cubic metres per year, before eventually increasing to a long-term harvest level of 973,000 cubic metres per year (about 30 per cent lower than the current AAC).

Currently, cedar stands on sites of low productivity contribute 130,000 cubic metres per year to the AAC. In the base case forecast, these stands initially contribute up to 95,000 cubic

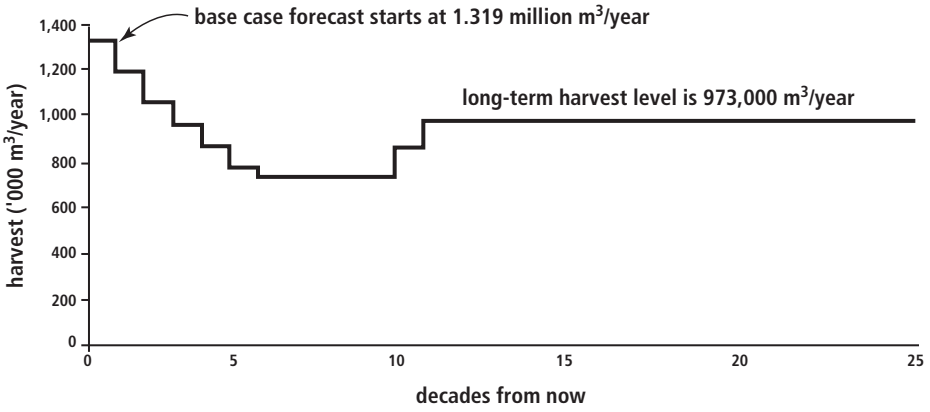


Figure 4. Base case forecast — Kingcome TSA, 2001

- **wildlife tree patch** — a group of trees with special characteristics that provide valuable habitat for wildlife.
- **riparian** — areas of land adjacent to wetlands, rivers, streams and lakes.
- **ungulate** — a hooved herbivore.

metres per year, and after 50 years decline to a steady long-term level of 28,000 cubic metres per year.

At present, red alder stands contribute 25,000 cubic metres per year to the AAC. In the base case forecast these stands initially contribute 15,340 cubic metres per year, and after 50 years decline to zero.

Compared to the 1995 timber supply analysis, several changes have occurred in the Kingcome TSA that affect timber supply forecasts. The timber harvesting land base has decreased by about four per cent, mostly to account for larger reductions for inoperable areas, low productivity stands, environmentally sensitive areas, wildlife tree patches* and riparian* areas. These changes were somewhat offset by the addition of several large areas transferred from neighbouring tree farm licences. The reductions for environmentally sensitive areas include winter habitat for deer, elk and other ungulates*.

Sensitivity analyses: examining uncertainty

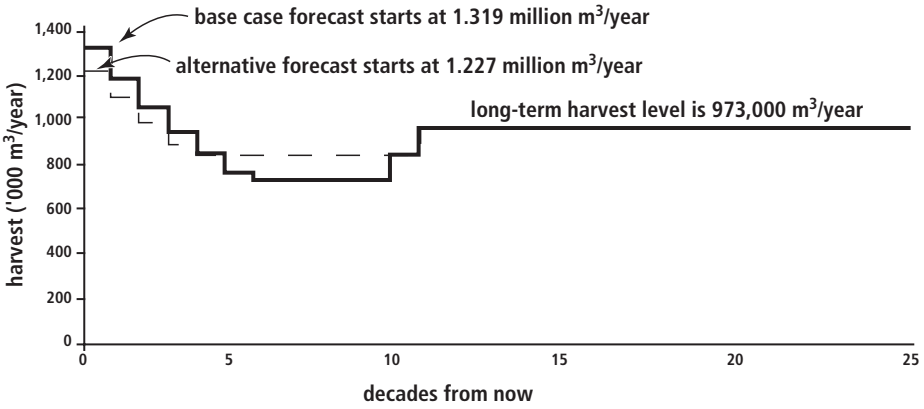
Because forests are complex and constantly changing, timber supply analysts assess how the timber supply might be affected by uncertainties in inventory information and management practices. These uncertainties are generally examined through what are called sensitivity analyses, which the chief forester will consider in determining an AAC. The sensitivity analyses are useful for assessing how uncertainties and risks, or any changes in information, might affect timber supply.

In the Kingcome TSA, a number of sensitivity analyses were conducted to examine the stability of the timber supply in light of uncertainties. Three key sensitivity analyses are described below. For a complete listing of sensitivity analyses, please refer to the *2001 Kingcome TSA Analysis Report*.

Alternative harvest forecast

The base case forecast indicates the harvest level in the Kingcome TSA is projected to decline between the short- and long-term. The base case forecast is only one of many options for managing the transition from the current AAC to a lower long-term harvest level. An alternative forecast was prepared in which the mid-term harvest level (where the annual harvest is the lowest) was increased. As Figure 5 indicates, by increasing the mid-term level, the initial harvest level is reduced to 1.227 million cubic metres per year, or about seven per cent lower than in the base case forecast.

Figure 5. Alternative harvest forecast with increased mid-term level — Kingcome TSA 2001



Central Coast Land and Resource Management Plan

The framework agreement for the Central Coast Land and Resource Management Plan sets out proposed protection areas, option areas and special management zones within the Kingcome TSA. Since government has not

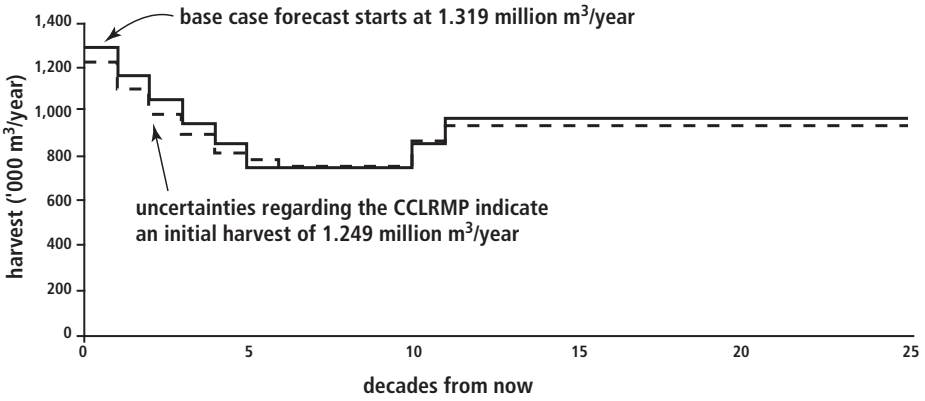


Figure 6. Harvest forecast indicating potential impact of CCLRMP framework agreement — Kingcome TSA, 2001

yet formally approved the areas, the areas are included in the timber harvesting land base. Figure 6 shows that if the proposed protected areas are removed from the timber harvest land base, and special management zones for visual quality are implemented, the initial harvest level could decline to 1.249 million cubic metres per year — about 5.3 per cent lower than in the base case forecast.

Uncertainty about future productivity

The results of provincial studies suggest that the future productivity of sites currently occupied by old-growth forests may be higher than previously estimated. The research shows that the measured productivity of existing second-growth forests is higher than the productivity estimates using measurements from old-growth forests growing on ecologically similar sites. These results are based on the maximum potential site productivity that might be achieved under ideal conditions. However, in the field, conditions for regeneration and subsequent growth are not always ideal because of factors like competition from brush or overstocking. Therefore, some forests may not reach the potential productivity suggested by research.

The results of the provincial studies apply to forests older than 140 years, which make up about 40 per cent of the timber harvesting land base in the Kingcome TSA. A sensitivity analysis examined the impact to timber supply if site productivity is higher than currently estimated for these stands. The results show the long-term timber supply could be as much as 21 per cent higher than in the base case.

Implications of changes in the AAC

Community Implications

The implication of changes in the AAC for local communities is an important consideration in the Timber Supply Review. The forest industry in the Kingcome TSA is the leading source of employment and income for local residents. The projected decline in timber supply, though not new, will impact local communities.

Compared to the current AAC, an initial harvest forecast of 1.319 million cubic metres per year, if fully harvested and processed, would result in a reduction of about 100 direct person-years of work across the province. However, the actual 1998-2000 harvest rate was approximately 1.118 million cubic metres per

year, or about 15 per cent lower than the initial harvest forecast in the base case. Given the actual average harvest rate over the last three years, the impact on the region's economy may not be as significant as projected.

Your input is needed

Public input is a vital part of establishing the AAC. Feedback is welcomed on any aspect of this discussion paper, the *2001 Kingcome TSA Analysis Report* and other issues related to the timber supply in the Kingcome TSA. Forest Service staff would be pleased to answer questions to help you prepare your response. Please send your comments to the forest district manager at the address below. **Your comments will be accepted until Jan. 28, 2002.**

You may identify yourself on the response if you wish. If you do, you are reminded that responses will be subject to the Freedom of Information and Protection of Privacy Act and may be made public. If the responses are made public, personal identifiers will be removed before the responses are released.

A summary of public comments will be attached to the AAC rationale and will be available from the district office when the chief forester's AAC determination is announced.

For more information contact Scott Mitchell at the Port McNeill Forest District, phone 250 956-5000.

Send your written comments to:

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Visit our Web site at www.for.gov.bc.ca/tsb

The Chief Forester's Responsibility

Determining the allowable annual cuts (AACs) for public forest lands in British Columbia is the responsibility of the province's chief forester. In this lengthy and complex process, the chief forester considers technical reports, analyses and public input, as well as government's social and economic objectives.

This responsibility is required by legislation in the Forest Act, Section 8. It states that the chief forester shall specifically consider the following factors:

1. The rate of timber production that may be sustained from the area, taking into account:
   - the composition of the forest and its expected rate of growth
   - the time that it will take the forest to become re-established
   - silviculture treatments, including reforestation
   - standards of timber utilization
   - constraints on the amount of timber that may be produced due to use of the forest for other purposes.
2. The short- and long-term implications to the province of alternative rates of timber harvesting from the area.
3. The nature, production capabilities and timber requirements of established and proposed processing facilities.
4. The economic and social objectives of the Crown for the area, region and province—as expressed by the minister of forests.
5. Abnormal insect or disease infestations, and major salvage programs planned for the timber on the area.

Some of these factors can be measured and analyzed — others cannot. Ultimately, the chief forester's determination is an independent professional judgment based on the best available information. By law, the chief forester is independent of the political process, and is not directed by the minister of forests when determining AACs. In these determinations, the chief forester considers relevant information from all sources.

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