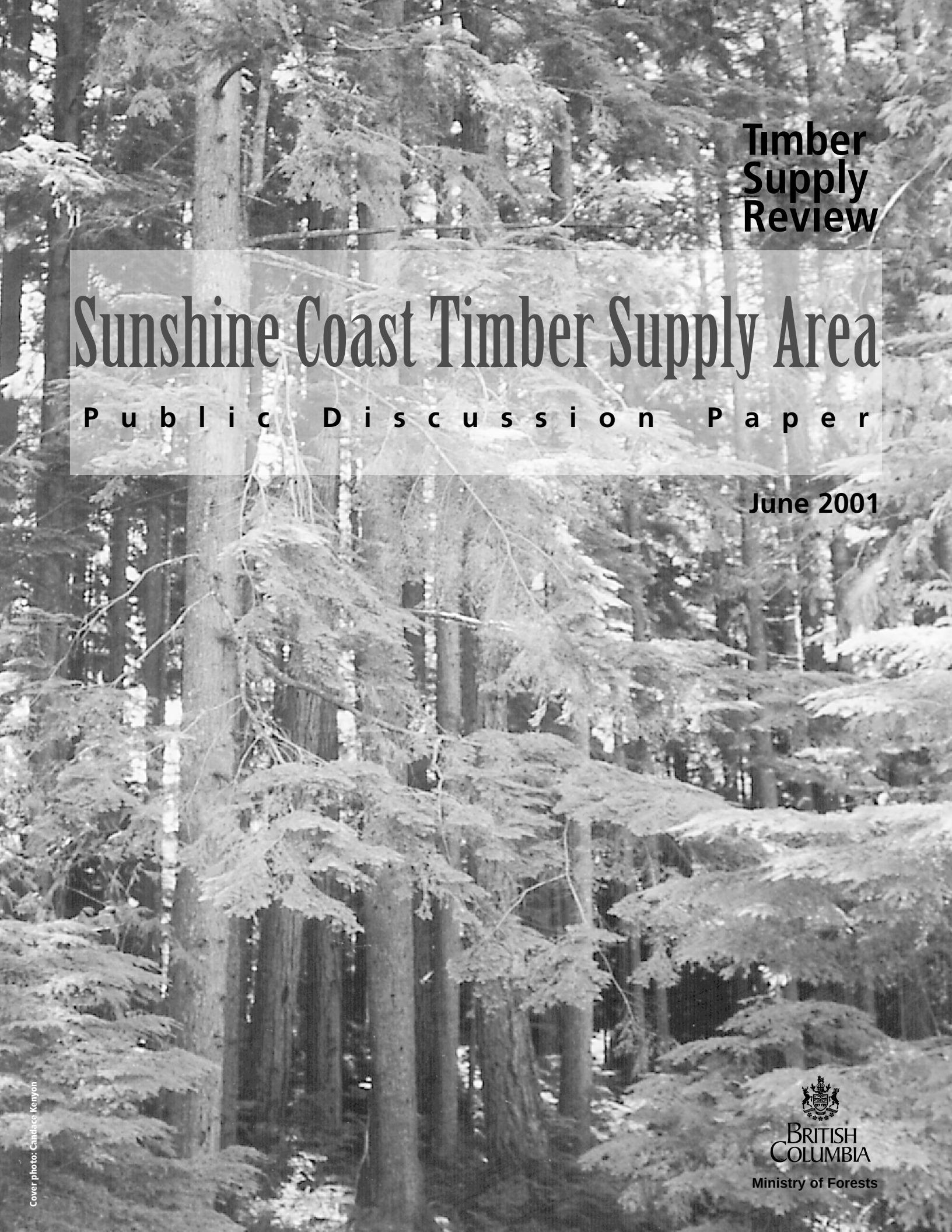


Timber Supply Review

Sunshine Coast Timber Supply Area

Public Discussion Paper

June 2001

Cover photo: Candace Kenyon

BRITISH COLUMBIA

Ministry of Forests

Introduction

The British Columbia Forest Service is reviewing the timber supply for all timber supply areas (TSAs) and tree farm licences (TFLs) in the province. 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 may, if necessary, adjust the allowable annual cut (AAC) for the Sunshine Coast TSA.

By law, the chief forester must review and set new AACs for all TSAs and TFLs every five years. The objectives of the Timber Supply Review are:

- to identify relevant current forest management practices and assess their effects on short- and long-term timber supply, and identify related economic, environmental and social factors
- to identify where improved information is required for future timber supply forecasts
- to provide the chief forester with information to use when making AAC determinations that will apply for the next five years

Timber Supply Review in the Sunshine Coast TSA

The Sunshine Coast TSA Data Package and Information Report were released in May 2000. Following the release, the documents were reviewed by licensees, the public and government agencies. The BC Forest Service has now completed the 2001 Sunshine Coast TSA Analysis Report which is summarized in this discussion paper. The objectives of this document are to provide British Columbians with an overview of the Timber Supply Review process and harvest level forecasts for the Sunshine Coast TSA and to encourage them to provide comments during the 60-day public review period. Public comments will be accepted until Aug. 13, 2001.

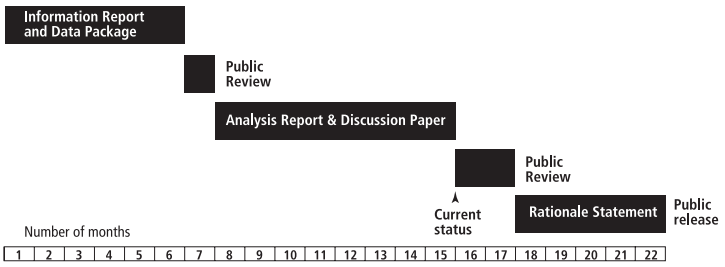
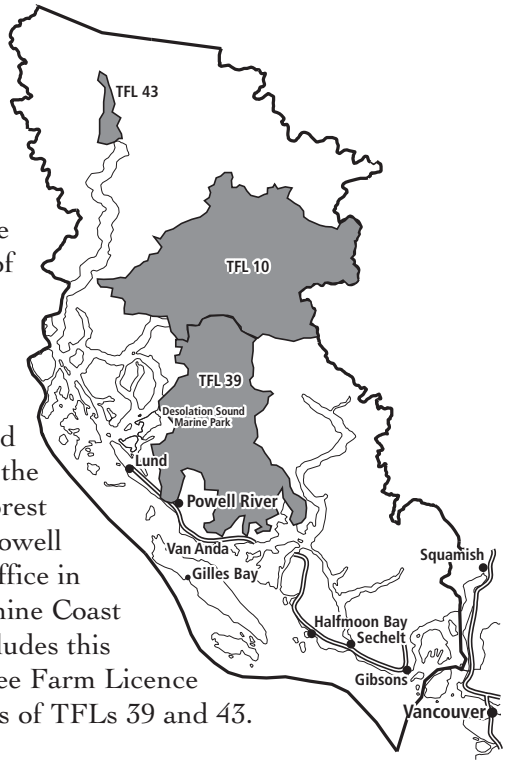


Figure 1. *Review process for the Sunshine Coast TSA*

Before setting a new AAC, the chief forester will review all relevant reports and public input. The chief forester's 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 AAC determination by the chief forester, the minister of forests will apportion the AAC to the various licences and programs.

Description of the TSA

The Sunshine Coast TSA is situated along the southwest coast of British Columbia, extending from Howe Sound in the south to the head of Bute Inlet in the north. The TSA covers approximately 1.5 million hectares and is administered by the Sunshine Coast Forest District office in Powell River and a field office in Sechelt. The Sunshine Coast Forest District includes this TSA, as well as Tree Farm Licence (TFL) 10 and parts of TFLs 39 and 43.



****A timber supply area is an integrated resource management unit established in accordance with section 7 of the Forest Act.***

According to the 1996 census, the population of the Sunshine Coast TSA is 45,878, a 14.5 per cent increase since 1991. More than half of the population lives in the three major centres of Powell River, Sechelt and Gibsons. Other smaller communities include Halfmoon Bay, Pender Harbour, Lund and the communities on Texada, Cortes and Lasqueti islands.

First Nations

Eight First Nations have traditional territory in the Sunshine Coast TSA and four of them also have reserve lands (the Sechelt Indian Band, Sliammon Indian Band, Homalko Indian Band and Klahoose Indian Band). The other four First Nations with traditional territory are the Squamish Nation, the Comox Indian Band, the Campbell River Band and the Cape Mudge Band.

The Sechelt Indian Band has traditional territory covering Jervis and Sechelt inlets, and the majority of the members reside in Sechelt. The Sliammon Indian Band has six reserves and traditional territory located near Powell River. The Homalko Indian Band has 11 reserves and traditional territory around Bute Inlet, but the majority of its members reside in Campbell River. The Klahoose Indian Band has a reserve and office in Squirrel Cove on Cortes Island and traditional territory extending into the head of Toba Inlet. These four First Nations have a population of about 2,150 people living in the TSA.

Archaeological Overview Assessments (AOAs) have been completed for portions of the Sunshine Coast TSA. These assessments are the basis for determining areas and sites that may require further evaluation in the form of an Archaeological Impact Assessment (AIA), which are carried out as part of operational planning. The findings from completed AIAs will be considered in this Timber Supply Review.

Many First Nations members participate in the forest sector and First Nations have indicated a strong interest in obtaining forest tenure in order to provide economic opportunities for their members. First Nations have also expressed concern about the impact of logging on water and fishery resources, heritage resources and spiritual ceremonial sites in their traditional territories. The Sunshine Coast Forest District attempts to address these concerns through co-operative planning processes, heritage resource inventories and consultation on five-year development plans.

The natural resources

The forests of the Sunshine Coast TSA provide a wide range of forest land resources, including forest products (timber and non-timber, such as wild mushrooms), recreation and tourism amenities, and a variety of fishery and wildlife habitats.

The mountainous topography and associated high rainfall in the Sunshine Coast TSA produce a diverse climate and ecology. The landscape ranges from rocky shorelines and coastal plains to rugged ice-capped mountains. The Coast Mountains dominate the TSA, with nutrient-rich, moist floodplains in valley bottoms and alpine meadows at higher elevations. Several significant coastal fjords, most notably Bute, Toba and Jervis inlets, also occur in the TSA.

Within the land base currently considered available for timber harvesting, Douglas-fir, hemlock and balsam are the major tree species, while western redcedar, spruce, pine, red alder, cottonwood and maple also occur. Douglas-fir, hemlock, alder and western redcedar are the tree species most commonly used by the forest industry in the area. The TSA has a long history of harvesting activity, resulting in younger forests on better quality, more accessible growing sites, and older forests on the poorer and less accessible areas.

The forests and landscapes of the Sunshine Coast TSA are home to a wide variety of wildlife species, including . The Forest Practices Code outlines a process for identifying species at risk that require special management. Currently, eight species identified as at risk may be found in the Sunshine Coast TSA, including the Northern goshawk, marbled murrelet and Keen's long-eared myotis.

Residents and visitors make extensive use of the forests of the TSA for recreational activities. Parks, recreation sites and trails, and roaded and non-roaded areas in the TSA provide opportunities for numerous outdoor activities such as hiking, camping, skiing, mountain biking, horseback riding, mountaineering, angling, hunting, canoeing and kayaking, as well as more passive activities such as wildlife or forest viewing.

About 28 per cent of the Sunshine Coast TSA land base is considered productive Crown forest land managed by the BC Forest Service (approximately 428,000 hectares). Currently about 52 per cent of the productive Crown forest land is considered available for harvesting (14 per cent of the total TSA 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 Sunshine Coast TSA, about 48 per cent of the productive Crown 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 biodiversity, scenic areas, community watersheds, recreation features, stream, lake and wetland management, gully management and protection of unstable terrain were included in the analysis.

Land use planning

Preliminary work is underway on a land and resource management plan (LRMP) for the Sunshine Coast TSA. The LRMP will include recommendations regarding future management of public forest lands in the TSA. In addition, several small local plans have been completed that reflect integrated multiple-resource use. Land-use planning decisions that have received final approval from government will be reflected in this timber supply review. Since the last timber supply review, 15 new protected areas have been designated and one more is expected to be announced soon. The protected areas are reflected in this timber supply review.

Current allowable annual cut

Following the last timber supply review, the chief forester set the allowable annual cut (AAC) in the Sunshine Coast TSA at 1.14 million cubic metres, effective July 1, 1996. This level represents a 3.6 per cent increase from the previous level. The chief forester also specified that 1.045 million cubic metres be attributed to harvesting from coniferous forests and 95,000 cubic metres to harvesting from deciduous forests. The AAC is apportioned by the minister of forests to various licences.

Socio-economic profile

Regional economy

The economy of the southern portion of the Sunshine Coast TSA is relatively well-diversified, benefitting from the growing economy of Vancouver and non-employment sources of income such as pensions. The northern portion of the TSA relies more heavily on the forestry sector.

As Figure 2 illustrates, forestry is the largest contributor to employment, supporting about 28 per cent of the total labour force. The public sector, which includes municipal, provincial and federal employment, is next at 26 per cent of the total labour force. The travel sector—both business and tourism—and construction are third and fourth, respectively. Income transfers, (ie. non-employment related spending) such as pensions, investment income and social assistance payments, support nearly seven per cent of the labour force.

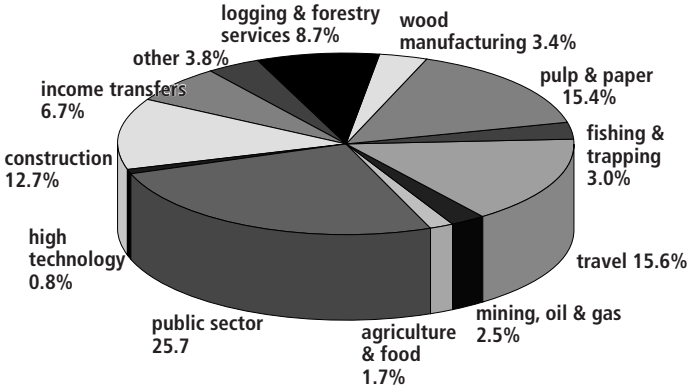


Figure 2. *Sunshine Coast TSA - Total Employment by Basic Sector, 1996*

Source: 1996 Forest District tables, BC Ministry of Finance and Corporate Relations

Notes: The figures are for the Sunshine Coast TSA. Percentages reflect direct, indirect and induced employment supported by the basic sector. "Other" (basic sectors) consist of transportation and some manufacturing.

The forest sector supports numerous other jobs in the area through companies and employees purchasing goods and services from local businesses. Each 100 full-time direct forestry jobs in the Sunshine Coast TSA are estimated to support another 44 to 87 jobs, depending on the forestry activity (harvesting or timber processing). In comparison, 100 direct jobs in the public sector support an estimated 25 indirect and induced jobs, and 100 tourism jobs support an additional 15 positions.

Table 1 illustrates the potential contribution of the forest industry associated with the Sunshine Coast TSA timber harvest to both the regional and provincial economies. Figures in this table are based on the average 1998-2000 annual harvest of 1,118,888 cubic metres.

	TSA	Provincial
Direct employment (person years)	508	1,300
Total employment (person years)	823	2,955
Total employment income ($1999 millions per year)	34.3	114
Provincial government revenues ($1999 millions per year)	n.a.	32.4

Table 1. *Summary of local and provincial economic information associated with the average 1998-2000 annual harvest.*

Timber supply forecasts

A timber supply computer model was used to project several possible timber supply forecasts for the next 250 years. Two harvest forecasts are presented in this report for discussion and comparison. The two forecasts illustrate the effect of current forest management practices on timber supply, using the best available information. However, they differ by using different approaches to managing harvest rates. The forecasts are not recommendations for an AAC, but rather they are two of many sources of information the chief forester will consider when setting the AAC.

One forecast shows the initial harvest level beginning at the current AAC, while the other forecast indicates a maximum even-flow harvest level. Due to areas of uncertainty, the AAC determined by the chief forester may be greater or less than the levels projected in these harvest forecasts.

As Figure 3 shows, the forecast in which the initial harvest level is the same as the current AAC (1.14 million cubic metres per year) is maintained for 250 years. In the second forecast, the initial harvest level is 1.233 million cubic metres per year, an increase of eight per cent over the current AAC. Both of these harvest levels are projected to be maintained over the long term without requiring future harvest level reductions or creating future timber supply disruptions.

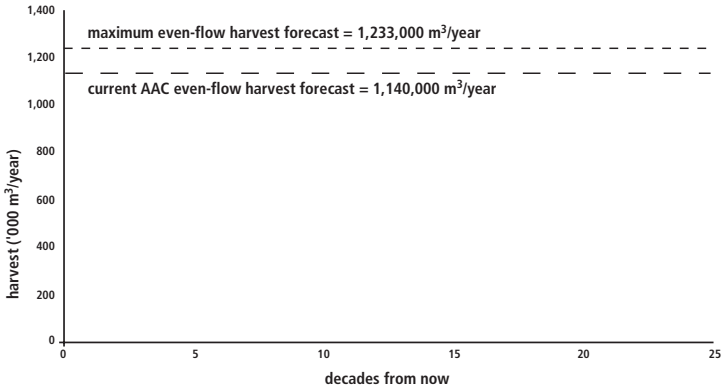


Figure 3. *Two potential timber supply forecasts — Sunshine Coast TSA, 2001*

Compared to the 1995 timber supply analysis, several changes have occurred in the Sunshine Coast TSA that affect the timber supply. Implementation of the Forest Practices Code has increased landbase reductions for riparian areas and volume reductions for wildlife tree patches, and restricted timber availability in order to meet old-growth requirements. This has been offset by changes to the inventory as a result of new information from a vegetation resources inventory completed in 1999. Based on reclassifications and ground sampling, the inventory indicates that existing stand volumes in the Sunshine Coast TSA have increased by about 13 per cent. As well, changes to scenic areas and revisions to visual quality classes have improved timber supply. The area subject to visual quality objectives has decreased from about 55 per cent of the timber harvesting land base to less than 50 per cent. Modeling refinements have also enhanced timber supply. In this analysis, deciduous forests have been included in the landbase.

Sensitivity analyses: examining uncertainty

Because forests are complex and constantly changing, timber supply analysts assess how their timber supply forecast results 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 any changes in information or uncertainties and risks might affect timber supply.

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

Uncertainty about the size of the timber harvesting land base

Uncertainty about the size of the timber harvesting land base results from various factors, such as land-use decisions, timber price fluctuations, changes in harvesting and milling technology, and changes in the definition of non-merchantable forest types

As Figure 4 shows, if the timber harvesting land base is decreased by 10 per cent, the harvest level of 1.233 million cubic metres per year could be maintained for only three decades before declining by 10 per cent. If the timber harvesting land base is increased by 10 per cent the timber supply also increases by 10 per cent and a maximum-even flow harvest forecast of 1.353 million cubic metres per year can be maintained.

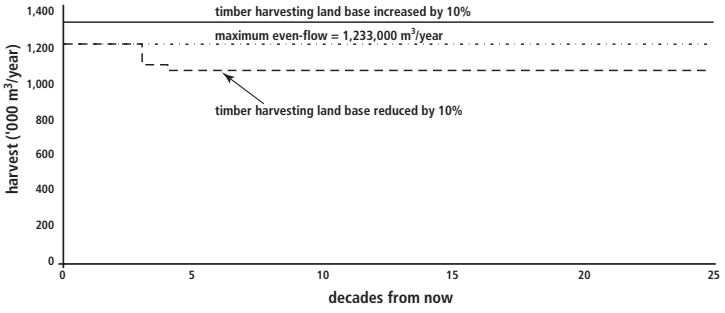


Figure 4. *Effects of changes to the timber harvesting land base—Sunshine Coast TSA, 2001*

Uncertainty in estimates of existing stand volumes

Volume estimates for existing stands are subject to uncertainties in the forest inventory. A new inventory procedure, called the vegetation resources inventory, was completed in 1999 and showed that volumes for the Sunshine Coast TSA were underestimated by about 13 per cent.

As Figure 5 shows, if stand volume estimates are not adjusted to account for the results of the vegetation resources inventory, an even-flow harvest level of 1,157,789 cubic metres per year—or six per cent below the maximum even-flow harvest forecast—can be maintained.

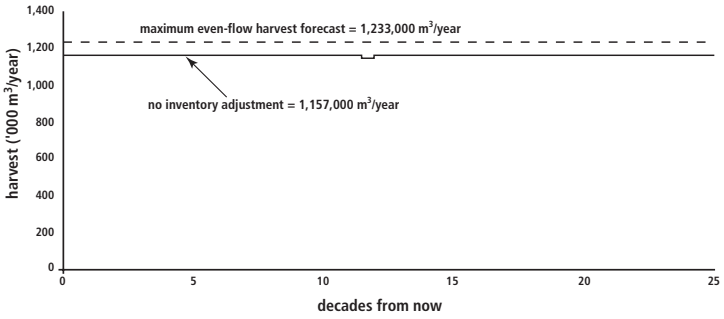


Figure 5. *Effect of not adjusting existing volume estimates to account for vegetation resources inventory—Sunshine Coast TSA, 2001*

Uncertainty in the productivity of current old-growth sites after harvesting

The results of two recent provincial studies suggest that the future productivity of sites currently occupied by old-growth stands may be underestimated. The research shows that the measured productivity of existing second-growth stands is higher than the productivity estimates using measurements from old-growth stands 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, regeneration and subsequent growth does not always occur under ideal conditions due to factors such as competition from brush or overstocking. Therefore, some stands may not reach the potential productivity suggested by research.

The results of these studies apply to stands older than 140 years, which make up 18 per cent of the timber harvesting land base in the Sunshine Coast TSA. While there are no local studies to verify the application of the results of the provincial studies to the Sunshine Coast timber supply area, the sensitivity analysis indicates that the harvest level could be as much as seven per cent higher than the maximum even-flow forecast.

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. Of the two harvest forecasts presented for the Sunshine Coast TSA, one suggests a harvest level beginning at 1.14 million cubic metres per year and the second suggests a harvest level beginning at 1.233 million cubic metres per year. Both forecasts could be maintained for 250 years. The average actual harvest from 1998 through 2000 was about 1.119 million cubic metres. If the harvest forecast beginning at 1.14 million cubic metres per year is fully harvested and utilized, employment or other industry-related activities in the Sunshine Coast TSA could be marginally higher than the 1998-2000 average. If the harvest forecast beginning at 1.233 million cubic metres is fully harvested utilized, employment or other industry-related activities in the Sunshine Coast TSA could be significantly higher than the 1998-2000 average.

Your input is needed

Establishing the AAC is an important decision that requires well-informed and thoughtful public input. Feedback is welcomed on any aspect of this discussion paper, the 2001 Sunshine Coast TSA Analysis Report and other issues related to the timber supply in the Sunshine Coast TSA. Forest Service staff would be pleased to answer questions or discuss concerns that would help you prepare your response. Please send your comments to the forest district manager at the address below. Your comments will be accepted until Aug. 13, 2001.

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 and/or mail your comments to:

District Manager
BC Forest Service
Sunshine Coast Forest District
7077 Duncan Street
Powell River, BC V8A 1W1
Phone: (604) 485-0700, Fax: (604) 485-0799

Or electronically mail to
Barry.Miller@gems7.gov.bc.ca

Visit our website at www.for.gov.bc.ca/tsb

Background Information Regarding TSR

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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