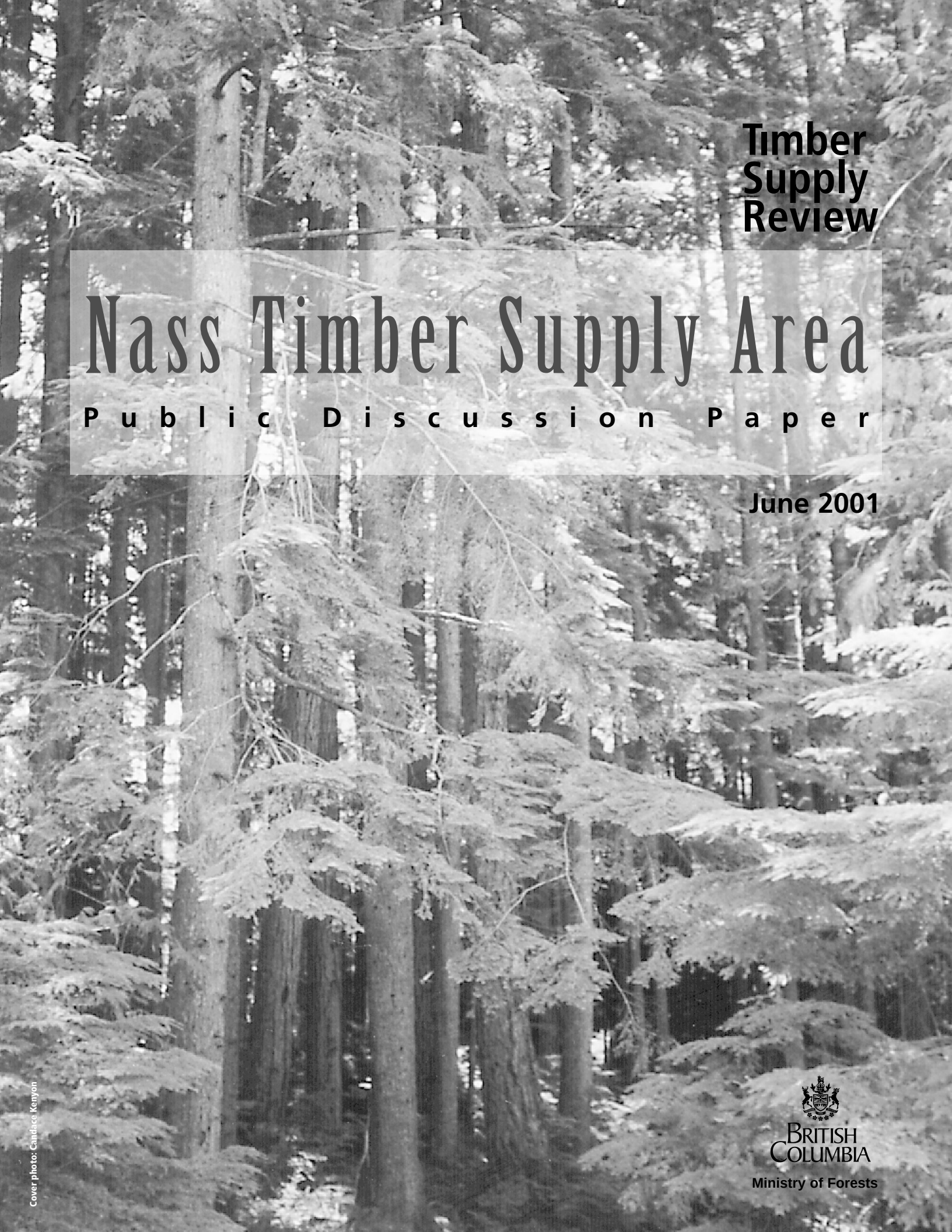


Timber Supply Review

Nass 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 Nass 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 Nass TSA

The *Nass 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 Nass 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 Nass TSA and to encourage them to provide comments during the 45-day public review period. Public comments will be accepted until July 30, 2001.

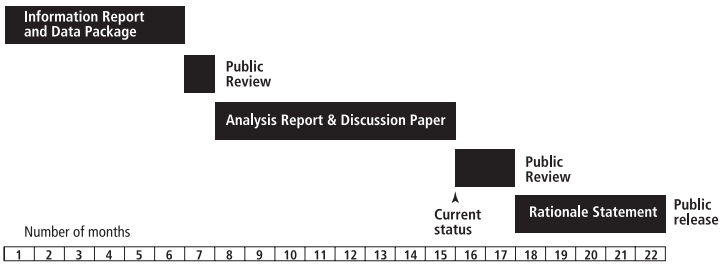
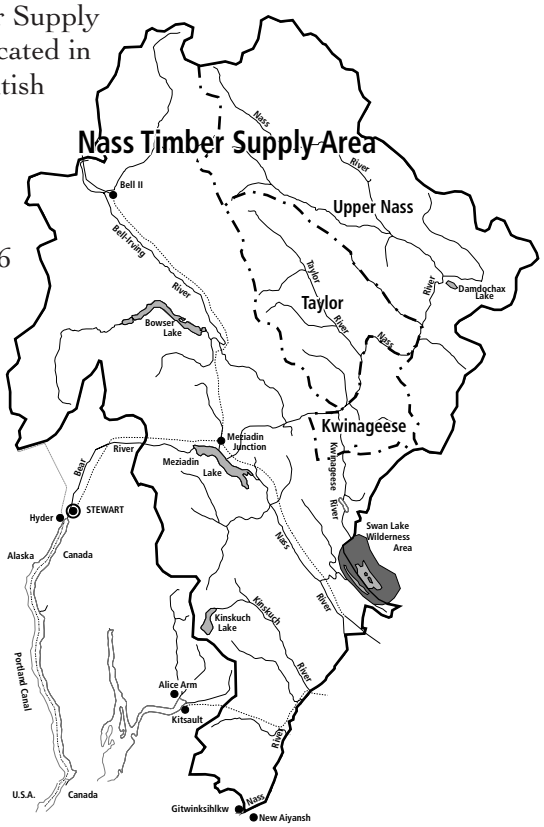


Figure 1. *Review process for the Nass TSA*

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 which, 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 Nass Timber Supply Area (TSA) is located in northwestern British Columbia in the Prince Rupert Forest Region and covers approximately 1.6 million hectares. This TSA is administered from the Kalum Forest District office in Terrace and a field office in Stewart. The Kalum Forest District includes the Nass and Kalum TSAs, as well as tree farm licences 1 and 41.



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

The Nass TSA is remote and sparsely populated with a population of approximately 2,000 (1996 census). The communities within and adjacent to the TSA include Stewart, Meziadin, Elsworth camp, Nass camp, Van Dyke Camp, Gitlakdamix, Gitwinksihlkw, Lakalzap, Gitwanga, Kitwanga and Gitanyow.

First Nations

A number of First Nations have traditional territories within the Nass TSA. They are represented by four tribal organizations: Nisga'a, Gitxsan, Gitanyow and Tahltan.

The effective date of the Nisga'a Treaty—a comprehensive land claim—was May 11, 2000. As decisions have been finalized, the Nisga'a lands have been removed from the Nass TSA.

The Gitanyow First Nation has reached the agreement-in-principle stage 4 of the B.C. Treaty Commission process. Since November 1999, when B.C. and Canada presented a joint land and cash offer to the Gitanyow, treaty negotiations have continued and three treaty-related measures are being implemented. A bilateral forest negotiations table has also been established to address Gitanyow fibre access interests within existing policy and legislation.

The Tahltan First Nation has suspended treaty negotiations. Currently, the Tahltan have prioritized their involvement in lands and resource management planning initiatives to areas outside of the Nass TSA.

The Gitxsan First Nation is participating in informal discussions with B.C. and Canada regarding the resumption of treaty negotiations.

All of the First Nations have expressed concerns about timber harvesting within their traditional territories. Cultural heritage inventory studies, which identify sites of potential archaeological significance, have been completed. Archaeological impact assessments and traditional use studies have also been completed within portions of the TSA. The information gathered from these studies is used to plan forest management operations, while ensuring that cultural heritage resources are taken into account.

The natural resources

The forests of the Nass TSA provide a wide range of forest land resources, including forest products, recreational opportunities, wild pine mushroom harvesting, minerals, tourism amenities and a variety of wildlife habitats

The western part of the Nass TSA is mountainous, with coastal plains and rugged ice-capped mountains. Almost all of the forest in this area is either not merchantable or is situated on environmentally sensitive locations, and is unavailable for harvesting. The eastern portion of the TSA is characterized by wide and flat plateaus bordered by the Skeena and Coast Mountain ranges. Overall in this TSA, summers are warm, while cold Arctic fronts frequently descend into the area in the winter. The forests of the Nass TSA are dominated by western hemlock and subalpine fir, while lodgepole pine, Sitka spruce and western redcedar also occur, as do lesser amounts of deciduous forests and scattered wetlands.

The forests of the Nass TSA are home to a wide variety of wildlife species, including moose, mountain goat and black bear. Rivers support a rich variety of fish, such as salmon, steelhead, rainbow trout and Dolly Varden char. Wetlands and lakes provide habitat for a variety of birds and other species. 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 Kalum Forest District, including tailed frog, Northern goshawk and grizzly bear.

Parks, glaciers, water bodies, recreation sites and trails, and roaded and non-roaded areas provide opportunities for numerous outdoor activities in the Nass TSA. Although there are opportunities for recreation, the demand is limited due to the low population density of the region and because the majority of the area is inaccessible. Within the TSA, Meziadin Lake Provincial Park and Swan Lake-Brown Bear Park have been established as protected areas. Recreational activities in the TSA include backcountry touring, sport fishing, hiking, hunting and wilderness viewing along the Stewart/Cassiar Highway. This highway connects to further recreational opportunities in the Yukon and Alaska.

About 39 per cent of the Nass TSA land base is considered productive Crown forest land managed by the BC Forest Service (approximately 639,000 hectares). Currently, about 30 per cent of the productive Crown forest land is considered available for harvesting (12 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 Nass TSA, about 70 per cent of the productive Crown forest is not considered available for timber harvesting and will provide for many environmental values. Forested areas both inside and outside the timber harvesting land base will help to maintain critical forest habitats for many species. Forest cover requirements for biodiversity and visual quality were included in the analysis.

Land use planning

Currently, a land and resource management plan has not been initiated in the Nass TSA. Mount Bell Irving/Hanna Ridge, Kwinageese Outlet, Tintina, Nass-Meziadin Junction and Damdochax/Slamgeesh Lake are areas identified by the government as approved official study areas and may be established as parks as part of the completion of a higher level plan or by order-in-council. Only land-use planning decisions that have received approval from government will be reflected in this timber supply review.

Current allowable annual cut

The chief forester set the allowable annual cut (AAC) in the Nass TSA at 1.15 million cubic metres, effective Jan. 1, 1996. This level represented an eight per cent decrease from the previous AAC. In 2000, the AAC was reduced to 1.142 million cubic metres to reflect land transferred out of the TSA under the Nisga'a Treaty. The AAC is apportioned by the minister of forests to various licences. Over the past several years, the actual harvest has been less than half of the AAC, mainly due to poor market conditions and Skeena Cellulose's corporate restructuring.

Socio-economic profile

Regional economy

Employment in the Nass TSA (including forestry) totals about 400 positions. As Figure 2 shows, forestry is the largest contributor to private-sector employment, while tourism and mining rank second and third, respectively. Commercial harvesting of pine mushrooms is an important unconventional economy. In 1994, about 160,000 kilograms of pine mushrooms worth some $4.2 million were harvested in the area.

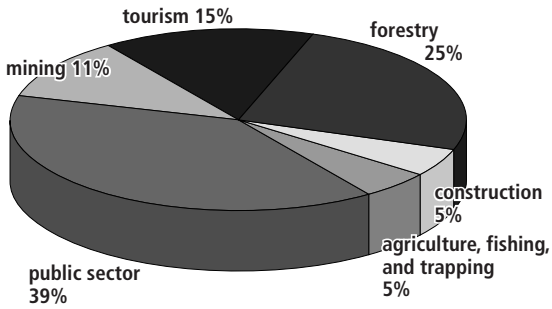


Figure 2.
Nass TSA—Total Employment by Basic Sector, 1996

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

Note: The figures are for the Nass portion of the Kalum Forest District. 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 Nass TSA are estimated to support another 20 to 30 jobs, depending on the forestry activity (harvesting or timber processing). By comparison, each 100 tourism jobs support an additional 10 to 15 positions.

Table 1 illustrates the potential contribution of the forest industry associated with the Nass TSA timber harvest to both the regional and provincial economies. Figures in this table are based on the current AAC of 1,142,400 cubic metres.

	TSA	Provincial
Direct employment (person years)	157	953
Total employment (person years)	200	2,091
Total employment income ($1999 millions per year)	6.4	60.5
Provincial government revenues ($1999 millions per year)	n.a.	23.1

Table 1. *Summary of local and provincial economic information associated with the current AAC.*

Timber supply forecasts

A timber supply computer model was used to project several possible timber supply forecasts for the next 250 years. One of these forecasts is the base case forecast that illustrates the effect of current forest management on timber supply. The base case is not an AAC recommendation, but rather one of many sources of information the chief forester will consider when setting the AAC.

The base case forecast is presented in this report for discussion and comparison. Due to areas of uncertainty, the AAC determined by the chief forester may be greater or less than the level forecast in the base case.

The base case timber supply forecast for the Nass TSA begins at an initial harvest level of 820,000 cubic metres per year for one decade. This is followed by a reduction of 10 per cent per decade for the next six decades prior to reaching the long-term harvest level of 407,000 cubic metres per year. The initial harvest level is 28 per cent lower than the current AAC primarily as a result of excluding the Upper Nass, which is no longer considered an economically accessible area.

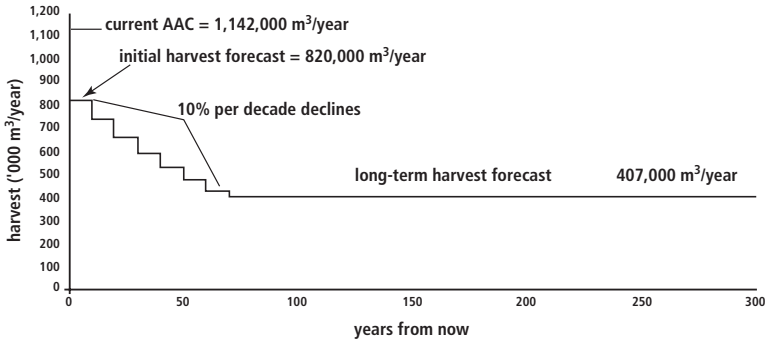


Figure 3. *Base case timber supply forecast for the Nass TSA, 2001*

Compared to the 1995 timber supply analysis, several changes have occurred in the Nass TSA that affect the timber supply. Implementation of the Forest Practices Code has increased the land base reductions for riparian areas and volume reductions for wildlife tree patches, while old-growth requirements have restricted timber availability. In addition, the Nisga'a Treaty took effect in May 2000, resulting in the removal of about 28,750 hectares from the TSA land base.

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 the 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 uncertainties and risks, or changes in information, might affect timber supply.

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

Uncertainty about the size of the timber harvesting land base

Uncertainty in the size of the timber harvesting land base is a result of various factors, such as land-use decisions, boundary changes and the economics that define operability. Currently, in the Nass TSA, there is some uncertainty about the exclusion of the Upper Nass area. The Upper Nass area was excluded in the base case forecast, reducing the timber harvesting land base by 28 per cent. There have been numerous initiatives to resolve road access difficulties to reach the Upper Nass area. However, presently the Upper Nass area remains economically inaccessible, and therefore was considered not to contribute to the timber harvesting land base.

As Figure 4 shows, if the Upper Nass is included in the timber harvesting land base the harvest forecast indicates an initial harvest level of 1.059 million cubic metres (about seven per cent below the current AAC), which eventually declines to a long-term harvest level of 525,000 cubic metres per year.

There is also some uncertainty about the inclusion of cable harvesting areas, which comprise about 36 per cent of the timber harvesting land base. As Figure 4 indicates, if 20 per cent of the cable harvesting area is excluded from the timber harvesting land base the initial harvest level is forecast to begin at 760,000 cubic metres per year and then gradually decline to a long-term harvest level of 380,000 cubic metres per year.

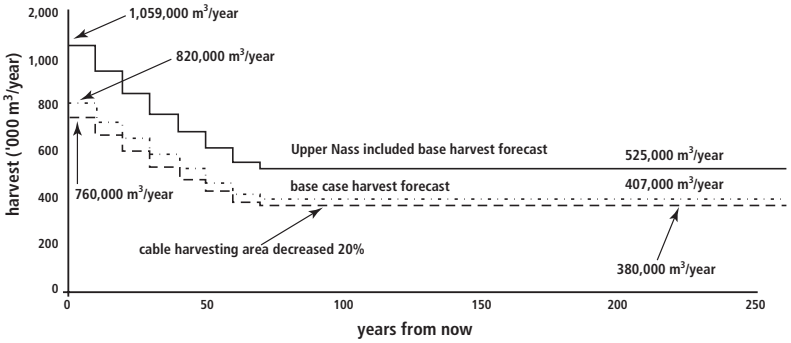


Figure 4. *Effects of uncertainty in the timber harvesting land base—Nass TSA, 2001*

Uncertainty in allowable disturbance in the IRM zones

Within the Integrated Resource Management (IRM) zones, the base case reflects a maximum disturbance in which 35 per cent of the area has trees less than green-up height (three metres). However, a 1999 study indicated that current harvesting operations were disturbing no more than 22 per cent. To assess the uncertainty regarding how to model the allowable disturbance, a sensitivity analysis looked at increasing and decreasing the maximum allowable disturbance by 15 per cent.

As Figure 5 shows, if the maximum disturbance is 20 per cent, the harvest level in the initial decade declines 38 per cent from the base case forecast, then in the second decade an increase is possible followed by a 10 per cent reduction per decade to a long-term harvest level that is slightly lower than the base case harvest forecast.

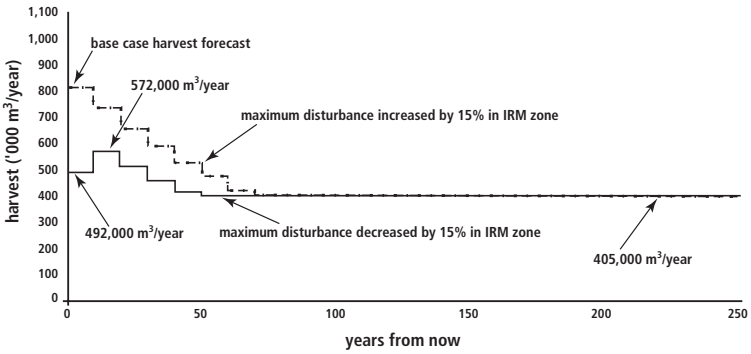


Figure 5.

Effects of increasing and decreasing disturbance levels in the IRM zones—Nass TSA, 2001

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. Given that the Nass timber harvest provides more than 25 per cent of the basic employment in the TSA, changes to the timber supply would be expected to have an impact on the overall economic trends of the region. However, it is anticipated that in the short term, a base case forecast that reflects a 28 per cent lower harvest level (from 1.142 million cubic metres to 820,000 cubic metres per year) would not have a significant impact. Recent actual harvest levels in the TSA have been considerably lower (52 per cent) than the current AAC.

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 Nass TSA Analysis Report* and other issues related to the timber supply in the Nass 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 July 30, 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
B.C. Forest Service
Kalum Forest District
Rm. 200 – 5220 Keith Ave.
Terrace, B.C. V8G 1L1
Phone: (250) 638-5100, Fax: (250) 638-5176

Or electronically mail to
Wendi.Knott@gems1.gov.bc.ca

Visit our website at http://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.

Why the current AAC may be higher than the long-term harvest level.

Some concern has been expressed that the AACs are higher than the long-term harvest level. There are two main factors which explain this difference:

- In the short term, harvesting takes place in older forests which have accumulated high timber volumes by growing for a long time. Future harvesting on the same sites will take place in second-growth forests at younger ages, often yielding lower volumes per hectare.
- Where the long-term harvest level is significantly below the current AAC, the chief forester's strategy is to gradually reduce AACs in a managed transition to the lower level over several decades (provided the long-term harvest level is not jeopardized) to allow communities that rely on the forest sector to avoid sudden economic disruptions and to plan for the future.

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