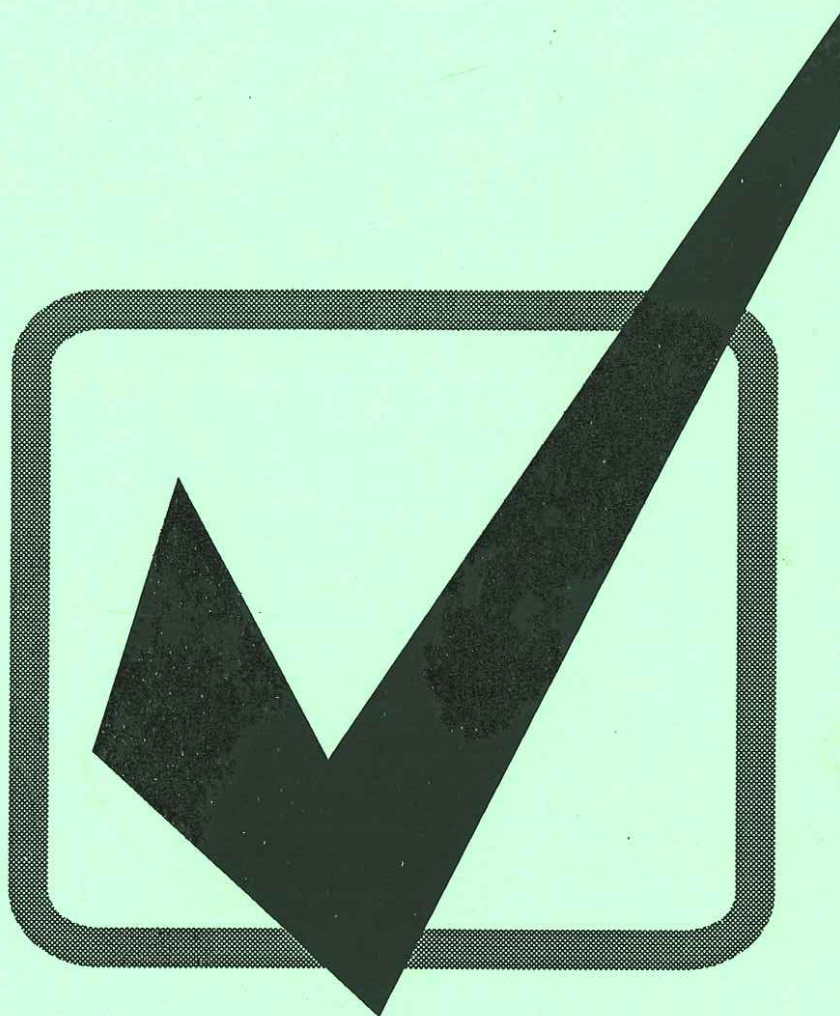


REPORT ON THE

Aboriginal Participation Survey



**Aboriginal Affairs Section
Corporate Policy and Planning Branch
Ministry of Forests**

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Executive Summary

Background and Objectives

Prior to the Aboriginal Participation Survey, very little data existed on aboriginal participation rates in the forest industry, Forest Service and forest economy. As a result, policy decisions on aboriginal programs were made on the basis of a limited range of experience — only anecdotal evidence could be offered regarding the success or failure of certain programs or the level of aboriginal participation in certain sectors of the industry.

The Survey consisted of three sections — one each for First Nations, industry and the Forest Service. Forest Service questionnaires were distributed to all Forest District offices in the province, First Nations questionnaires were mailed to all Bands in the province, and industry questionnaires were distributed to companies via industry groups — COFI, CLMA, ILMA and NILS. Due to time constraints, the Truck Loggers Association was not surveyed; however, a large sample was obtained from the other groups.

In addition to serving as a broad knowledge base, the data collected by the survey will be used as a starting point for a more detailed study of aboriginal joint ventures with industry. Successful joint ventures will be studied to determine how positive results can best be obtained in First Nations partnerships with the forest industry.

Results

Not all of the findings of the questionnaires are summarized here, only the broad outlines. Facts and figures omitted here for brevity are still included in the body of the report.

RESPONSE

The response rate for the Forest Service questionnaire was 100%, with all forty-three Forest District offices returning questionnaires. The Band questionnaire was completed and returned by 18 of the 198 Bands it was sent to. Industry returned 30% of its questionnaires, or 56 of 184.

EMPLOYMENT

Direct employment of aboriginal workers in the forest sector is somewhat lower than one would expect given First Nations population demographics, but not significantly so. However, opinion data from all surveys indicate that lack of education and training are important current barriers to aboriginal employment in the forest sector.

The aboriginal employment rate in industry is approximately 4.3%, while the rate of employment in Forest District offices is 2.1%. This disparity may be an effect of the higher level of education necessary for most Forest Service jobs.

In industry, 90% of aboriginal workers are employed in machine operation and labour, with the balance mainly in technical positions. Similarly, the Forest Service employs 95% of its

aboriginal workers in technical and clerical positions — there are currently no natives in management positions in the Districts.

CONTRACTING

The Forest Service's Direct Award Silviculture program has been very successful in encouraging viable aboriginal silviculture firms. The program has doubled in size over the past year and is measurably creating new competitive First Nations silviculture contractors.

In fact, the strongest area of First Nations forestry activity is presently silvicultural contracting, both for industry and the Forest Service. Industry is currently awarding approximately 6% of its contracts annually to aboriginal companies; of these, fully 70% are silvicultural contracts. It is estimated that industry is now awarding as many contracts to aboriginal firms competitively as the Forest Service is through the Direct Award program.

TRAINING

The Forest Service's training initiatives, the Native Unit Crew Program and the Native Orientation Program, are experiencing varying levels of success. The Native Unit Crew Program is clearly successful, providing employment and training to large numbers of aboriginal people.

The Native Orientation Program, on the other hand, has had mixed success. While some Districts report that the Program has provided them with quality employees, others cite personality and cultural conflicts, limited educational backgrounds, lack of funding, and union re-call provisions as disincentives to District involvement. Nonetheless, the Program trained 71 First Nations participants last year, and retained almost half of them on a continuing basis.

ABORIGINAL BUSINESS VENTURES

Aboriginal small business ventures in forestry tend to be concentrated in the areas of silviculture and harvesting, with silviculture by far the greater of the two. Aboriginal ventures in remanufacturing are just getting started — only 4 of the 130 active Section 16.1 timber sales in B.C. are held by native ventures or joint ventures, and all of these ventures are relatively recent. There are a few commodity mills with an aboriginal interest, most notably Babine Forest Products of Burns Lake, but aboriginal participation is still concentrated in activities requiring a lower capital commitment.

Forest Service respondents emphasized that increased business and technical training are important to increase the viability of aboriginal forestry ventures. Partnerships with industry were also stressed as a means of improving aboriginal involvement in the business sector.

ATTITUDES AND OPINIONS

All of the surveys asked respondents to identify what they felt were the greatest barriers to aboriginal participation in forest sector activities. Respondents from that Forest Service, industry and First Nations all agreed that inadequate training and education levels are the greatest barriers to aboriginal participation. First Nations and the Forest Service also agreed that cross-cultural differences are another significant barrier.

Not surprisingly, favoured remedies included an increase in business and technical training programs. Promotion of joint ventures for economic development was also urged.

COMMENTS

Comments from respondents pointed out other methods of increasing aboriginal involvement, and identified obstacles other than those provided for consideration in the questionnaire.

For instance, the importance of flexible work schedules to aboriginal workers was stressed by respondents from industry, First Nations, and the Forest Service. Joint ventures were highlighted by some industry respondents as a means of increasing understanding and economic benefit among all parties. A few First Nations and Forest Service respondents questioned whether the current tenure system could adequately address the need for aboriginal involvement and suggested that new kinds of tenures, such as an aboriginal woodlot program, might increase involvement.

CONCLUSIONS

Rates of aboriginal participation measured as ratios or averages are difficult to draw inferences from since they lack a basis for comparison. It is very much a subjective decision whether or not an industry employment rate of 4.3%, which is only 1% less than the provincial demographic on First Nations population, is low or high. For that reason, this report has attempted to avoid unwarranted value judgments when presenting the results of the survey. As far as possible, comparisons and contrasts have been made, but the data provided by the survey is extremely general owing to the sketchy knowledge available when the questionnaire was constructed. Future studies can use the general information in this report both as a basis for comparison and as a starting point for more detailed work.

Notwithstanding the uncertainties involved, there are some clear conclusions to be drawn from responses from all participants:

1. Employment of First Nations workers in government is less than representative. In order to rectify the situation, employers require an increased recognition of the problem of aboriginal under-employment and aboriginal workers require an increased appreciation of the importance of training and education.
2. The level of training and education in the First Nations workforce is considered inadequate by all respondent groups. While more training is universally called for, it is unclear at present what type of training would be appropriate — present training prospects, such as public schools and community colleges, may be underutilized or considered irrelevant by First Nations workers.
3. There is a great deal of potential for growth in aboriginal small business forestry. Programs like the Native Direct Award Silviculture Program have shown that government can stimulate growth without sacrificing quality. Opportunities to implement such programs in other areas of government contract and tenure award should not be ignored.

The Forest Service Survey

Summary

The Forest Service section of the Aboriginal Participation Survey was sent to, and returned by, every District Manager in the province.¹ The intent of the Survey was to measure in both quantitative and qualitative terms the approximate extent of aboriginal participation in programs and initiatives administered by the Ministry of Forests.

Aboriginal involvement in the Forest Service and Forest Service programs is highly variable, depending on which programs and areas you examine.

Both the Native Unit Crew program and the Native Direct Award Silviculture program can be described as unqualified successes. The Unit Crew program is providing employment and training to large numbers of aboriginal people. The Direct Award program has doubled in size over the past year, is providing quality contracting and training opportunities, and is creating viable native silviculture firms across the province.

The Native Orientation Program has had mixed success. While some Districts report that the Program has provided them with quality employees, others cite personality and cultural conflicts, poor educational backgrounds, lack of funding, and union re-call provisions as disincentives to District involvement.

The Small Business Forest Enterprise Program is underutilized, with only 10 Districts reporting any aboriginal involvement with Section 16.1 or Section 18 Timber Sales. Currently, approximately 3% of Section 16.1 Timber Sales are held by aboriginal ventures or joint ventures.

An area in which the Forest Service can increase aboriginal participation is direct employment in District offices. Only 2% of employees in District offices are aboriginal and almost all are in clerical and technical positions. There are no natives in District management positions, and only two in professional positions.

Opinion data from the Forest Service indicate that lack of training is the greatest perceived obstacle to increased aboriginal participation. Suggested options for greater participation were more business training, and more joint ventures with industry. The areas with the greatest perceived increase in participation were direct award silviculture and training programs.

Employment

FIRE UNIT CREWS

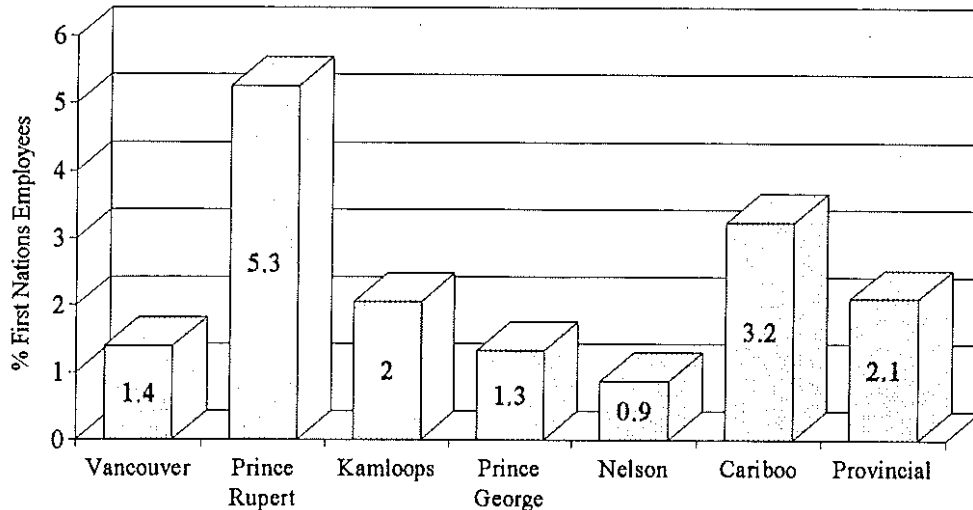
Due to the success of the Native Unit Crew Program, 18 of the 27 Fire Unit Crews in the province are all-native, providing forest employment to approximately 360 aboriginal

¹ Because the Forest Service survey was returned by all 43 Districts, summary statistics can be treated as true parameter values. Therefore, error bounds are not relevant and have not been calculated.

people. However, the number of natives employed in Initial Attack crews is much lower — only 8 people out of 216, or 3.7%, are aboriginals.

DISTRICT OFFICES

Direct employment of aboriginal people within the Forest Service's District offices is extremely low, both regionally and provincially.



As shown above, even the most successful Forest Service Region has only 5.3% First Nations employees in their District offices. The low figure from the Nelson Region is partly due to the low number of aboriginal bands in the Region. Given that 5% of the provincial population is aboriginal, and that rural areas have a generally higher percentage of natives than urban areas, the Forest Service does not employ a representative number of aboriginal people either regionally or provincially.

More importantly, all aboriginal Forest Service employees in the Districts except two work in technical or clerical areas. The two exceptions work in a professional area — there are no aboriginal people in management positions in any of the District offices.

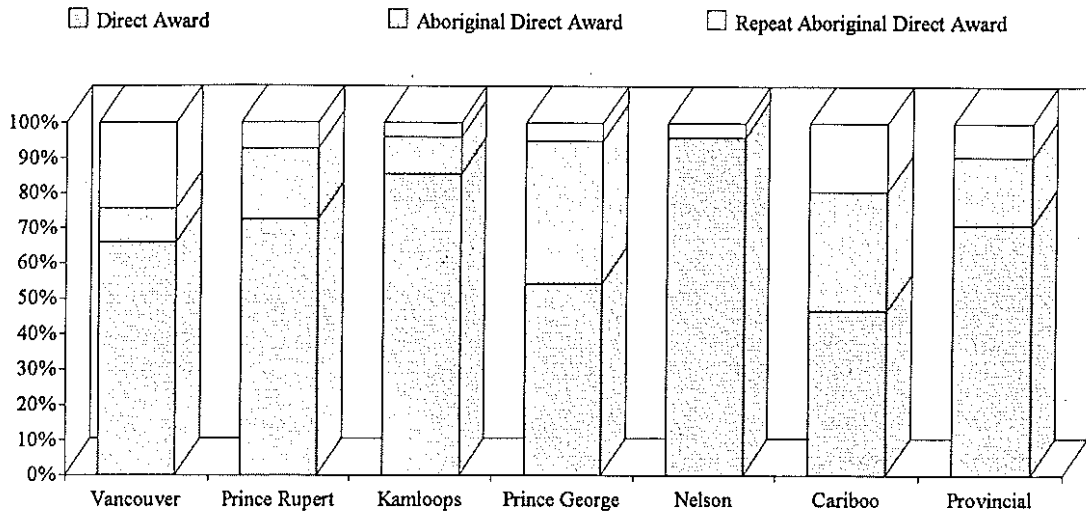
Silvicultural Contracting

Unlike other sections of this survey, it is possible to contrast data from the Silviculture Contracting section with data collected in a previous survey², prepared by the Silviculture Branch. By comparing results, we can assess the growth of the direct award silviculture program over the past year.

The financial value aboriginal direct awards province-wide has more than doubled in the past year, from \$2.7 million in 1991/92 to \$5.7 million in 1992/93. Over the same period, the hectareage treated and number of contracts awarded have also doubled. The number of districts involved in the program has also increased, from 24 in 1991/92 to 33 in 1992/93.

Regionally, the Cariboo awarded the highest percentage of its direct awards to aboriginal contractors, as shown below:

² "An evaluation of the Native Indian Direct Award Silviculture Contract Pilot Program", Planning and Cooperative Programs Section, Silviculture Branch, Ministry of Forests, February 1992.



Repeat Direct Awards occur when a contractor receives direct award contracts two years running. Repeat awards are theoretically supposed to be granted only when the contractor receiving the award requires further training to compete in the normal tendering process. However, responses indicate that, 43% of the time, repeat awards are given to aboriginal contractors because of social or economic need in the contractor's community. Thirty-four percent of the time, the repeat award is given to further train the contractor. Twenty-two percent of respondents cited some other reason for awarding a repeat contract, such as high quality work, contractor availability or agreements with local bands.

Opinion data indicate that 76% of respondents rate the work quality of aboriginal direct award contractors as being the same as that of contractors from the competitive process. Twenty per cent place aboriginal contractors below competitive contractors and 3% place them above. Given that direct award contracts are meant to train inexperienced crews and contractors, the generally high perceived work quality is impressive.

Evaluation of the performance of the Direct Award program depends on the definition of "success" used in the evaluation. If the "success" of Direct Awards is defined in terms of the creation of aboriginal contractors capable of competing for contracts via the normal tendering process, then Direct Awards are measurably successful in achieving their goal. The correlation³ between the number of aboriginal direct awards a District grants and the number of competitive aboriginal contractors within the District is 62.2%. This moderate positive correlation indicates that competitive aboriginal contractors are more common in Districts with strong aboriginal direct award programs.

Small Business Forest Enterprise Program

The Small Business Forest Enterprise Program (SBFEP) portion of the survey assessed the amount of timber being granted to aboriginal groups under Section 16.1 and Section 18 of the Forest Act. Opinions on training effectiveness and methods of increasing access were also measured.

³ Because the data are ordinal, and there are no reasonable distributional assumptions, Pearson's rank correlation is being used, with a correction for tied ranks.

TIMBER SALES

Aboriginal involvement in SBFEP Timber Sales is relatively low compared to involvement in silviculture, or fire control. Only 10 Districts report that aboriginal Bands or companies have received timber rights under Section 16.1 or Section 18 of the Forest Act.

Four Timber Sales under Section 16.1 are currently held by bands or aboriginal joint ventures. They are distributed as follows: one sale of 900 000 m³ in Lakes Forest District to Burns Lake Specialty Wood Products; one sale of 110 000 m³ in Port Alberni to the Toquaht Indian Band; one sale of 120 000 m³ to Forstar Trading Ltd in Morice Forest District; and a 20 000 m³ sale to the Nazko Indian Band in Quesnel. For comparison, there are roughly 130 active Section 16.1 timber sales in B.C. in total.

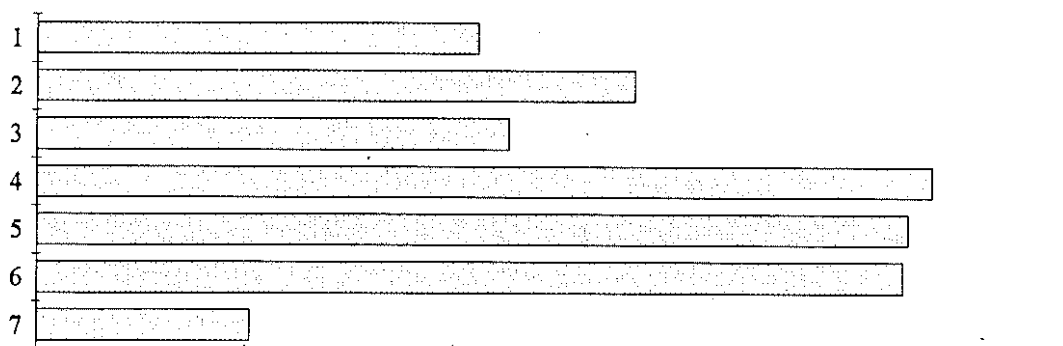
A total of 19 Timber Sales were awarded to aboriginal ventures under Section 18 last year, averaging 6800 m³ per sale. Opinion data indicate that only a bare majority of respondents, 55%, considered Section 18 awards a useful tool for training aboriginal forest contractors.

HOW TO INCREASE ACCESS

Respondents were also asked for opinions on how to increase aboriginal access to the SBFEP. The questionnaire provided a list of options for improving access, as follows:

1. Provide training programs in cross-cultural awareness.
2. Provide financial incentives to industry for on-the-job training programs.
3. Identify and provide information on financial resources.
4. Increase training opportunities for aboriginal people in entrepreneurship and business management skills.
5. Increase access to technical training for natives.
6. Encourage more partnerships with industry.
7. Provide more "labour intensive" timber sales.

The chart below shows the average relative popularity of each option, according to respondents province-wide⁴:



The three most favoured options for increasing native involvement in the SBFEP were more business training, technical training, and joint ventures with industry.

⁴ Since the summary statistics here are based on arbitrary rankings from the Districts, a horizontal scale would consist of arbitrary, meaningless numbers and has therefore been omitted for clarity. What is important is the relative size of the summary statistics, and that is adequately displayed here.

WOODLOTS

Approximately 6% of woodlots (30 out of 502) in the province are currently held by native bands, companies or joint ventures.

Native Orientation Program

The Native Orientation Program is an on-the-job training program designed to provide participants with hands-on experience in various fields or office functions. The goal is to highlight potential career opportunities within the Forest Service and encourage trainees to pursue formal education, if required, in order to compete for positions in the forest sector. Participants are employed by the Forest Service for four to six months and work under the guidance of Ministry staff in a variety of forest management functions.

Last year, 27 of the 43 Forest District offices were involved in the Native Orientation Program, training a total of 71 participants. The median district had two participants and the mean term of employment was just under seven months.

On average, participation in the program provides a 46% chance of continuing employment, a 42% chance of further training, and a 21% chance of gaining direct competitive employment.

Anecdotal comments on the program were mixed, but tended to depend on the personalities of the participants involved more than on any flaws in the program. A few representative samples follow:

- Benefits: Improved skills, motivated to return to school, university. Problems: Much more supervisory time needed. Poor attendance, different perceptions of completed work. Clerical employee felt she was already competent, although most of the work was of poor quality. Both employees had trouble accepting the need to do duties they did not like.
- Benefits: Opportunity for training and introduction to Forest Service work force for participants. Problems: The main problem is accrual of seniority — new participants cannot be hired until the re-call list is exhausted.
- Benefits: Assisted in mapping out Band interest areas; traplines; berry picking areas; cultural and archaeological sites. No problems.
- The District has gained a valuable employee, no problems.

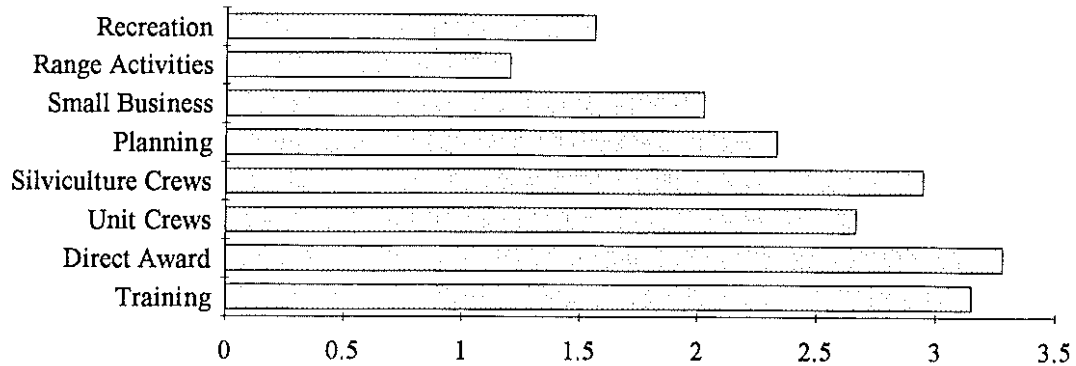
Primary among identified problems were cross cultural differences relating to work ethic and employee responsibility. Union re-hire provisions were cited by some districts as a barrier to the hiring of capable First Nations employees.

Opinions and Subjective Data

In the Opinions section of the survey, respondents were asked to subjectively rank options regarding methods of increasing aboriginal participation and current barriers to participation.

PARTICIPATION RATES

The first question of the Opinions section was designed to assess the increase in aboriginal participation in various Forest Service activities over the past two years. Respondents were given a list of Forest Service activities and asked to rate how much increase in participation they perceived, from 1 (none) to 5 (a lot).



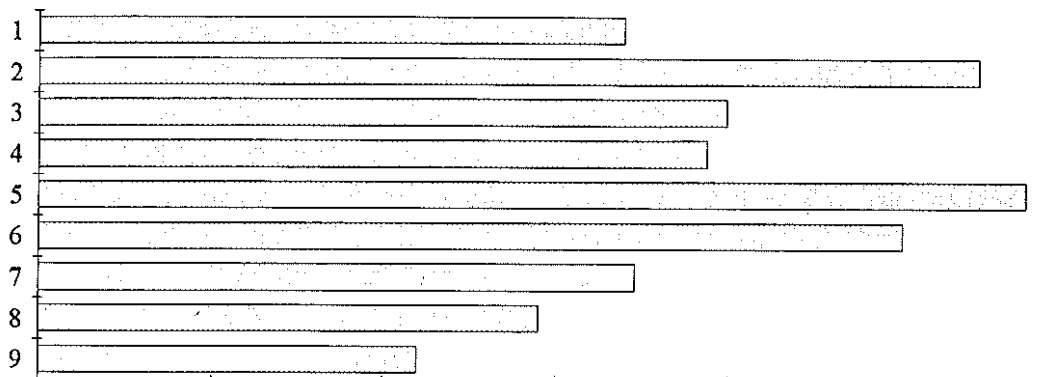
Average rated increase in each category is shown in the chart above. Direct awards, training programs and silviculture showed the most marked increase in activity. Since these data are subjective, they are only a *reflection* of the actual levels of increase. However, they do provide a good rough estimate of the relative growth rates of aboriginal participation province-wide.

HOW TO INCREASE PARTICIPATION

In the second question in the Opinions section respondents were asked to rank a list of different ways the Forest Service could increase First Nations participation. The options provided were as follows:

1. Identify and provide information on financial resources.
2. Provide training opportunities in entrepreneurship and business management skills.
3. Increase cross-cultural training.
4. Provide more information on government loans, grants and employment and training programs available for business ventures.
5. Provide technical training for aboriginals.
6. Provide business training for aboriginals
7. Encourage other Ministries and the Federal Government to improve available funding.
8. More policy direction from headquarters.
9. More support from regions.

The chart below shows the average relative popularity of each option, according to respondents province-wide:



Clearly, the most favoured choices are options 2, 5 and 6, which suggest business and technical training for aboriginals. All other options are within approximately the same middle region, with the exception of option 9, more support from regions, which is the least favoured.

Other suggested methods of improving participation included:

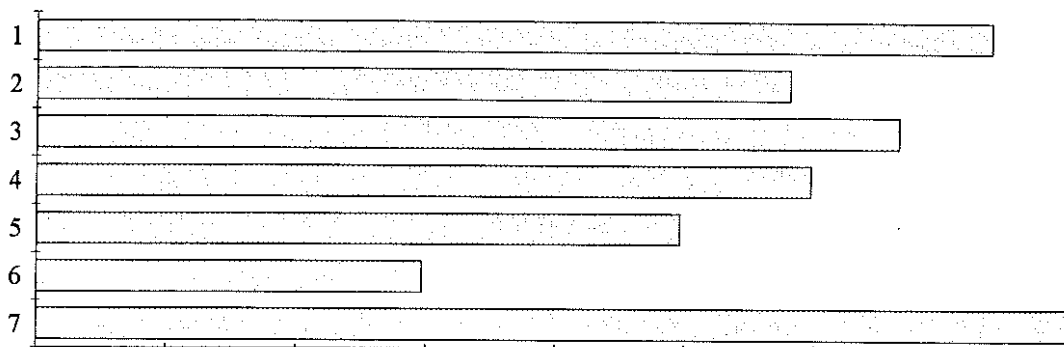
- "Set up a Native Forest Worker Apprenticeship Program in all areas, including clerical, systems, technical, and warehousing, and provide continuing funding for the program."
- "Create First Nations Liaison positions where they are needed. Provide discretionary funding to the District Manager to be used for supporting locally tailored initiatives."
- "Set up an apprentice program for target groups that permits trainees to move to FTE level. Then hire them as permanent staff."

BARRIERS TO PARTICIPATION

The last question in the section asked respondents to rank a list obstacles to aboriginal participation in the forest sector according to how important they felt the obstacles were. The listed obstacles were:

1. Cross cultural differences.
2. Limited access to capital for aboriginal people.
3. Lack of financial resources for forest services.
4. Lack of training for Forest Service staff regarding aboriginal issues.
5. Lack of clear policy direction from headquarters.
6. Lack of regional support.
7. Inadequate training for aboriginal peoples.

Average relative importance of the obstacles, as ranked by respondents province-wide, is summarized in the chart below:



The highest ranked obstacle is Option 7, inadequate training, followed by Option 1, cross-cultural differences.

Note that the obstacles identified in this section coincide with the problems cited in the Native Orientation Program section, inadequate training and cross-cultural differences. Also, the most favoured solution from the second question in the Opinions section (more training) matches the greatest identified obstacle in the third question (inadequate training).

In summary, the Opinions section identified that Forest Service respondents consider lack of training and education the greatest obstacle to aboriginal participation in forest activities and the problem which it is most important to address. Cross-cultural differences were identified as the second most important obstacle for the Forest Service to address.

The Industry & Band Survey

Summary

The Industry survey was sent to all members of the Council of Forest Industries, the Northern Interior Lumber Sector, the Cariboo Lumber Manufacturers Association and the Interior Lumber Manufacturers Association. The return rate was 30%, for a total of 56 of 184 questionnaires returned. Due to time constraints, members of the Truck Loggers Association were not surveyed.

Band surveys were sent to every Band in the province. Eighteen surveys were returned, out of a total of 198 surveys sent out, for a return rate of 9%. The low returns can be attributed in part to the high volume of work Band offices are currently being asked to process — a survey simply is not a high priority.

Survey results indicate that the current level of aboriginal employment in the forest industry is approximately 4.3% of the workforce.⁵ Most of these jobs are in labor and machine operation areas. Industry respondents perceived far fewer difficulties for aboriginal workers seeking employment in the forest industry than their First Nations counterparts did. Industry respondents were also less likely than First Nations to consider aboriginal applications for forest work a common occurrence.

Contracting for industry by aboriginal firms is currently at approximately 6% of all contracts provincially. Seventy percent of the contracting work done by aboriginal firms is in the area of silviculture, with harvesting and maintenance accounting for most of the remaining contracts. Based on the sample data collected, it is estimated that industry is now providing as many silviculture contracts to aboriginal firms as the Forest Service's Direct Award Program is.

Opinion data indicate that industry and First Nations agree that the greatest perceived obstacle to aboriginal employment in industry is native workers' generally low technical skill level. Industry also identified low employee turnover as an obstacle, while First Nations cited cross-cultural differences. Both groups highly favoured training programs in technical areas as a method of increasing aboriginal employment in forest activities.

Comments from First Nations suggested a reformed tenure system, alternate training programs and increased awareness of aboriginal values are alternatives that would make employment in the forest sector more accessible to aboriginal people. Industry comments emphasized the need for education and qualifications in prospective employees.

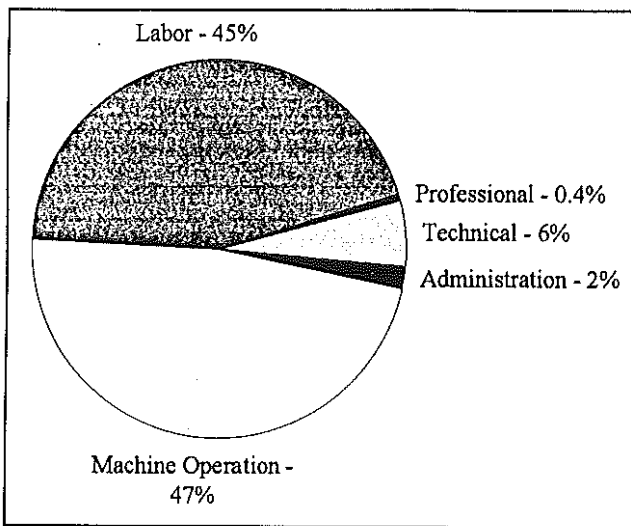
In general, the desire for increased training opportunities for aboriginal workers was most pronounced. Cross-cultural training was considered useful, but not as urgently needed. Levels of contracting indicate the existence of a healthy silvicultural contracting community, and Forest Service data suggest that this community will continue to grow.

⁵ Ranges of error for quoted statistics are available in the main body of the report.

Employment

Employment of First Nations peoples in the forest industry is comparable to or higher than direct aboriginal employment in the Forest Service. Provincially, direct native employment by forest companies is $4.3\% \pm 1.6\%$ of the workforce.⁶ This compares well with the provincial population demographic for First Nations (5%), but high concentrations of First Nations communities and forestry work outside the predominantly non-aboriginal lower mainland mitigate against calling such an employment rate representative.

The high relative variability of the employment statistic is related in part to the large deviations in aboriginal employment among the companies surveyed and the highly skewed nature of the population.⁷ For instance, many companies employ no natives, or only a few natives, while some employ 25-30% and one employs fully 60%.



As the figure to the left shows, only 8% of the aboriginal workforce in the companies surveyed is in high-skill job categories. This accounts for the disparity between employment figures for industry and figures for the Forest Service, where full-time jobs tend to be higher skilled technical and professional positions.

As part of the employment section, both First Nations and industry were asked if they felt aboriginal workers have a significantly harder time getting employment in the forest industry than

non-aboriginal workers. The disparity in opinion between the two groups of respondents was substantial. Thirty-one percent of industry respondents agreed that aboriginal workers have a harder time getting forest employment, while 80% of First Nations respondents thought so.⁸

First Nations and industry were also asked if they thought aboriginal workers commonly applied for forest sector employment. Here the disparity in opinion was smaller, but still statistically significant. Forty-nine percent of industry respondents agreed that aboriginal workers commonly apply for forest jobs, while just over 62% of First Nations respondents concurred.⁹

Thirty-six percent of all industry respondents reported that their firms were participating in employment initiatives to encourage aboriginal participation. Of those respondents who

⁶ All sample statistics will be quoted with 95% confidence.

⁷ The sample distribution of this statistic has a large bulge at 0% and a long right tail out to an extreme value of 60% aboriginal employees.

⁸ $31.5\% \pm 1.7\%$ of industry agreed and $80.0\% \pm 5.2\%$ of First Nations agreed.

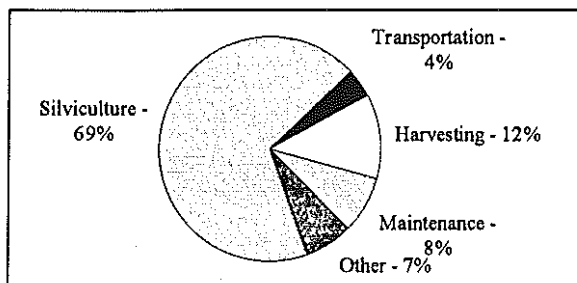
⁹ $48.8\% \pm 2.4\%$ of industry agreed and $62.5\% \pm 5.9\%$ of First Nations agreed. Industry data have been adjusted to exclude Lower Mainland responses, where the aboriginal workforce is negligible and applications from native workers unlikely.

agreed that aboriginal workers have a harder time gaining employment than non-aboriginals, only 41% stated they were participating in employment initiatives.¹⁰

Contracting

Contracting for industry by aboriginal firms is at $5.3\% \pm 2.8\%$ of contracts provincially. To some extent, low aboriginal contracting levels on the part of some large divisions of the major forest firms pull the average down. With these outliers removed, the level of contracting is $7.8\% \pm 4.0\%$ of contracts. Note, however, that the two statistics are still the same within their regions of error. Again, the high variability and large skew of the population are widening the error range, despite the relatively large sample size.

Although the overall contracting level is low to moderate, at this time it probably has more to do with a lack of aboriginal contracting capacity than any innate bias against First Nations contracting. In fact, 45% of respondents reported using aboriginal contractors to some extent, through either direct award arrangements or competitive processes.¹¹



The emphasis in aboriginal contracting work for industry is decidedly silvicultural. Almost 70% of the contracting done is silviculture work, followed by harvesting at 12%. This sample of 51 companies reported a total of 50 silviculture contracts let to aboriginal contractors, not including direct award arrangements. Extrapolated to

the entire population of surveyed companies (184), this statistic would translate to 180 ± 50 silviculture contracts. This is a conservative guess since the population of surveyed companies is made up entirely of members of industry groups and excludes independents. The total number of aboriginal direct awards let by the Forest Service last year is 214, so it is possible that industry is already tendering as many, if not more, silviculture contracts to aboriginal companies than the Ministry of Forests' Direct Award Program.

Opinions and Subjective Data

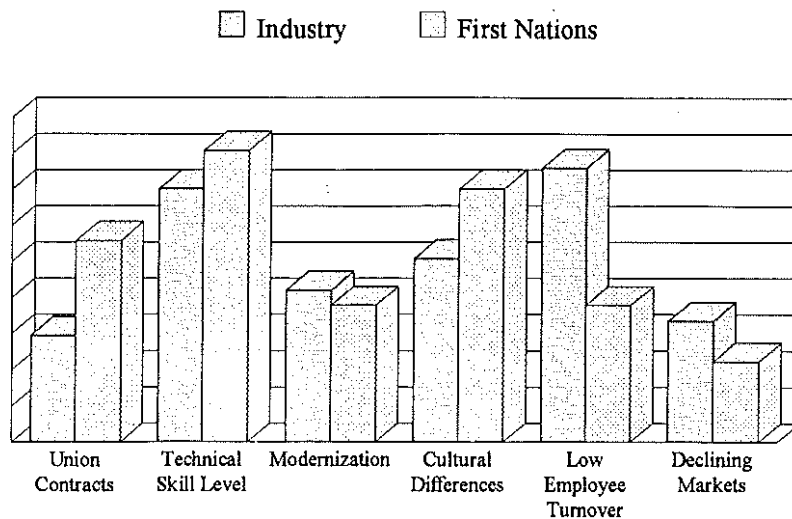
The first question in the opinions section of the Industry and Band surveys asked about barriers to aboriginal employment in the forest industry. Respondents were asked to rank a list of potential barriers to employment from most important to least important. The list of barriers to employment presented for ranking was as follows:

1. Union contracts.
2. Technical skill level.
3. Modernization.
4. Cross-cultural differences.
5. Low employee turnover.
6. Declining markets and revenues.

¹⁰ $36.4\% \pm 1.7\%$ of industry is involved in employment initiatives overall. Of those who agreed natives have a harder time getting forest work, $41.2\% \pm 5.7\%$ were reportedly involved in employment initiatives.

¹¹ $45.4\% \pm 1.8\%$ of industry is involved in some kind of aboriginal contracting.

The average relative rankings from industry and Band responses are summarized in the table below:¹²



Both First Nations and industry respondents concur that lack of training is a significant obstacle to aboriginal employment in the forest industry. Comments from industry also pointed to educational level as an important barrier:

- "As a general rule, aboriginals must improve their high-school education level."
- "Lack of education is a barrier. Most employers today require Grade 12 for all entry jobs and post-secondary for jobs in the technical and professional areas."

First Nations and industry differed in that First Nations considered cross-cultural differences an important barrier, while industry considered low employee turnover more significant.

Some industry respondents also identified what they felt were other intrinsic barriers to aboriginal employment:

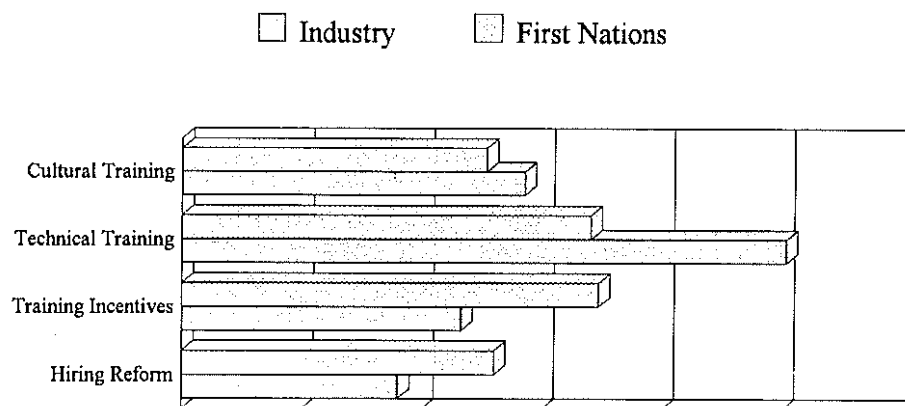
- "The issue is tied to the Reserve and welfare mentality that natives have grown up in. Their isolation from mainstream society has more to do with dependence on Reserves and handouts than cultural differences. Thus, they have poor relational and practical skill sets."
- "The hiring clause of the Master Agreement dictates who will be hired. The company may hire outside of the Agreement only if there are no preferred applicants available with the required skills. Employment would have to be made more appealing to aboriginals before they would work off the Reserve."

The second question of the opinions section asked respondents to rank a list of ways to overcome barriers to aboriginal employment in the forest industry. The listed options were as follows:

1. Training programs in cross-cultural awareness.
2. Training programs in technical skill areas.
3. Financial incentives for on-the-job training programs.
4. Identification of systemic barriers and reform of hiring practices.

¹² Since the summary statistics here are based on arbitrary rankings of options, a vertical scale would be consist of arbitrary, meaningless numbers and has therefore been omitted for clarity. What is important is the relative size of the summary statistics, and that is adequately displayed here.

The average relative popularity of the options among First Nations and industry respondents is summarized in the table below:¹³



Industry responses indicated a clear need for training programs to make aboriginal workers more employable. First Nations respondents considered cross-cultural training less important than their industry counterparts did.

Respondents were also asked for their suggestions on improving aboriginal participation rates. Among industry responses were such comments as:

- "Training and support aimed at improving understanding of the job market, knowing employer needs, and the presentation of an applicant that supports those needs."
- "A flexible work schedule is needed, perhaps we should change our system. However, we need to cut handouts and promote a real desire for employment."
- "Job search training would help."

First Nations responses also included suggestions for increasing participation:

- "Give Indians a piece of the tenure so we don't have to depend on non-natives for work. Devise alternative methods for Indians to access tenures, or a written policy for native participation in the forest industry at the industry/mill level."
- "Training must be certified, and include a grading scheme, not like the Ministry of Forests which will train you (at no cost) but give you a certificate based on *attendance only*."
- "Third parties must be educated about aboriginal views on traditional values and lands."
- "We need a change of management."

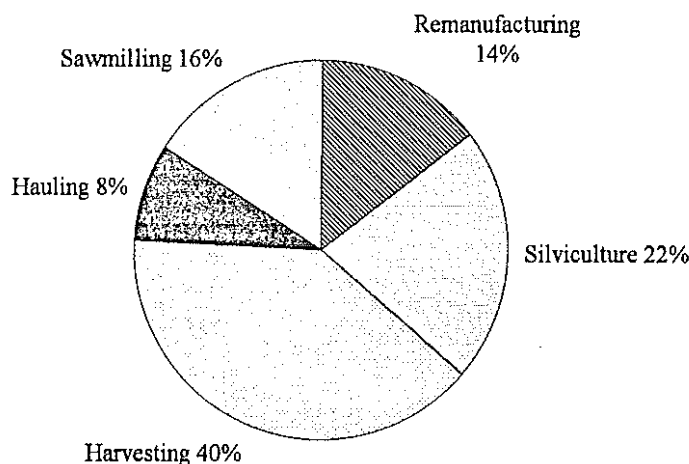
It is obvious that perceptions about the most effective method of improving participation vary widely between aboriginal and industry groups. However, there is agreement about the need for training and education to improve the aboriginal workforce, as well as a realization that cultural differences can sometimes create frictions which make employment difficult for aboriginal workers.

¹³ It should be noted that none of the First Nations opinion averages is distinctly larger or smaller than any of the others at a 95% confidence level. In other words, 19 times out of 20, variations this large are expected simply as a result of chance deviations. Industry responses show technical training is statistically more preferred than the others.

Joint Ventures

Summary

A total of 14 industry respondents reported being involved in aboriginal joint ventures, as did 4 First Nations respondents.



The forest activities that the joint ventures identified in the survey are involved in are summarized in the above pie chart.¹⁴ In this case, silviculture does not dominate the breakdown — probably because silviculture firms require far less startup capital than other ventures and are therefore more likely to be independent companies than joint ventures.

The average joint venture in this sample employs approximately 90% aboriginal workers, 18 times more than the industry average.

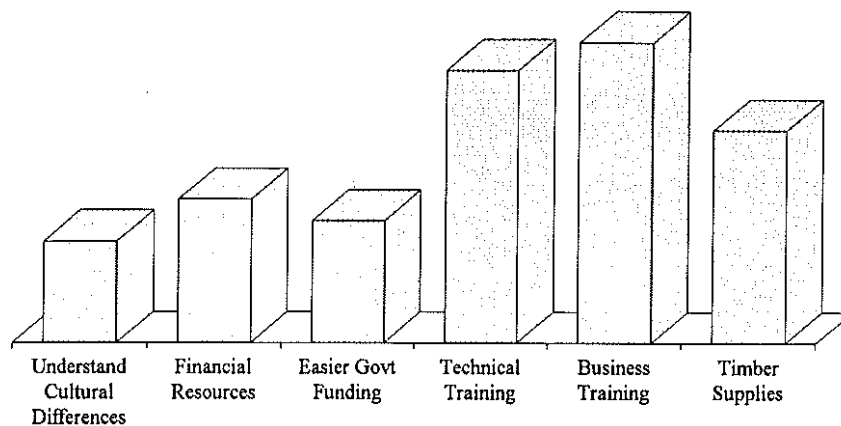
When asked to identify the greatest contributions made by their aboriginal partners, industry respondents tended to identify labour, equipment and acquisition of timber rights. First Nations tended to identify the provision of training and equipment, the acquisition of timber, and market research as the most important contributions made by their industry counterparts.

As part of the opinion data, respondents were asked to rank a list of possibilities for improving their joint venture. The list provided was as follows:

1. Improved appreciation of cross-cultural differences.
2. Improved access to financial resources.
3. Easier access to government funding.
4. More technical training for aboriginal people.
5. More business management training for aboriginal people.
6. Easier access to timber supplies.

¹⁴ Error bounds are not being calculated because extending sample data to a population this small would be meaningless. In fact, the sample probably represents a majority of the relevant population in this case.

The average relative popularity scores of the listed options are summarized in the following chart:¹⁵



Clearly, more technical and business training are considered the best methods of improving the success of aboriginal joint ventures. Easier access to timber for joint ventures was also popular, but more so with industry respondents than First Nations.

Respondents were also asked to provide comments on what they thought various stakeholders could do to increase the potential for successful joint ventures. A number of roles were identified for government:

- "Less cash handouts, but a stronger policy on finalizing land claims and defining reserve lands."
- "Governments must have the ability to react quickly to inquiries from aboriginal groups for financial or educational support, must have the ability to guarantee operating resources necessary for venture, and must provide an incentive to blend the economic strengths of credible business partners with aboriginal resources."
- "When industry tries to help native bands and can prove it, some tax allowance or stumpage rate compensation should be given for encouragement."
- "Provide funds for training in business skills, understanding aboriginal culture at the field level."

Suggestions for industry highlighted to need to take risks:

- "Industry needs to venture into the risky area of aboriginal joint ventures. Current industry preference is towards partnership with proven performers."
- "There must be a uniform commitment within the company to pursue business ventures with First Nations. As relationships develop, the company must then remain committed even under adverse conditions."
- "Industry needs a willingness to accept native people as they are and not try to make them into white people — to find job sharing opportunities where native people can adapt their lifestyle to the work ethic."

Suggestions for First Nations focused on business skills:

- "Greater work ethic, and communications skills are needed. There needs to be an appreciation of *our* cross-cultural differences."

¹⁵ As previously, for opinion data a vertical axis is irrelevant given the arbitrary nature of the values the columns depict. It is the relative size of the columns which is important.

- "The aboriginal group must have a clear understanding of what they wish to achieve from the business relationship, as well as an understanding of the objectives of the business partner. Any mistrust must be openly addressed."
- "It is important that there be a separation of the business agenda from the political agenda of the native group."

Identified Joint Ventures

Although all the companies listed in this section were identified by either an industry or First Nations group as joint ventures, they may not be joint ventures in the strictest sense. Some are contracting arrangements, or supply arrangements rather than jointly held, financed or managed companies. However, all the companies cited are aboriginal forestry ventures of some sort.

For each company, the Band and forest corporation involved will be listed, along with other available information. The participant who reported the venture will be listed in italics.

NAZKO RESOURCE MANAGEMENT

- *Nazko Indian Band*
Slocan Forest Products
- Remanufacturing firm as well as prior arrangements between Band and company for harvesting and silviculture.
- 10 Band members employed in reman plant, approximately 10 in harvesting and silviculture.

CHENDI ENTERPRISES

- *Alexis Creek Indian Band*
Lignum Limited
- Silviculture and harvesting contractor, 50% owned by each shareholder, employing 1 Band member.

ECOLINK FOREST SERVICES LIMITED

- *Alkali Lake Indian Band*
Lignum Limited
- Silviculture and harvesting contractor, 50% owned by each shareholder, employing 33 Band members of 35 employees.
- Reportedly profitable, and creating greater understanding between the partners about ways of doing business.

NORTHERN SHUSHWAP

- *Williams Lake Indian Band*
Lignum Limited
- Remanufacturing venture with supply agreement for logs provided by industry, employing 15 Band members out of 16 employees.

KAMPAC FOREST PRODUCTS

- Cooks Ferry Indian Band and others
Lytton Lumber Limited
- Remanufacturing venture just in planning stage, Bands buying into pre-existing company with plans for reman plant in Lytton.

TSAY TAY

- *Fort Ware Indian Band*
Fletcher Challenge Canada
- Harvesting operation.

BABINE FOREST PRODUCTS

- Burns Lake Native Development Corporation
Weldwood of Canada, Eurocan Pulp & Paper
- Commodity sawmill located on Burn Lake Band Reserve, BLNDC is economic development initiative of five local Bands, employs 75 natives of 250 employees.

BURNS LAKE SPECIALTY WOOD PRODUCTS

- Burns Lake Native Development Corporation
Weldwood of Canada (Babine Forest Products)
- Remanufacturing plant in Burns Lake, supplied by Weldwood mills from Section 16.1 sale, currently employs 22 aboriginal workers of 52 on one shift, planning to expand to two shifts.

TEESLEE FOREST PRODUCTS

- Takla Indian Band
Northwood Pulp and Timber Limited
- Newly formed harvesting and sawmilling operation.

LAX KWA'ALAAMS DEVELOPMENT CORPORATION

- Port Simpson Indian Band
Helifor Industries Limited
- Harvesting and hauling operation including helilogging, contractual arrangement between parties, employs 22 natives of 44 employees.

NISGA'A ECONOMIC ENTERPRISES

- Nisga'a Bands
Helifor Industries Limited
- Harvesting and hauling operations including helilogging, labour contract between parties and some funding from the Manpower Training Program, employs 22 aboriginal workers.

NAME NOT GIVEN

- Alexander Indian Band
Weldwood of Canada
- Harvesting initiative, contractual agreement with band, band supplies timber to company, employs 7 natives of 10 employees.

KYAH FOREST PRODUCTS

- Moricetown Indian Band
Trans-Pacific Trading
- Sawmilling operation run by Indian band, company brokers logs, employs 28 aboriginal workers.

M.J. ELKINS

- Anaham Indian Band
Fletcher Challenge Canada
- Harvesting and hauling operation; contract with Fletcher, employs 7 Band members.

STONE LOGGING ENTERPRISES

- Stone Indian Band
Fletcher Challenge Canada
- Horselogging operation, has contract with Fletcher, Fletcher provided interest free loan for training program, employs 3 Band members.

SHEEP MOUNTAIN ENTERPRISES

- Nemiah Indian Band
Fletcher Challenge Canada
- Harvesting operation, has contract with Fletcher, Fletcher provided interest free loan, employs 3 Band members.

NAME NOT GIVEN

- *Kamloops Indian Band*
Weyerhaeuser Canada, Interfor Adams Lake Division
- Silviculture company, received some CAEDS assistance, employs 12 Band members

HECATE LOGGING LIMITED

- Ehattesaht Band
Coulson Timber Products

SIM GAN FOREST CORPORATION

- Gitwinksihlkw Band Council

Data Treatment

Error Estimation

Data treatment for the industry and Band surveys proceeded on the potentially misleading assumption that surveys were randomly returned. While there is no evidence to support a contention that the surveys were returned in a pattern that would confound presented statistics, neither is there evidence to the contrary. For that reason, presented figures should be treated as a "best guess", not as statistically valid estimators.

All confidence intervals or tests throughout the survey are quoted or performed at a 95% significance level.

For all yes/no, agree/disagree questions, assent is coded 1 and dissent is coded 0. Then, the distribution of the sampled population is clearly Bernoulli with parameter p equal to the population percentage in agreement. p is estimated with a maximum likelihood method and a confidence interval derived using the fact that maximum likelihood estimators are asymptotically normal.

For ratios of employment and contract award in the industry and Band survey, a bivariate, second order Taylor series expansion is used to approximate the moments of the distribution of the ratio from the moments of the numerator (average # aboriginal) and denominator (average # in total). Under the linear approximation assumptions, the central limit theorem can be used to argue that the estimator of the ratio is normally distributed, so a confidence interval based on the standard normal can be constructed.

Significance of differences between popularity ranking totals for opinion data are calculated using a Friedman multiple comparisons technique.

Comments on Data Gathering

The Aboriginal Participation Survey suffered from deficiencies which should be taken into account in any follow-up effort. Because it was a voluntary questionnaire, a full survey of all industry and native groups was unattainable. Further, because the pattern of responses could not be shown to be random, the results of the industry and band questionnaires could not be reliably subjected to standard statistical tests. The result is that all statistics and error bounds quoted in the Industry & Band section of this report must be treated with skepticism. The Forest Service questionnaires were all returned, therefore summary statistics from that section can be regarded as high quality parameter measurements.

The Survey also suffered from high expectations. A complete list of joint ventures was expected, but in hindsight it is clear that a voluntary survey could never provide a complete list. An accurate picture of "aboriginal participation" was expected but precise questionnaire design was impossible in the absence of any coherent definition

of what "aboriginal participation" is. The Survey attempted to gather data to fulfill an ambiguous desire for "more information" without any real knowledge of what information was being sought, and the quality of the results has suffered as a result.

On the positive side, the broad nature of the data gathered will allow future data collection efforts to focus more accurately and more effectively on specific areas of forest sector activities.

The goals of any follow-up survey must be clearly laid out prior to questionnaire design and sample selection. If summary statistics are adequate, a sample should be randomly selected from the target population and polled via telephone to ensure 100% participation. If a complete survey is desired, as in the case of obtaining a complete list of First Nations forestry ventures, then *all* members of the relevant population must be polled.

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