

SECTORAL
REPORT

YUKON DEVELOPMENT STRATEGY

FORESTRY

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YUKON'S FOREST SECTOR

A Discussion Paper Prepared by the

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NORTHERN AFFAIRS PROGRAM INFORMATION CENTRE

Table of Contents

	Page
1. Introduction	1
2. History of Forestry in Yukon	1
3. Structure of the Forest Industry	3
3.1 Value and Production	3
3.2 Firm Size in the Industry	7
3.3 Employment and Income	8
3.4 Further Processing	8
3.5 Present Markets	10
4. Constraints to Growth in the Forest Industry	11
4.1 Yukon Based Constraints - Operating	13
4.1.1 Production Inefficiencies	13
4.1.2 Under-Utilization of the Forest Resources	14
4.1.3 High Transportation and Energy Costs	15
4.1.4 Market Fluctuations	15
4.1.5 High Risk	16
4.1.6 Insufficient Base-Line Data	17
4.2 Regulatory Constraints	17
4.3 Other Constraints	18
5.0 Opportunities to Reduce Constraints	19
5.1 Increased Market Penetration	19
5.2 Import Substitution	21
5.3 Linkage Development	22
5.4 Specialized Exports	23
6.0 Options for Increased Sectoral Development	24
Conclusion	27

1. Introduction

The Yukon Government has initiated a planning process, entitled "Yukon 2000," which is intended to provide a comprehensive economic development strategy that will guide Yukon's economy into the 1990's and beyond. Yukon's forest industry has been identified as a developing economic activity that can provide a substantially increased contribution to Yukon's economy, can lead to greater diversification of our economic base and can provide significant opportunities for reducing leakages from our economy.

The purpose of this report is to provide a thumb-nail sketch of Yukon's forest industry and to put before Yukoners a number of the basic issues and options available for developing the potential of this industrial sector. The paper will discuss the history of the forest industry, its significance to the economy, some of the constraints to growth and opportunities available, and options which may be pursued for increasing sectoral activity. A prioritization of action required to stimulate forestry development will have to be undertaken during the workshop itself.

As indicated, this report is a draft discussion paper intended to stimulate discussion and debate; it is not a definitive analysis of Yukon's forest industry.

2.0 History of Forestry in Yukon

Yukon's forest industry began with the onset of the Gold Rush in 1898 when small primitive sawmills sprang up along the water route from Lake Bennett to Dawson City. These early firms provided whip sawn lumber for boats, tent floors and the first

buildings. As communities became established, larger sawmills developed, particularly in Dawson City. With the arrival of the White Pass and Yukon Railway in 1899, and the development of the Yukon River shipping system, vast amounts of fuelwood were required as a source of power and heavy logging occurred along these water routes over the fifty year life span of the river transportation system.

With the development of permanent hard rock mines such as those at Faro and Whitehorse during the years following the placer gold rush, the forest industry continued to develop to provide timber of all shapes and sizes to meet the demands of Yukon's mining industry.

More recently, in the early 1970's, several of the smaller mills in the Watson Lake area were amalgamated and rebuilt as one larger operation known as Yukon Forest Products, with a one shift capacity of 20 million board feet annually. A ten year harvesting agreement was signed in 1979 and the company produced over 70% of Yukon's forest production for the next four years. In 1983, the firm, now called Catermole Timber Ltd., became victim to the severe economic recession in Canada and with a dramatic decline in markets and mounting debts, the company was forced into receivership. In 1985, the company was reactivated under the name Watson Lake Forest Products Ltd. and continued in operation until August 1986 when the company again fell into receivership.

At the same time, there were approximately 18 smaller sawmills operating in the Territory ranging in size from 10,000 boardfeet to 6 million boardfeet, operating sporadically as the local

demand required. These firms were located all the way from Dawson City to Watson Lake, were usually locally owned and employed local labour when in operation.

3.0 Structure of the Forest Industry

3.1 Value and Production

The forest industry in Yukon consists of two major elements, the primary producing component and the manufacturing component. The primary producing component refers to logging, commercial fuelwood cutting and cone-picking (seed production). Sawmilling, on the other hand, is a manufacturing component where logs are processed into cants, timbers, dimensional lumber and other by-products such as wood-chips. Domestic fuelwood cutting is a non-commercial activity and is not included in this assessment.

From information obtained from the Yukon Business Directory and estimates from the Forest Industry Association, the Yukon forest industry consists of a total of 19 sawmills with another half a dozen firms providing contract logging services, about the same number providing commercial fuelwood cutting services, and several seed gathering operations. The Yukon Forest Industry Association reported in their recent study of the forest industry that of the 19 sawmills in the Territory only three operations derive their full-time income from the business, with all other operations being part-time and integrated with other industries such as construction, trucking, and ranching.

Table 1 outlines the key economic indicators in the forest industry over the past five years; while Table 2 indicates the levels of forest production over the past decade. As the tables indicate, both the primary producing and the processed forest producer components of the industry has seen output and value rise significantly over the past five years. The value of forest production grew from \$906,000 in 1981 to \$2,818,000 in 1985, while the value of dimensional lumber has gone from \$426,000 to \$1,041,000 over the same period.

The majority of the increase in production in the past five years was due to the rapid growth of the commercial fuelwood business and a sudden increase in dimensional lumber production in 1985 to meet a short-term export demand for lumber in Alaska.

The tendency towards the import substitution of wood based space heating for fuel oil has resulted in a dramatic increase in the commercial sale of fuelwood. Permit data from DIAND indicates that the commercial wood cutters share of the fuelwood market has grown to sixty-eight percent (68%) by 1985 from forty-two percent (42%) in 1982. The value of fuelwood also increased dramatically from \$401,000 in 1981 to \$1,563,000 in 1985.

Raw log production has remained relatively stable throughout the 1981 to 1985 period and accounted, on average, for about 10% of the total fibre production. While round log production averaged only about one-third the volume of output of sawlogs during the 1981-84 period, the value of this production was actually greater than that of sawlogs. The higher unit value of roundlogs arises from the need for

TABLE 1
KEY ECONOMIC INDICATORS
YUKON FOREST INDUSTRY

	1981	1982	1983	1984	1985
Physical Output					
Sawlogs (m3)	18,415	10,736	13,538	13,366	64,188
Roundlogs (m3)	4,465	3,208	4,094	4,551	2,668
Fuelwood (m3)	17,404	45,831	36,597	43,359	51,087
Cone Production (hl)	1,268	2,255	2,359	2,764	2,386
Dimensional Lumber (mbf)	3,252	1,896	2,391	2,360	11,361
Estimated Value of Production (\$,000)					
Sawlogs	177	158	183	175	923
Roundlogs	227	178	205	240	141
Fuelwood	401	1,079	969	1,149	1,563
Cone Production	101	180	189	221	191
Sub-total	906	1,595	1,547	1,785	2,818
Processed Wood Products					
Dimensional Lumber	426	495	472	2,493	1,041
Other	n/a	n/a	n/a	n/a	n/a
Total*	1,155	1,932	1,836	4,278	2,936
Employment					
Full-time Employment	27	26	19	42	47

Source: Yukon Bureau of Statistics and Northern Affairs Program, DIAND

* The value of sawlogs is incorporated with the cost of dimensional lumber and hence the Total value does not include the row on sawlogs in the calculation.

TABLE 2
FOREST PRODUCTION IN THE YUKON

YEAR	LUMBER		ROUNDWOOD	FUELWOOD		TOTAL
	cu. m	Mfbm	cu. m	cu. m	Cords	cu. m
1974-75	73 959	13,061	6 260	21 846	9,644	102 088
1975-76	67 536	11,927	3 933	25 966	11,457	97 435
1976-77	46 932	8,287	2 973	25 162	11,108	75 067
1977-78	92 024	16,249	3 588	22 076	9,745	117 688
1978-79	80 012	14,130	3 695	29 492	13,018	113 199
1979-80	114 485	20,218	4 015	39 757	17,549	158 257
1980-81	18 415	3,252	6 614	32 598	14,389	57 626
1981-82	10 736	1,896	3 748	39 335	17,362	53 819
1982-83	13 538	2,391	3 028	87 260	38,516	103 826
1983-84	13 366	2,360	4 449	75 546	33,346	93 361

larger sized and higher quality timber to meet the demand in this market segment. The estimated price for roundlogs averaged \$42 per cubic metre over 1981-85 while the imported value of sawlogs was set at just under \$10 per cubic metre.

Despite the steady increases in production and value over the past five years, Yukon's forest industry has operated at less than seventy percent (70%) of the forest output enjoyed throughout the last half of the seventies. The time series data in Table 2 show that during the late seventies average annual output totalled 110,622 cubic metres (m³), while the industry averaged only 77,158 cubic metres/year during the past five years.

Dimensional lumber has been the worst hit component with average production falling from an average of 79,094 cubic metres per year between 1974/75 and 1980/81 versus an average of 29,049 cubic metres per year in the eighties.

3.2 Firm Size in the Industry

The forest industry in Yukon is broken down into two different firm sizes; those having more than fifty employees and those having fewer than five employees. On the one hand, there is the Watson Lake Forest Products mill in Watson Lake who during their periods of production accounted for more than 70% of the lumber production in the Territory. During production the mill employed approximately 65 people on a one-shift basis and as production stepped up to two shifts on occasion the number of employees rose to over 100 on the payroll. To this is added spin-off benefits to the local and regional economy which provided a profound social and economic impact to Watson Lake.

On the other hand, the remaining 18 sawmills were largely very small businesses employing fewer than 5 employees. Table 3 provides an outline of Yukon's forest industry as reported in 1981 and there is a clear indication as to the relative size and importance of the two types of operation.

3.3 Employment and Income

Employment in Yukon's forest industry varies dramatically depending upon local demand and sawmilling activity. When Watson Lake Forest Products was in production during the seventies, it has been estimated that there were over 170 jobs in the industry; but declining production in the eighties reduced the number of jobs to less than 75 in 1982 and fewer than 50 in 1985. The number of full time jobs as reported by the Yukon Bureau of Statistics on the other hand, has increased over the past five years from nineteen (19) to forty-seven (47).

3.4 Further Processing

Further processing of Yukon's forest products is carried out on a sporadic basis within the Territory. Several sawmillers provide mill logs for home construction, Klondike Homes Ltd. of Watson Lake sells prefabricated homes using milled logs and Del Mickelson provides customized log built homes using round logs. In addition, there are a number of custom furniture builders who utilize some of Yukon's forest products for the production of office furniture, custom cabinets, and other household items.

Table 3
Yukon Sawmill Industry

Sawmill	Location	Avg. no. employees	Avg. no. native employees	Avg. no. man-mos. per year	Avg. annual output		Output 1980-81	
					m ³	Mfbm	m ³	Mfbm
Yukon Forest Products	Watson Lake	20-25	10	250	61,500	(10,860)	-	(-)
Prophet River Forest Pro.	Watson Lake	6	0	55	8,675	(1,530)	-	(-)
Frontier Lumber	Albert Creek	4	2	27	1,930	(340)	2,385	(420)
Liard Band	Watson Lake	7	7	1	45	(8)	-	(-)
Calamity Mill	Teslin	2	-	3	26	(5)	113	(20)
McCormack's Lumber	Teslin	3	-	9	3,875	(685)	-	(-)
Yukon Logging	Tagish	-	-	-	-	(-)	1,415	(250)
J. Gilbert	Whitehorse	2	-	-	-	(-)	531	(94)
Ten Mile Logging	Tagish	3	1	25	1,130	(200)	1,700	(300)
E. Smith	Little Atlin Lake	2	-	-	850	(150)	430	(75)
G. Nilsson	Marsh Lake	2	1	-	-	(-)	-	(-)
Herman's Sawmill	McClintock R.	2	-	-	220	(38)	280	(50)
Star Sawmill	McClintock R.	2	-	-	-	(-)	-	(-)
Forsyth Timber	Takhini area	-	-	-	-	(-)	-	(-)
K.V. Sawmill	Swan Lake	2	-	1.5	225	(40)	-	(-)
Bullied	Boss River	2	-	5.5	489	(85)	317	(56)
Klipperts Transfer	Pelly Crossing	5	2	14	2,830	(500)	5,663	(1,000)
CB Construction	Carmacks	6-7	4	24	2,830	(500)	-	(-)
Cal's Trucking	Mayo	4	2	45	14,158	(2,500)	2,693	(475)
Ewing Transport	Mayo	7	4	19	1,835	(325)	-	(-)
Ledermerber	Beaver Creek	4	2	9	1,352	(240)	2,000	(353)
Arctic Island Resources	Dawson	3	-	14	2,832	(500)	1,400	(247)
Old Crow Band	Old Crow	-	-	-	-	(-)	3,191	(563)

*Source: Yukon Forest Resources Division, DIAND

Discussions have been undertaken in recent years to consider the use of wood chips for space heating and a demonstration chip heating system has been installed in the Pelly Crossing School. A proposal to install a wood chip heating system in Whitehorse is also being actively developed. However, at the present time there are no operators producing wood chips on a regular basis.

3.5 Present Markets

The vast majority of the market demand for Yukon's forest production has been within the Territory. The only export markets for Yukon's forest products over the past decade has been the export of milled logs and dimensional lumber by Watson Lake Forest Products to Fairbanks Alaska, and the occasional shipment of forest products to Northern British Columbia and Japan.

The major local markets for processed products are mining companies who purchase poles and timbers, residential home construction for air dried dimensional lumber and mill logs, and White Pass for railway ties. A segment of the forest industry that is assuming increasing importance is the use of wood as an energy source. As indicated there has been a significant increase in the commercial production of fuelwood and this demand is expected to continue as more home-owners become aware of the possible cost-savings of using wood as opposed to other fuel sources.

The major market for Yukon seed production is Scandinavia, especially Sweden.

4.0 Constraints to Growth in the Forest Industry

The Yukon Forest Industry Association report on the Yukon forest industry estimates that the total productive capacity of the sawmills in Yukon based on working one shift for 260 days per year would be over 85.8 million boardfeet. With total production within the forest industry set at 4.7 million board feet, the industry is clearly producing at far below its capability.

Significant opportunity exists in several areas to increase the contribution of the forest industry to the economy and to develop linkages between the various components of the forest industry to expand the value added to Yukon's economy through development of Yukon's forest industry.

There are a number of constraints, however which preclude effective development of Yukon's forest industry. These constraints fall into two major categories, Yukon based and external constraints. In turn the Yukon based constraints can be subdivided into operating constraints and regulatory constraints. Figure 1 summarizes these constraints.

As well, forest managers and operators must recognize the value of the forest resource to competing uses and users, the impacts of forest operations on the environment and the need to develop processes to ensure the ability of the industry to maintain a sustainable yield on an ongoing basis.

Figure 1

CONSTRAINTS TO FOREST INDUSTRY DEVELOPMENT

I. YUKON BASED CONSTRAINTS

A. OPERATING

1. UNDER-UTILIZATION OF THE FOREST RESOURCE
2. PRODUCTION INEFFICIENCIES
3. HIGH TRANSPORTATION COSTS
4. UNCERTAIN MARKETS
5. HIGH RISK
6. LACK OF ACCESS TO CAPITAL
7. INSUFFICIENT BASE-LINE DATA ON THE FOREST INDUSTRY

B. REGULATORY

1. LACK OF FOREST MANAGEMENT POLICY
2. COMPLEX REGULATORY SYSTEM
3. LAND CLAIMS

II. EXTERNAL CONSTRAINTS

1. ISOLATION FROM MAJOR MARKETS
2. US/CANADA TRADE DISPUTE
3. WORLD MARKETS

4.1 Yukon Based Constraints - Operating

The Yukon forest operators at the October 9th workshop indicated that the industry faces several major operating constraints which have created the dramatic declines in recent production. Netta Derocher commented at the workshop that "the quality of Yukon wood is good; its the poor maintenance and production practices which have hurt the forest business." Figure 1 summarizes these constraints which are detailed below. These problems have given forest operators a poor image in the market place and resulted in declining market shares.

4.1.1 Production Inefficiencies

The Yukon Forest Industry Association indicates that Yukon's forest operators are less efficient than elsewhere due to the use of old and outdated equipment which yields higher cost lumber of inferior dimensional accuracy, improper maintenance practices that cause frequent and costly breakdowns, a lack of knowledge of the appropriate production and marketing techniques which reduces productivity, and poor quality control which results in substandard product delivery to contractors and retailers.

The forest operators at the October workshop felt that the existance of several inefficient and ineffective operators has given the industry a very poor image and lead to deteriorating market shares. Watson Lake Forest Products, in particular, was sited for poor management and operating practices which has severely affected the industry.

Alaska Economics Inc. in a recent report on economics of scale in Alaska wood products provided clear evidence that operating efficiencies in the forest industry could be improved through specialization of activities between logging and sawmilling. In Yukon the majority of operators are fully integrated logging/sawmilling operations who operate on a seasonal basis and because of the variety of equipment find their productivity declining and their costs increasing. This is compounded by the fact that most operators work part-time and with the move to integration and part-time employment in the industry the end result has been a deterioration of markets, equipment and skills. This deterioration results in higher operating costs, lower productivity and fewer markets.

4.1.2 Under-Utilization of the Forest Resource

The Yukon Forest Industry Association report, and information provided on Yukon by Alaska Economics Inc., provide evidence that the Yukon forest industry utilizes as little as 40% of each tree during production, leaving anywhere up to 60% of the resource as waste residue. This residue includes chips, sawdust and slabs. The extremely high degree of residue left by the industry both reduces the potential revenue available to the industry and increases the costs to the operator who must pay to dispose of the residue. Figures in British Columbia indicate that upwards of 32% of the total revenue from the forest industry in 1985 came from the sale of wood chips.

At the same time, it can cost operators anywhere up to \$10 per ton to dispose of the residues from the forest production process. This combination of decreased revenue potential and increased cost dramatically hampers the competitive capability of Yukon's forest industry.

4.1.3 High Transportation and Energy Costs

While Yukon has a reasonably good road network, most forest operations face high transportation costs to their markets. Secondary road access to timber stands is limited and costly to develop and most firms are more than 100 - 300 miles by road from their major markets. As well, it costs operators anywhere from 12-30 cents/kwh for energy to power the sawmills.

4.1.4 Market Fluctuations

Forest production is an input into other economic sectors and its success depends upon overall economic growth and development. Yukon's economy has been subjected to rapid economic fluctuations and this has been reflected in the forest industry which is largely dependent upon this small local and regional market.

Yukon's sawmill operators go into production only when they receive orders and usually carry limited inventory. As such, the industry has trouble meeting surges in demand and are not able to provide easier credit terms. On the other hand, larger southern firms can meet demand out of existing inventory and can give up to 90 days for payment with accounts.

Being on the fringe of world markets, Yukon's forest industry faces higher operating costs and isolation from established markets. This means that Yukon's forest operators, who export other products are the first ones to feel the decline in world markets and the last to recover. This market fluctuation makes it very difficult for forest operators to undertake any form of long-term market development strategies.

4.1.5 High Risk

In light of the production inefficiencies, market fluctuations, problems of lack of long-term tenure, higher transportation costs, and under-utilization of product, the risk associated with Yukon forest operations rises dramatically. For this reason, forest operators often pay a significant premium to obtain capital from financial institutions and are faced, in many cases, with problems of obtaining any type of financing. As well, a number of operations have gone bankrupt in recent years which has adversely affected bankers perception of the individual and reduced access to capital.

The high degree of uncertainty also reduces the desire of entrepreneurs to invest in this industry and for existing operators to have the incentive to take the steps necessary to improve the productivity and effectiveness of their businesses.

4.1.6 Insufficient Base-Line Data

Yukon forest companies have extremely limited information on the quality, size and type of forest product available to them within their production areas. Therefore, in order to undertake even short-term planning, forest companies must incur the high costs of conducting both preliminary base-line data collection and more thorough forest inventories. These additional operating costs adversely impact on the financial viability of forest operators and compound the risks in the industry.

Moreover, a lack of basic forest information makes it extremely hard for forest operators to incorporate the latest techniques for efficient production of the forest resource into their long-term production plans thereby compounding the problems associated with the development of the forest industry.

4.2 Regulatory Constraints

The Yukon forest operators at the October workshop reported that the lack of forest management policies and legislation has been a major constraint to development of the industry. The lack of a proper forest management framework has meant that forest operators cannot get long term tenure for their forest resources thereby increasing risk in the industry. A lack of consistency in approach to forest management by

federal government officials has resulted in confusion and animosity between industry and government. The fact that mineral claims staked under the Quartz Mining Act will alienate timber lands has meant that thousands of hectares of prime forest land have been withheld from forest operators. And the lack of forest management policy fails to provide the industry with the policy framework for evaluating economic and environmental impacts and for dealing with alternative uses and users to the industry.

The forest industry believes that the CMHC regulations regarding the use of kiln dry lumber and restrictions on coverage for roundlog homes has dramatically and negatively impacted on local operators who cannot provide lumber to meet these narrow and inflexible guidelines.

Finally, industry believes that a negative attitude by municipal and territorial officials to the benefits of co-generation and wood chip heat generation has severely hampered the ability of firms to use the full resource potential of each tree harvested and has increased operating costs.

4.3 Other Constraints

As indicated earlier, the lack of a settlement of Yukon's land claims, places in uncertainty the available lands for forest production. While significant opportunity exists for

native corporations to take advantage of Yukon's forest resources, a lack of a land claims settlement often means that forest lands cannot be turned over to native or non-native operators for fear that the land will at some future time become part of a land selection process. These uncertainties contribute to the higher risk associated with the industry and therefore the increased cost of developing the industry.

5.0 Opportunities to Reduce Constraints

A broad range of opportunities have been identified to overcome the inherent constraints within Yukon's forest industry and dramatically increase the amount of production. These opportunities include:

1. increased market penetration
2. import substitution
3. linkage development
4. specialized exports.

5.1 Increased Market Penetration

If local operators could increase their market penetration from the present level of less than twenty percent (20%) to approximately fifty percent (50%), the revenue to the forestry industry would increase by over \$5,000,000 per year, thereby stimulating employment, income and economic benefits.

At the present time Yukon's economy is recovering quickly and the local demand for lumber for mining timber and residential building has increased substantially. In Whitehorse over 75 homes were built in 1986, up from 18 homes in 1985. In addition, the Yukon Indian bands are involved in a major housing development program, and will require sufficient lumber to build over 50 houses in the next five years. As well, the Yukon Government has a potential to purchase large quantities of lumber to meet their capital requirements for various government buildings and further processing potential exist in the areas of log homes manufacturing, laminated beams and furniture production.

Yukon's forest operators have the advantage of having good quality trees close to the local markets and should be able to effectively supplant imports of dimensional lumber and timber. However if the Yukon forest industry is to take a larger market share than they presently do they must dramatically improve their productivity and efficiency within the industry, improve the marketing capability and provide mechanisms to reduce certain significant costs including transportation costs, data development costs and the cost of risk associated with the projects.

At the October 9th workshop, the industry representatives felt that the most critical requirement for future development was the need for industry to develop procedures to ensure product quality. There will be a need for a dramatically increased effort by government and industry to educate forest operators on proper forest management techniques and to develop training programs to grade lumber and improve the quality of existing lumber facilities.

On the basis of initial discussions with members of the forest industry, there appears to be an opportunity to significantly reduce operating costs and increase efficiency of the forest industry through a combination of management training and improved utilization of equipment. In addition, increased specialization of activities between logging, sawmilling and further processing, will potentially increase the productivity and reduce the operating costs of operators throughout the Territory.

Moreover, Yukon's forest industry is significantly under-capitalized, using antiquated equipment and outdated technology. New technology needs to be explored and adapted to the Yukon forest industry and assistance needs to be provided to these individuals in order to acquire that new technology. Armed with the new technology and improved specialization, there appears significant room to increase capacity utilization in the industry while reducing wastage and improving utilization of the resource.

5.2 Import Substitution

Significant opportunity also exists within the forest industry to utilize the residue from production for space heating requirements and steam generation. At the present time, there exists a 1.5 megawatt steam generation plant in Watson Lake, Yukon which could potentially be utilized to provide electrical power for both a modernized mill in Watson Lake and for electrical generation to meet the community's needs. In addition, there is a potential for

using wood chips in heating plants for buildings and a proposal by Dave Harder is being actively considered to provide space heating requirements for both the Justice Building and the Yukon College. Co-generation for other smaller operators needs to be explored to help smaller operators reduce energy costs while using more residual material.

The Yukon Forest Industries Association in their report also indicated an opportunity to utilize the residue for spacing or heating requirements of green-houses, silviculture facilities, and other associated facilities. The report indicated that in one project alone they could consume 3,000 tons of forest residue per year at a cost savings to the industry of over \$30,000 and with a revenue generating capability of more than \$100,000. With petroleum products creating leakages of over \$40 million annually, the forest industry has an opportunity to use a significant portion of their residue for meeting space heating requirements, both commercially and domestically. Greater resource utilization will also reduce operating costs associated with product disposal and reduce operating costs.

5.3 Linkage Development

Significant opportunity appears to exist in the research and development side of the forest industry. At the present time, there is significant export demand for Yukon's seed production and indications are that new seed strains are being developed from the genetic seed provided by Yukon. The possibility exists through a combination of research and commercial development, to create a strong silviculture

industry with products exported to countries around the world. This dramatically increases the value of the product and provides an opportunity for significant employment in the Territory. As well, the seed production from Yukon's forest industry could potentially be the forerunner of forests throughout Canada and around the world. Early indications from discussions with Swedish trade officials are that a significant market potential exists for this type of product.

Further processing activities including log home construction kits, furniture production facilities and specialized wood products facilities should also be explored. In particular, specialty wood products such as pine and poplar panelling and Yukon College siding hold significant potential for future development.

5.4 Specialized Exports

Significant interest continues to remain among some elements of Yukon's forest industry that opportunities are available for the development of larger scale forest operations in Yukon, along with the potential for pulp mills, oriented strand mills and so on. These projects are significantly larger in magnitude than the present industry within the Territory and significant evaluation of these projects would be required before proceeding to develop a potential which may exist in this sector. Investigation and research is a clear precursor before determining whether or not these activities can provide significant opportunities for Yukon.

6.0 Options for Increased Sectoral Development

In developing Yukon's forest potential, the immediate objectives appear to be:

- a) to substantially increase the market share of Yukon manufactured products through efforts to improve productivity, to improve resource utilization, and to decrease operating costs;
- b) to increase the use of fuel wood products as an alternative to the use of imported petroleum products by utilizing wood chips, wood pellets and other forms of forest products for space heat and thermal generation;
- c) to increase further processing of Yukon's forest products through feasibility analyses of manufacturing potentials;
- d) to investigate the potential available for larger scale forest development within Yukon.

In order to assist this industry to develop, there are a number of direct options that were presented to participants at the October workshop. These options are outlined in Figure 2.

It appeared clear from the history of Yukon's forest industry and industry participants that the significant potential is not likely to be developed without some form of government participation. There was a general concensus by participants that there is an immediate requirement for government to take on a passive intervention role within the forest industry. This passive intervention must include:

- a) significant expenditures in base-line data in order to provide sufficient information for forest companies to make proper forest production decisions;

- b) specialized training programs for Yukon's forest operators to train them in business management techniques and proper forest production systems, is immediately required, along with improved timber grading capability;
- c) a government requirement to provide marketing information and ongoing production data in order to assist the industry in its long-term planning is a necessity;
- d) industry must have access to lower cost capital for upgrading and modernizing their equipment and production processes and to reduce the inherent high risk associated with these kinds of forest operation;
- e) assistance needs to be provided to YFIA to develop systems to ensure product quality and service in the industry
- f) specialized research and development should be undertaken within Yukon in order to develop areas of potential for silviculture development, enhancement and export;
- g) investigation should be made of possible other forms of financial and tax incentives which might be available to assist the industry to develop;
- h) government must undertake to develop a coherent forest management system within the Territory that allows for the effective harvesting of Yukon's forest products on a long-term basis.

Measured against potential development of Yukon's forest potential for direct revenue is the need for Yukoners to consider the impact of forest harvesting on other resource users and upon wildlife. The Yukon Department of Renewable Resources through their Green Paper on Yukon's Renewable Resources outlined the need for the development of methods for timber harvesting programs to minimize the impacts on others in a particular area and to develop forest management techniques which endeavor to minimize the impact on wildlife habitat and important wildlife species.

Figure 2

OPTIONS

1. INDUSTRY SIZE

SMALL LOCAL MARKET BASED VS LARGER EXPORT BASED

2. GOVERNMENT INTERVENTION

A) BASELINE DATA COLLECTION - FOREST INVENTORY
- SITE SPECIFIC FOREST INFORMATION

B) FINANCIAL ASSISTANCE

- GRANTS
- SUBSIDIES
- INCOME SUPPORT
- LOW INTEREST LOANS
- LOAN GUARANTEES
- DIRECT INVESTMENT

C. AREAS TO FUND

- EDUCATION AND TRAINING
- PRODUCTION
- MARKETING
- FEASIBILITY
- BUSINESS ADVICE

NORTHERN AFFAIRS PROGRAM INFORMATION CENTRE

D. EDUCATION

- MANAGEMENT CLASSES
- FORESTRY ADVISORS
- LUMBER GRADING

E. REGULATION

- FOREST MANAGEMENT PLANS
- FOREST MANAGEMENT LEGISLATION
- LONG TERM TENURE
- RESEARCH AND DEVELOPMENT

Finally, the history of Yukon forest industry has been one dedicated largely to the supply of products for Yukon's local market requirements. In the near future, there will be a need for both government and industry to decide whether to continue to promote an industry focussed on supply and products for local market needs through small community operators or to develop a combination of local suppliers and larger industrial operators focussing on supply products for southern and foreign markets. At the October meeting, it appeared that most participants found an approach which supported the development of local operations but did not preclude any investment by larger export oriented forest companies.

Conclusion

Yukon's forest industry is operating at far below its full capacity and significantly less than the production levels of the late 1970's. Efforts must be made in the short term to redress the major operating constraints of the present industry and to overcome the poor image most operators have in the business.

The immediate requirements ask for industry with financial support from government to become actively involved in quality control and industry promotion, and for government to assist firms to recapitalize and develop their market potential.

In the medium term government must overcome lack of forest management policy and legislation in the Territory in order to overcome the uncertainty in the industry and rationalize the regulatory environment.

As well, government must investigate the types of financial assistance that will assist the industry to grow and develop in the future.

Finally, there will be a need to address the requirements of other resource users and the impact of forest development on the environment in order to provide a framework for effective development of the forest industry without harming other important sectors of the economy.