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GOVERNMENT
OF CANADA
REGIONAL
ECONOMIC
EXPANSION



NOVA SCOTIA
DEPARTMENT
OF
LANDS AND
FORESTS



A CANADA — NOVA
SCOTIA SUB AGREEMENT
UNDER THE GENERAL
DEVELOPMENT AGREEMENT

FORESTRY CANADA/NOVA SCOTIA



THIS SUB AGREEMENT SIGNED 28 JUNE 1977
IS SUBJECT TO AMENDMENTS

CANADA - NOVA SCOTIA

SUBSIDIARY AGREEMENT

FORESTRY

THIS AGREEMENT made this 28th day of JUNE 1977.

BETWEEN: THE GOVERNMENT OF CANADA,
(hereinafter referred to as "Canada"),
represented by the Minister of Regional
Economic Expansion

OF THE FIRST PART

AND: THE GOVERNMENT OF THE PROVINCE OF
NOVA SCOTIA (hereinafter referred to as
"the Province"), represented by the
Minister of Development,

OF THE SECOND PART.

WHEREAS Canada and the Province signed a General
Development Agreement dated September 12, 1974 (hereinafter
referred to as "the GDA"), to achieve the objectives set
forth in section 3 thereof;

AND WHEREAS a strategy is provided for in Schedule
"A" to the GDA which includes the development of new or
expanded employment opportunities throughout Nova Scotia by
the identification of appropriate development opportunities;

AND WHEREAS in pursuit of these objectives Canada
and the Province have agreed to seek a coordinated application
of relevant federal and provincial programs and activities
in order to assist in the realization of identified opportunities;

AND WHEREAS Canada and the Province have identified
forestry development as a development opportunity which will
lead to the expansion, diversification and strengthening of
the provincial economy;

AND WHEREAS the Governor in Council by Order in
Council P.C. 1977-1817 of the 27th day of JUNE, 1977, has
authorized the Minister of Regional Economic Expansion to
execute this Agreement on behalf of Canada;

AND WHEREAS the Lieutenant Governor in Council by Order in Council No. 77-171 of the 22nd day of FEB., 1977, has authorized the Minister of Development to execute this Agreement on behalf of the Province;

NOW THEREFORE the parties hereto mutually agree as, follows:

SECTION 1 - DEFINITIONS

1. In this Agreement:

- (a) "capital project" means any specific project, as determined by the Management Committee, in which construction or activities related to construction are involved;
- (b) "eligible costs" means those costs defined in subsections 6.4 and 6.5;
- (c) "external staff" means professional and other staff who are not employed by provincial government departments but who enter into a contract with the Province by which they agree to undertake or participate in work related to implementation of this Agreement;
- (d) "external services" means services and facilities that are required from outside the federal and provincial governments in support of an activity, under this Agreement and includes accommodation, equipment, office and support services, and professional services;
- (e) "Federal Minister" means the Minister of Regional Economic Expansion of Canada and includes anyone authorized to act on his behalf;

- (f) "fiscal year" means the period commencing on April 1 of any year and terminating on March 31 of the immediately following year;
- (g) "Management Committee" means the officials designated pursuant to subsection 5.1;
- (h) "Ministers" means the Federal Minister and the Provincial Minister;
- (i) "program" means the subject matter specified in subsection 4.1;
- (j) "project" means a subdivision of a program as defined by the Management Committee; and
- (k) "Provincial Minister" means the Minister of Development and includes anyone authorized to act on his behalf.

SECTION 2 - PURPOSE AND OBJECTIVES

2.1 The purpose of this Agreement is to enable Canada and the Province jointly to undertake the implementation of the Forestry Development Opportunity described in subsection 4.1, in accordance with the strategy outlined in Schedule "A" to this Agreement.

2.2 The objectives of this Agreement are:

- (a) to maintain the existing aggregate employment based mainly on the softwood species, and
- (b) to increase employment opportunities and incomes in timber harvesting and processing based mainly on hardwood species.

SECTION 3 - STRATEGY

3.1 The strategy outlined in Schedule "A" to this Agreement shall be reviewed annually and may be revised from time to time by the Ministers.

SECTION 4 - SUBJECT MATTER

4.1 The four programs listed in Part I of Schedule "A" to this Agreement constitute the several initiatives to be pursued in the attainment of the development opportunity agreed to by the Ministers.

4.2 The Province will undertake, either directly or through agencies of the Province, in accordance with an agreed schedule, to implement the several initiatives to be pursued in the attainment of the development opportunity.

4.3 The Province will either directly or through its agencies (including municipalities) assume ownership of each capital project undertaken under this Agreement and shall accept full responsibility for its operation, maintenance and repair.

4.4 Subject to Subsection 4.7, it is mutually understood and agreed that the Province shall engage the external staff and purchase external services, and that such staff or services may be engaged or

purchased by such provincial department or agency as may be appropriate having regard to the subject matter of the work being undertaken.

4.5 This Agreement shall have effect from April 1, 1977 and shall terminate on March 31, 1982 except that activities approved and commitments made in writing prior to this date shall continue in force until completion. However, Canada shall not pay any claim received after March 31, 1983.

4.6 All activities to be undertaken under this Agreement are to be consistent with the objectives and intent stated herein and, before being implemented, shall require joint approval by Canada and the Province through the Management Committee. If such joint approval is not obtainable, the activity or activities in question may nevertheless be approved by the Ministers.

4.7 Each activity proposed to be undertaken under this Agreement shall be described in an appropriate document in sufficient detail to allow proper consideration and approval by the Management Committee.

4.8 The Province hereby undertakes to ensure that any applicable environmental laws of Canada or the Province are complied with in all projects implemented under this Agreement.

SECTION 5 - ADMINISTRATION AND MANAGEMENT

5.1 Each of the Ministers shall designate one or more senior officials in equal numbers to be responsible for the administration of this Agreement. These officials shall constitute the Management Committee whose function it shall be to oversee the planning and implementation of the programs specified in subsection 4.1 and to fulfill responsibilities identified for the Management Committee elsewhere in this Agreement. In the event of any disagreement in the Management Committee, the relevant matter shall be referred to the Ministers whose decision shall be final.

5.2 Canada and the Province agree to provide the Management Committee with all information necessary for the performance of its functions.

5.3 The signatures of at least two members of the Management Committee shall be sufficient verification for the purpose of this Agreement of any recommendation or decision made, or approval given by the Management Committee, provided that at least one of the members represents the Provincial Minister and another represents the Federal Minister.

5.4 The Management Committee may establish subcommittees to advise and assist it in its work, which subcommittees may include persons who are not members of the Management Committee. Subcommittees will prepare, as requested, submissions and recommendations to the Management Committee on all matters relating to the planning and implementation of the projects in Schedule "A". Progress reports on physical and financial details of projects will be presented to the Management Committee with recommendations for any necessary action consistent with the development strategy adopted.

SECTION 6 - FINANCIAL PROVISIONS

6.1 Canada shall contribute eighty per cent (80%) of the eligible costs and the Province shall contribute twenty per cent (20%) of the eligible costs of any project approved under subsections 6.4 and 6.5, except for projects 2(a) New Uses for Hardwoods, 3(a) Forest Inventory Refinements, and 3(d) Survey of Private Ownership Characteristics, specified in Schedule "A", to which Canada shall contribute fifty per cent (50%) and the Province fifty per cent (50%).

6.2 The provision of financing by Canada and the Province for the implementation of this Agreement is subject to the Parliament of Canada and the Legislative Assembly of the Province of Nova Scotia having provided funds for such financing for the fiscal year in which such financing is required.

6.3 Notwithstanding anything in this Agreement, the total amount payable by Canada under this Agreement shall not exceed \$20,212,000.

6.4 Subject to subsection 6.6, the eligible costs of capital projects to be implemented under this Agreement, consist of all direct costs including public information costs, which, in the opinion of the Management Committee, have been reasonably and properly incurred by the Province for the purpose of implementing the capital projects, plus 10 per cent of such direct costs. Eligible costs shall in no circumstances include administrative, survey, engineering, or architectural costs. Without restricting the generality of the meaning of the foregoing, breakdowns of eligible costs may be found in Part II of Schedule "A" to this Agreement. In no case shall any provision in this Agreement be relied upon as authority to include either administrative, survey engineering, or architectural costs as eligible costs under this Agreement.

6.5 Subject to subsection 6.6, the eligible costs of non capital projects to be implemented under this Agreement consist of all costs actually incurred by the Province pursuant to a contract entered into in accordance with this Agreement, with any person or corporation, for the performance of work, the supply of goods or the rendering of services for the implementation of a non capital project, but do not include any cost in respect of the services of any regular employee of the Province or its agencies.

6.6 Neither the cost of land nor the cost of acquiring land or any interest therein shall be considered to be an eligible cost under this Agreement, except as specified in Part II of Schedule "A" under Project 1(d) namely, Group Management of Private Lands.

6.7 This Agreement, and Schedule "A" thereof, may be amended in writing as agreed from time to time by the Ministers. Each project item added to Schedule "A" shall form part of this Agreement and shall be governed by the terms thereof as fully and effectively as if it had originally been included in this Agreement. It is expressly understood and agreed, however, that any amendment to subsections 6.1 and 6.3 and any amendment to the four programs in Part I of Schedule "A" shall require the approval of the Governor in Council.

6.8 The Management Committee may make adjustments in and between the projects of any program specified in Schedule "A" of the Agreement during any fiscal year; provided, however, that such adjustments do not increase the total cost of the relevant program.

6.9 If, at any stage of a program, it appears to the Province that the costs thereof will exceed the estimated costs specified for any program in Schedule "A", the Province shall promptly so inform the Management Committee and state the reasons for such increase.

6.10 Upon being so informed, the Management Committee shall consider the circumstances which have contributed to the increase in the estimated costs and shall prepare and present a report and recommendations to the Ministers in respect of the action proposed to be taken.

SECTION 7 - CONTRACT PROCEDURES

7.1 All contracts for approved activities shall be awarded in accordance with procedures to be approved by the Management Committee, and, unless in its opinion it is impractical to do so, shall be let pursuant to tenders invited by public advertisement and awarded to the qualified and responsible tenderer submitting the lowest evaluated bid.

7.2 All contracts under this Agreement shall be supervised in accordance with procedures to be approved by the Management Committee, and reports produced by consultants or resulting from such contracts shall become the property of both parties.

7.3 In the awarding of contracts pursuant to the recommendation of the Management Committee, the Province shall retain the services of Canadian firms or individuals where practical and consistent with economy and efficiency.

7.4 All public announcements of contract awards shall be made jointly by Canada and the Province.

SECTION 8 - PAYMENT PROCEDURES

8.1 Subject to subsection 8.2, payments by Canada shall be promptly made to the Province on the basis of progress claims setting out the costs actually incurred and paid for the project, submitted in a form satisfactory to the Federal Minister.

8.2 In order to assist with the interim financing of activities, Canada may, if the Province so requests, make interim payments to the Province of up to one hundred per cent (100%) of Canada's share of claims submitted, based on estimates of costs actually incurred as certified by a senior officer of the Province.

8.3 The Province shall account for each interim payment by submitting to Canada within 120 days after such payment by Canada, a detailed statement of the actual expenditures incurred and paid, verified in a manner satisfactory to the Federal Minister. Any discrepancy between the amounts paid by Canada by way of interim payments and the amounts actually paid by the Province shall be promptly adjusted between Canada and the Province.

SECTION 9 - RECORDS AND AUDIT

9.1 The Province shall maintain proper and accurate accounts and records relating to the cost of the program, and Canada may audit the amounts of all progress claims and payments and the provincial accounts and records relating thereto.

SECTION 10 - MONITORING

10.1 All substantive amendments to contracts shall require the prior approval of the Management Committee.

10.2 Any member of the Management Committee or his representative shall be permitted to inspect any project at all reasonable times for the purpose of verifying progress claims and obtaining any other information concerning the project which may be required by the Federal Minister or the Provincial Minister.

SECTION 11 - PUBLIC INFORMATION

11.1 Canada and the Province agree to cooperate in the development and implementation of a program of public information respecting implementation of projects under this Agreement, and further agree to supply, erect and maintain on the direction of the Management Committee:

- (a) during the course of construction of capital projects, a project sign or signs consistent with Federal-Provincial Identity graphics guidelines, and in both official languages, specifying that the relevant project is a Canada-Nova Scotia Regional Development Project, financed by contributions from the Department of Regional Economic Expansion of the Government of Canada (and any other federal agency, where relevant), and the Government of the Province of Nova Scotia, or such other wording to the like effect as may be agreed upon by the Ministers; and
- (b) where relevant upon completion of each project, a permanent sign or plaque to the effect set forth in (a).

11.2 Any public announcement of the measures covered and of the products generated by this Agreement, as well as any official opening ceremony for any project under this Agreement, where such ceremony is indicated and appropriate, shall be arranged jointly by the Ministers.

SECTION 12 - GENERAL

12.1 No member of the House of Commons of Canada or the Legislative Assembly of the Province of Nova Scotia shall be admitted to any part or share of payments made pursuant to this Agreement or to any benefits to arise therefrom, nor shall such member undertake or participate in any study or analysis pursuant to a contract as a result of which Canada may be required to pay any amounts pursuant to this Agreement.

12.2 With regard to the applicability of labour standards, the parties agree as follows:

- i) rates of pay shall be those prevailing in the area of employment for each classification of work, subject to the minimum wage specified in provincial legislation;
- ii) in building construction, the rates of pay for overtime shall be time and one-half the specified prevailing rate of pay after the hours stipulated for purposes of overtime payment in the relevant provincial standards, which shall in no case be more than 48 per week;
- iii) in road and heavy construction, the rates of pay for overtime shall be time and one-half the specified prevailing rate of pay after the hours stipulated for purposes of overtime payment in the relevant provincial standards, which shall in no case be more than 60 per week; and
- iv) labour conditions shall be specified in all tendering documents and shall be posted conspicuously in the work place;

it being expressly understood and agreed that to the extent to which there are higher provincial standards applicable to particular occupations or regions, these higher provincial standards shall apply.

12.3 The terms and conditions of the GDA shall apply to this Agreement.

SECTION 13 - EVALUATION

13.1 During this Agreement, Canada and the Province shall jointly effect an assessment of the programs listed in Schedule "A" with regard to the stated objectives. Annual progress reports shall be submitted by the Management Committee to the Ministers on or before the annual meeting of the Ministers as prescribed under subsection 9.1 and section 10 of the GDA. In addition, Canada and the Province shall also jointly effect an evaluation of this Agreement with respect to the general economic and socioeconomic development of Nova Scotia.

IN WITNESS WHEREOF this Agreement has been executed on behalf of Canada by the Minister of Regional Economic Expansion, and on behalf of the Province by the Minister of Development.

In the Presence of:

GOVERNMENT OF CANADA

Witness

Minister of
Regional Economic Expansion

Witness

Minister of
Fisheries and the Environment

GOVERNMENT OF THE
PROVINCE OF NOVA SCOTIA

Witness

Minister of Development

Witness

Minister of Lands and Forests

CANADA/NOVA SCOTIA
 SUBSIDIARY AGREEMENT FOR FORESTRY
 SCHEDULE "A" PART I

Program	Estimated Total Cost (\$ 000's)	DREE Share (\$ 000's)	Provincial Share (\$ 000's)	Project	Estimated Total Cost (\$ 000's)	Cost Sharing
1. FOREST MANAGEMENT	23,436	18,749	4,687	(a) Forest Management on Private Lands	13,260	80/20
				(b) Forest Management on Crown Lands	7,563	80/20
				(c) Spruce Budworm Salvage	1,563	80/20
				(d) Group Management of Private Lands	1,050	80/20
2. FOREST INDUSTRY DEVELOPMENT	500	600	300	(a) New Uses for Hardwoods	400	50/50
				(b) Sawmill Improvement	500	80/20
3. SUPPORT SERVICES	599	355	244	(a) Forest Inventory Refinements	353	50/50
				(b) Organization of Forestry Management Crews	125	80/20
				(c) Establishment of Consulting Foresters	60	80/20
				(d) Survey of Private Ownership Characteristics	61	50/50
4. EDUCATION, PUBLIC INFORMATION AND EVALUATION	635	508	127	(a) Education and Public Information	600	80/20
				(b) Evaluation	35	80/20
<u>TOTAL</u>	25,570	20,212	5,358			

GOVERNMENT OF THE
 PROVINCE OF NOVA SCOTIA

 Minister of Development

 Minister of Lands and Forests

GOVERNMENT OF CANADA

 Minister of
 Regional Economic Expansion

 Minister of
 Fisheries and the Environment

CANADA - NOVA SCOTIA

SUBSIDIARY AGREEMENT FOR FORESTRY

SCHEDULE "A", PART II

A. SCOPE OF AGREEMENT

Within the framework of an overall development strategy for Nova Scotia, the policy of the Province is to maintain and increase employment and income opportunities for that segment of the population living in small urban centres and rural areas. The forest industry of Nova Scotia has long been important to the economy of the Province and to rural areas, in particular. The aim of this Agreement is to stabilize and increase employment and incomes derived from harvesting and processing this important renewable resource.

Programs outlined in Section E are directed at improving productivity and output of the resource and at maintaining and increasing forest-based manufacturing. Accordingly, this Agreement will have an impact on both the primary and secondary sectors of the industry.

Programs will be applied in all areas of the Province inasmuch as the forest resource covers much of the land area and dependent processing, particularly sawmilling, is well dispersed.

Recent ARDA programs have assisted the forest industry and have served to identify some of the strategy elements incorporated in this Agreement. Nevertheless, the programs to be undertaken in this Agreement are incremental to previous and existing programs.

B. BACKGROUND

I. Overview

Land

Nova Scotia has 10.8 million acres of land suitable for timber production (84% of the total provincial land area). Of this area, Provincial Crown land comprises 2.6 million acres (24%), Federal Crown land 0.3 million acres (2.5%) and private ownership 8.0 million acres (73.5%). Of the 8.0 million acres in private ownership, 5.6 million acres are in approximately 50,000 parcels distributed among some 30,000 owners each holding a total of less than 1,000 acres of forest land. This ownership pattern, showing a predominance of private land, is in sharp contrast to the general ownership pattern for all of Canada in which 91 percent of all productive forest is Crown land. The ownership pattern characteristic of Nova Scotia, therefore, presents special problems which must be recognized and considered in the preparation of an integrated resource management program.

The softwood cover type accounts for 53 percent of the total productive forest land. The mixed wood and hardwood cover types account for 29 percent and 18 percent, respectively.

Growing Stock

Recent inventory information shows that the gross merchantable volume of growing stock (all species) is 92 million cunits. Of this volume, 65 million cunits, or 71 percent is softwoods and 27 million cunits, or 29 percent is hardwoods. About 40 percent of the softwoods is sawlog size (larger than 7" outside bark at breast height). Of the 92 million cunits total volume of growing stock, 20 million cunits (22%) are on Provincial Crown land and 69 million cunits (78%) on private land.

Capability

The average capability of forest land in Nova Scotia for timber production, assuming site proper species, fully closed natural stands, even age class distribution and good management, has been estimated on the basis of Canada Land Inventory to be at least double the current annual growth. Thus, a program aimed at removing the present constraints and improving management of the resource could eventually allow the harvesting and processing of 2 to 3 times more timber than at present.

Industry

The timber harvest of Nova Scotia supports a manufacturing industry consisting of:

	total
3 major pulp and paper mills	(capacity: 720,000 tons/year)
1 minor pulp mill	(capacity: 55,000 tons/year)
1 hardboard mill	(capacity: 320,000 M ft ² - 1/8" base)
350 sawmills (approx.)	(capacity: ca. 200,000 M f.b.m.)

This forest industry requires an annual supply of approximately 140 MM ft.³ of timber for its production of pulp, paper, hardboard and sawn products.

There are approximately 2,500 full-time equivalent jobs in harvesting, approximately 1,900 in sawmills and 2,600 in pulp and paper (including hardboard) mills. Value added in harvesting amounted to approximately \$20.5 million and in processing approximately \$124 million, in 1974.

II. Trends and Constraints

Land

The high percentage and extreme fragmentation of private forest holdings in Nova Scotia impairs the efficiency of management and increases operational costs. A small parcel of land can, by its location, block access to a larger parcel of land, precluding management altogether or necessitating the construction of long and expensive detours.

The percentage of rural people earning a living directly from their lands by farming and/or forestry has declined significantly over the past half century resulting in a decrease in the number of owners interest in using their land for the production of timber. A significant and increasing number of properties are owned by residents and non-residents for recreational or speculative purposes. As a result, timber production from small ownerships shows a dramatic decline. In 1967 the small ownerships produced 59 percent of the total harvest but only 39 percent in 1975. The decline in the production of pulpwood from small ownerships during the same period was even more pronounced, from 64 percent to 38 percent. Although the output from large ownerships and Crown land has made up for this decline, the large private owners cannot long sustain their present production level without creating a shortfall at some future date.

Many ownerships are too small to constitute either a viable management unit or a meaningful source of revenue to the owner. The small ownerships have all too frequently been subjected to recurrent highgrading to meet occasional cash needs and/or abandoned for forestry purposes. Consequently, many of the small ownerships are now producing only a fraction of the yield of forest products that they could produce in view of their relatively high capability and easy accessibility, or they have been removed from production entirely, thereby reducing the resource base.

Incentives are clearly needed to restore properties to production and to realize productive capability by improving management and overcoming the fragmentation problem.

Growing Stock

Using conventional "allowable cut" formulae, the volume of softwood growing stock in the forests of Nova Scotia should support an annual harvest of approximately 164 MM ft.³ of mature timber. The actual volume of softwood timber harvested in 1975 was 110 MM ft.³, down from 120 MM ft.³ in 1974, suggesting a theoretical surplus of 44 MM ft.³ to 54 MM ft.³. The forest industry of Nova Scotia is heavily oriented towards the softwood species. In addition, not all land is physically accessible and/or available because of the fragmented ownership pattern. Therefore, the allowable cut suggested by the conventional formula is unattainable under existing conditions.

A new and more realistic method of calculating the average annual harvest, taking into consideration the actual area of accessible/available forest land, has been developed and applied. The results from this method indicate that at recent production levels, the softwood species are being overcut by 10 to 20 percent while less than one-third of the calculated cut in hardwoods is being harvested. Programs aimed at redressing these imbalances have, therefore, been included in this Agreement.

Annual Harvest and Industry Structure

From 1935 to 1960, the total harvest was approximately 80 MM ft³ annually. Since 1960, the annual harvest has increased from about 80 MM ft.³ to 118 MM ft.³ in 1975. There has been a steady decline in the volume of sawmill production since 1950 from about 350 MM f.b.m. per year (including 40 MM f.b.m. hardwoods) to the present volume of less than 200 MM f.b.m. per year, (including about 5 MM f.b.m. hardwoods). During the same period, the number of mills decreased from about 800 to 350. Many of the mills are inefficient, and only about 70% of the potential pulpwood fibre from sawmill residues is being recovered.

Seventy percent of sawn products are used within the Province, and there is considerable vertical integration, making the sawmill industry a vital part of the provincial economy. The future of the industry, however, is clouded by uncertainty of sawlog supply and competition with the pulp and paper companies for forest land and available raw material.

Prior to 1961, pulp and paper manufacturing consisted of the Bowater-Mersey Paper Company, Ltd. mill at Brooklyn, Queens County, the Minas Basin Pulp and Power Company, Ltd. mill at Hantsport, and the Sheet Harbour mill (now closed). Their combined requirements totalled approximately 23 MM ft.³ annually. This volume constituted roughly 30 percent of the total harvest. In 1961, the Nova Scotia Pulp Limited mill was opened at Point Tupper, followed by the Scott Maritimes Pulp, Ltd. mill at Abercrombie Point and the Anil (Canada) Ltd. (now Masonite Canada Ltd.) hardboard plant at East River in 1967. All three of these mills were expanded in the early 1970's. These industrial changes have increased total pulpwood requirements by over 80 MM ft.³ to approximately 75 percent of the total harvest.

The foregoing changes have translated into a 60 percent decrease in sawlog harvest and a 500 percent increase in pulpwood harvest since 1951.

Insect Infestation

In addition to the general trends and problems mentioned above, a more acute problem has occurred in recent months. This problem, insect infestation in decadent, overmature - mature timber, has reached serious proportions in Cape Breton Island and to a lesser extent in Cumberland County. It will seriously threaten the future viability and existence of major forest industries, unless properly dealt with. As a result, projects have been included in this Agreement to help minimize potential losses of wood fibre from this infestation.

C. OBJECTIVES

The objectives of this Agreement are:

- (a) to maintain the existing aggregate employment based mainly on the softwood species; and
- (b) to increase employment opportunities and incomes in timber harvesting and processing based mainly on the hardwood species.

These objectives will be achieved by the expansion and/or modernization of existing wood-using industries and where feasible, the establishment of new industries.

Implementation of the programs contained in this Agreement will permit an immediate expansion of employment in harvesting and manufacturing based mainly on hardwoods. Without such a program, future shortages in softwoods can be contemplated and any current "surplus" in the hardwood species would have to be regarded as a reserve for substitution at a later date. Therefore, particular emphasis is placed on ensuring the future supply of suitable timber through more effective management of private and public lands. In the face of a critical supply situation, effective utilization of the timber harvest is clearly necessary. This will be facilitated through a strengthening of the sawmilling industry as well as by expanding the harvest of presently underutilized species.

During the term of this Agreement, it is anticipated that 3,367 man/years will be maintained/created directly as a result of this Agreement and that an additional 10,168 man/years of employment will be created indirectly.

The Province has confirmed its intention to undertake a sustained program of forest management beyond the initial five-year period covered by this Agreement and the foregoing objectives are based on such a long-term program being maintained.

D. STRATEGY

In order to realize the above-stated objectives, it is necessary to:

- (a) improve productivity through more intensive forest management on both public and private lands to ensure sufficient supplies of softwoods to meet the requirements of existing industry.
- (b) find additional uses for underutilized hardwood species, thereby releasing softwoods from the mixedwood and hardwood stands;
- (c) accelerate the harvest of budworm-affected wood;
- (d) improve the allocation of wood harvested from public and private lands in terms of manufacturing to produce maximum employment benefits; and
- (e) increase utilization of suitable timber in sawmills and provide for more effective recovery and utilization of residues.

These measures, when implemented, will provide the new material necessary to permit an expansion in harvesting and manufacturing. Therefore, during the term of this Agreement, it should be possible to expand manufacturing, using mainly hardwoods, and to stabilize the sawmilling industry.

Forest Management

Specific measures to improve forest management are contained in Section E of Schedule "A", Part II of this Agreement. Recently, the Province proclaimed the Forest Improvement Act which will enhance the overall effectiveness of this Agreement. Furthermore, the Province is presently considering revising forest taxation to provide an added incentive for forest management. An improved taxation system will serve to reverse the recent decline in production from private holdings and will complement initiatives provided for in this Agreement. These actions on the part of the Province will be supported by an expanded education program and an increased extension service. In summary, the constraints which fall outside the scope of this Agreement, but which nevertheless are important to its objectives, are being removed.

The principle constraints to an expanded harvest are the unrealized capability of the land to grow timber and the extreme fragmentation of holdings, many of which have been removed from forest production. The underutilization of certain species, particularly hardwoods, is also a constraint. By improving management practices, especially by increasing forest improvement treatments such as reforestation, cleaning, thinning and improvement cutting, timber growth and yields on all lands can be greatly improved.

Management access roads are a prerequisite of forest management. In addition to permitting the harvest of previously inaccessible stands of timber, roads are necessary for the various forest improvement treatments mentioned. The current spruce budworm infestation in two areas of the Province highlights the need for good management roads, a problem which pertains to both public and private lands. Fire ponds are a relatively minor but nevertheless important part of the managed forest and boundary lines on private ownerships are frequently ill-defined and must be re-established prior to commencing forestry operations.

The fragmentation problem and the trend to lower production on the smaller holdings can be overcome by encouraging the grouping of smaller properties in all tenure classes into larger blocks. The larger units so created can then be managed more intensively and more effectively as single entities. Suitable incentives are provided to stimulate the formation of group management ventures, or where appropriate, less formal groupings, to overcome the fragmentation and scale barrier.

To facilitate implementation, consulting foresters will be encouraged to locate in selected areas, and specialized forest management crews will be sponsored where needed, on a pilot project basis. A public information and education effort will be undertaken to promote implementation of the forest management projects on private land. In undertaking forest management projects of the magnitude contemplated in this Agreement, additional staff will be provided by the Province.

Hardwood Development

Only the softwood cover types are harvested in many areas because hardwoods are of undetermined quality and market opportunities have not been identified. There are strong indications that, at present operating levels, softwood types are being overcut. The conclusion is that in the short run increased supplies of softwoods can only be obtained by solving the market problem for the surplus hardwoods. Studies will be undertaken to define the potential for using both low grade and quality hardwoods in the Province. These studies will include market analyses, identification of potential forest products and potential areas for hardwood based industry development. Data on growth and yields, availability and quality of the various hardwood species is seriously deficient. Further development of the data base is, therefore, provided for.

Budworm-affected Wood Salvage

Severe spruce budworm infestation, particularly in Cape Breton, presents an immediate special problem in forest management. Considerable timber has already been damaged and losses are imminent. Substantial amounts of this infested wood can be salvaged if physical access to the affected stands is improved. Therefore, an emergency road construction program is essential to minimize fibre losses on both public and private lands. Road access will also permit more effective management of the lands subject to infestation and serve to limit more widespread damage by this insect. Road construction projects in the most severely infested areas are, therefore, provided for. However, there is a need to provide for intensive monitoring of the budworm-affected stands in order to revise management priorities most effectively. The necessary elements in this connection are included under Support Services.

Allocation of Wood Harvested

Industrial development along the lines suggested in the objectives will require a larger harvest and the best utilization of all available raw material. Recent studies have indicated that considerable quantities of sawlog quality timber are being processed to pulp while pulpwood sizes are being sawn. Additional processing and stabilization of the sawmilling industry will depend to some extent on more effective allocation and utilization. In this regard, the Province will require that sawlog quality timber harvested from Crown lands be manufactured into sawn products and that logs of pulpwood size and quality be directed to pulping or similar processing. Further, sawlogs will be directed to sawmills that feature good utilization standards consistent with sawmill stabilization efforts. In terms of the projects contained in this Agreement, management plans will be a prerequisite of public assistance for forest improvement, access roads, and so on. Such management plans will be prepared in accordance with good forestry practices and, in addition, will serve to direct material harvested to its most beneficial end use.

In the case of private forest lands and in addition to the expected positive results from implementation of the Forest Improvement Act, the Province will actively promote improved allocation of private land harvest through such measures as encouraging the exchange of wood fibre between primary users and through a concerted information and education program.

Sawmill Stabilization

The sawmilling industry in the Province is comprised of many small mills and a few larger ones. As a consequence, a significant volume of merchantable fibre in the form of residues is lost to manufacturing. In addition, there has been a steady decline in the volume of sawmill production over the past 25 years. Thus, to ensure the future viability of this segment of the industry and to ensure that potential pulpwood fibre from sawmilling residues is recovered, greater efficiency of operation is clearly necessary.

The Province and DREE agree steps must be taken to strengthen the sawmilling industry in Nova Scotia. It is acknowledged that initiatives will involve restructuring toward larger and better-equipped mills.

While attainment of this objective indicates the need for a number of initiatives, several essential activities can be encouraged through this Subsidiary Agreement. The Province and DREE agree to initiate such actions, and to appropriately reinforce these efforts through supportive action in other applicable federal and provincial programs.

More specifically, the governments agree to use their various programs to direct wood fibre and financial assistance in such a manner as to influence a trend toward more efficient mills. Provincial funds, and sawlogs (from Crown lands, from timberlands receiving public assistance, and to the extent possible from privately-owned timberlands) will be directed only to sawmills meeting minimum acceptable standards of safety, working conditions, good wood utilization and high value products. Except where resource limitations make it clearly impossible to meet such standards, DREE will only direct its industrial incentives to projects striving to attain these standards.

It is recognized that the Province wishes to maintain the social benefits derived from dispersion of the sawmilling industry throughout the smaller communities of the province. Toward this end, the objective is to encourage a trend toward a number of medium sized mills rather than the minimum number of largest-possible sawmills, recognizing of course, that any mill must be large enough in annual throughput to afford modern equipment and reasonable working conditions.

The Province and DREE agree to establish minimum sawmill standards that will constitute basic requirements for mills receiving federal and provincial assistance. Such standards will specify reasonable safety precautions, working conditions, and requirements for efficient sawlog conversion and residue recovery.

The Province and DREE agree that good wood utilization must form an integral part of the overall objective. Today's technology indicates the use of debarkers, chippers and thin-kerf sawing equipment. There is general agreement that the use of such equipment is in the public interest. Both governments agree to use fibre and funds as incentives to persuade and enable sawmill operators to establish such facilities.

In cases where resource limitations (rather than personal preference), restrict annual volumes to a point where it appears economically impractical to meet the stipulated standards, conventional incentive assistance may be applied on an "exception" basis.

To further reinforce this approach, the Province will introduce mandatory registration of sawmills preparatory to monitoring and controlling safety and working conditions.

Support Services

In developing the above strategy, certain deficiencies in the available information base have become apparent. It will be necessary to correct this situation in the early stages of the Agreement. The Province maintains an ongoing forest inventory which provides the basis for forest planning. However, as presently constituted, it does not provide needed information on volumes by product in the growing stock nor does it reveal the adequacy of regeneration. Provision has been made in the Agreement to correct these deficiencies.

As mentioned above, the current spruce budworm infestation has imposed unusual problems for forest management. It is apparent that more intensive and continuous monitoring of the affected areas will be required over the next two or three years.

E. PROGRAMS

1. FOREST MANAGEMENT

Recent harvests of 110-120 MM ft.³ softwoods and 10-15 MM ft.³ hardwoods provide direct employment of approximately 7,000 man/years in harvesting and manufacturing. Available data indicate a substantial overcut in softwoods at recent production levels. On the other hand, only a relatively small proportion of available hardwoods are being harvested. Consequently, there is a pressing need to ensure that the softwood cut can be sustained, thereby retaining jobs and incomes, and for finding new uses for surplus hardwoods, thereby increasing jobs and incomes.

The immediate goal of this program is to increase productivity on all classes of forest land holdings, improve physical access, and reduce diseconomies attributable to fragmentation and scale. To facilitate achievement of these goals, the following projects will be implemented.

(a) Forest Management on Private Lands

Situation: Privately-owned productive forest land in the Province constitutes approximately three quarters of the resource with control distributed among an estimated 30,000 owners. It is estimated that up to one-half of this total, mainly in holdings of less than 1,000 acres, may not be available for forest production in the future. Therefore, if a concerted Forest Management Program is not undertaken, as much as 2.5 million acres will be effectively unproductive while the remaining lands are being overexploited. In addition, these lands are now supporting far less timber than they are capable of growing, due to poor management practices in the past. A strong thrust to increase growth and production from these lands and to reduce the effects of fragmented ownership is essential.

Project Requirements: To increase productivity, restore more privately-owned land to timber production and thereby facilitate an increase in the harvest, it is estimated that up to 325,000 acres of private land could be placed under management plans during the term of this Agreement.

Forest operations on the smaller holdings may be regarded by the owners as uneconomic and may result in removal of lands from forest production. In the face of a downward trend in forest production from the small ownerships, which collectively are very important to the forest industry, government incentives must be designed to encourage all owners to manage their lands more effectively while, at the same time, reducing the diseconomies inherent in fragmentation.

From the point of view of applying government incentives, servicing the smaller properties with roads on an individual basis will be relatively inefficient and costly. For this and other reasons, strong emphasis must be placed on encouraging the grouping of contiguous small blocks and the creation of group management ventures on a formal basis. To enhance prospects for creating larger land units in this manner, incentives will favour property owners entering into management contracts with group entities.

During the next few years, many owners who may be interested in practicing more intensive forest management on small holdings will not have an opportunity to join a formal group. Where the creation of formal group entities is not considered feasible, owners of small properties will be encouraged to cooperate in the development of a more efficient road system. Where this cannot be achieved, incentive assistance for the management of small holdings on an individual basis will be at a lower level. No assistance will be available for blocks too small to be considered economical, and the Province and DREE agree to establish a minimum size acreage figure for incentive assistance purposes.

In all cases, an approved operational forest management plan accompanied by a statement of intent respecting future management of the subject lands will be required prior to the commitment of funds under this project.

Project Costs:

Expenditures will consist of forest management inputs in keeping with approved management plans on all sizes of ownership with assistance favouring groupings of mainly small holdings. Approved costs will consist of site preparation, acquisition of planting stock and planting; cleaning, thinning and improvement cutting in natural stands as well as access road and fire pond construction and boundary line establishment. The projected magnitude of the land area and the basis for cost estimates for the various operations mentioned are as follows:

Area to be Placed Under Management Plans

Year	1	2	3	4	5	Total
Acres (000's)	45	60	65	75	80	325

Estimated Costs

Roads - Miles	1,187
(\$ 000's)	7,478
Boundary Lines - Miles	638
(\$ 000's)	640
Site Preparation - Acres	8,205
(\$ 000's)	127

Planting - Trees (000's)	9,780
(\$ 000's)	685
Cleaning - Acres	44,525
(\$ 000's)	2,193
Thinning and Improvement	
Cutting - Acres	31,540
(\$ 000's)	2,000
Plan Preparation (Consultant)	
(\$ 000's)	137

Estimated Five-Year Cost \$13,260,000

(b) Forest Management on Crown Lands

Situation: Provincial Crown holdings include approximately 1.5 million acres of productive forest land under long-term lease to pulp and paper companies and approximately 1.0 million acres under provincial control and management. Production from the latter can be increased immediately if physical access is improved. These lands are of particular importance as a source of sawlog material and to compensate for the overcut on private lands. Therefore, forest management inputs described below will be confined to the uncommitted Crown holdings.

Project Requirements: Both access road construction and forest improvement work are required. Best estimates indicate that construction of management access roads and forest improvement treatments consisting of reforestation (site preparation, acquisition of planting stock, planting and weeding), cleaning - spacing, thinning and improvement cutting can be undertaken at an accelerated rate inasmuch as planning is well advanced. The road construction program will make previously inaccessible areas available for forest management while the forest improvement work will increase timber availability to permit an expanded harvest in both the short and long-term.

Project Costs: Expenditures under this project for the above operations are estimated at:

Road construction - Miles	372
(\$ 000's)	4,440
Site preparation - Acres	17,300
(\$ 000's)	665
Planting - Trees (000's)	13,020
(\$ 000's)	1,507
Weeding - Acres	11,900
(\$ 000's)	221
Cleaning - Acres	5,355
(\$ 000's)	494
Thinning and Improvement	
Cutting - Acres	3,800
(\$ 000's)	236

Estimated Five-Year Cost \$7,563,000

(c) Spruce Budworm Salvage

Situation: Severe insect (spruce budworm) infestations affected more than 1.0 million acres on Cape Breton Island in 1976. Damage is particularly severe in Inverness and Victoria Counties. The situation is forecast by the Canadian Forestry Service to range from severe to extreme for most of the softwood forests on Cape Breton Island in 1977. Forecast damage in 1977 will result in deterioration of the stands and pose a threat to the viability of forest industries which depend on the long term supply of timber from the areas concerned. Extensive cutting of timber infested by insects on Crown land must, therefore, be carried out. Leaving the insect infested timber standing would present a fire hazard and a loss of wood fibre through fungal deterioration within a period of 3-5 years after mortality. In the short-term, wood will be recovered which would otherwise be lost to industry and in the longer-term, the forest will be restructured to reduce vulnerability to insect attack.

The recovery of insect-infested timber requires construction of roads in order to extract the timber before it is destroyed. Special funds must therefore be made available immediately for Crown land on Cape Breton Highlands in view of the public concern and the profound industrial, social, economic, aesthetic and environmental consequences that will follow if the problem is not met head on.

The merchantable timber in the plateau area currently subject to infestation would be harvested by the lessee over the next twenty years or so under normal circumstances. In view of the current serious situation, it will be necessary to compress harvesting of the substantial volumes of timber into a much shorter period of time. The recommended approach requires a doubling of the annual harvest over the next five years. To facilitate this, the road construction program must be greatly accelerated over the next three to five years. Inasmuch as the area is remote, has not been accessed by road previously and the pockets of particularly severe infestation are dispersed, the salvage plan requires construction of most of the access road system in the next five years that would normally be constructed over a twenty-year period.

Project Requirements: This salvage operation will necessitate construction of approximately 125 miles of road at an average cost of around \$25,000 per mile. Therefore, while road construction costs are calculated for a five-year period, it may be necessary, in view of the severity and advanced state of infestation in certain locations, to complete construction in an even shorter period.

Project Costs: The proposed road construction project will entail costs greatly in excess of the normal road construction costs (approximately \$1 million per year) incurred by the lessee. In view of the fact that the annual harvest in the Highlands area will be doubled over a five-year period to prevent losses of valuable raw material, up to fifty percent of the cost of emergency access road construction in the plateau area will be borne under this Agreement.

Estimated Five-Year Cost \$1,563,000

(d) Group Management of Private Lands

Situation: As outlined under Forest Management on Private Lands in (a) above, strong emphasis will be placed on the creation of group management ventures to overcome the fragmentation and scale problem and to ensure more efficient and cost-effective management of these small holdings. To permit operational testing of the group venture approach to private forest management preparatory to this Agreement, a pilot project was organized in Pictou County in early 1975.

Results of this undertaking indicate that the group venture concept is viable and suitable for inclusion in this Agreement. Accordingly, it is clearly desirable that efforts be made to encourage and facilitate the establishment of group ventures along the same lines as the West Pictou Project in other areas of the Province and to continue the West Pictou Project.

Much of the success of this particular approach is dependent upon the assemblage of contiguous blocks of a sufficient size to permit efficient operations and certain economies of scale. It is expected that cases will arise where parcels of forest land, located in a group management area, will be ineffectively used and may not be available to the group. Checkerboarding of this type will reduce efficiencies and increase costs, particularly for road construction.

Project Requirements: As mentioned above, the primary goal is the assembly of mainly small private holdings into operating units on which it is more attractive to practice intensive management. Larger scattered blocks of Crown or private ownerships may also be available for group management. In order to provide a suitable framework to ensure continuity of management, the organization of limited companies will be encouraged and facilitated. The companies will be responsible for forest planning and forest operations as well as the marketing of forest products. The main requirement is the provision of incentives to facilitate the organization of such ventures. This is mainly in the form of assistance with operating expenses which, in the first year or two, will necessitate a virtual total subsidy of company operating costs. Incentives for forest management are included in the Forest Management on Private Lands project.

During the next five years, it is the intention to encourage the creation of up to eight such group ventures, including the continuation of the West Pictou Project.

In the normal course of events, it would be desirable to have the group as an entity acquire key forest properties. For various reasons such as limited availability of equity capital, this solution may not be possible. As an alternative, such lands could be purchased by the Crown at the request of the management group and made available to the group for management purposes.

The key to growth and ultimate success of group management ventures is the participation of woodlot owners who are interested in having their lands managed. Therefore, it is not intended that land acquisition by purchase be regarded as a means of bringing an expanded acreage under management. Land acquisition by the Crown will be considered only under the following conditions:

- (1) Where a block of land not otherwise available for management but available for purchase will facilitate access to adjoining blocks under management by the group;
- (2) Where acquisition of land is the only means that will permit the construction of a more efficient road network, thus resulting in substantial savings.

Project Costs: Project costs are based on the establishment of eight group ventures over the next five years, including continuation of the West Pictou Group. It is difficult to estimate what the requirements for land acquisition may be. However, it is not unreasonable to expect that 2,500 acres might be acquired for this purpose over the next five years.

Estimated Five-Year Cost	\$800,000 group ventures
	\$250,000 land acquisition

2. FOREST INDUSTRY DEVELOPMENT

At recent production levels, less than one-third of the harvestable growth of hardwoods is being cut. Because existing industry is heavily oriented towards softwoods, only the softwood cover types are harvested in many areas. At present operating levels, the softwood cover types are being seriously overcut, since over 40 percent of the softwood volume is found in the mixedwood and hardwood cover types. At present, the softwood component in the mixedwood and hardwood stands are economically inaccessible in many areas because of a lack of markets for hardwoods. Continuing harvests of softwoods without spreading the annual cut over the entire forest area through the process of integrated logging increases the overcut effect in the softwood species and will inevitably lead to a deterioration of the fast growing sawlog-sized softwood stands. More importantly, the best prospects for immediate industrial growth are dependent upon an expansion of the hardwood harvest.

There has been a steady decline in the volume of sawmill production since 1950 from approximately 350 MM f.b.m. per year (including 40 MM f.b.m. hardwoods) to the current volume of less than 200 MM f.b.m. per year (including 5-10 MM f.b.m. hardwoods). During the same period, the number of mills decreased from about 800 to 350. The decline in production is associated with structural problems which have cause and effect linkages. Many of the mills are relatively inefficient which places them at a disadvantage in acquiring raw material. The supply of sawlogs is particularly problematical inasmuch as the independent mills collectively control only about five percent of the forest land. Relative inefficiency and obsolescence also means that there is a significant loss of usable residues.

(a) New Uses for Hardwoods

Situation: The hardwood segment of the resource is currently underutilized mainly because the various species are of undetermined quality and market opportunities have not been fully investigated. Therefore, the need exists to fully explore potential markets, identify possible manufactured products and locate areas for hardwood-based industry development. Concurrently, data on growth, yield, and quality of the various hardwood species has to be improved.

Project Requirements: Intensive investigations, commencing with and taking full advantage of completed and/or on-going research in Canada and elsewhere, will be undertaken relative to the integrated utilization of the low grade and quality hardwoods in the Province. These investigations will facilitate the realization of the potential of the hardwood resource. In the context of improving on the utilization of the currently surplus hardwoods, there is an obvious need to develop models capable of predicting the growth and yield of hardwood stands of varying densities, ages, species, composition and site. These will assist government and industry resource managers in determining yields which can be expected now and in the future, especially in decisions regarding the best combination of management alternatives. Industrial development possibilities based on the opportunities identified under this project will be coordinated with the Opportunity Identification Analysis and Promotion Program included in the Industrial Development Subsidiary Agreement and may be pursued under other federal and provincial programs.

Project Costs: Expenditures under this project are for the development of growth and yield models by qualified individuals hired on a contract basis and consultant studies.

Estimated Five-Year Cost

\$400,000

(b) Sawmill Improvement

Situation: A healthy competitive sawmill industry requires a trend to larger modern mills. However, there is little indication that this will occur automatically and, in fact, there is a very real danger that the industry will continue to decline.

Future viability of this segment of the industry requires larger, more efficient plants and equipment to increase the recovery of usable material and to improve safety and working standards. This necessitates a larger average size of mill, the use of debarking and chipping equipment as well as thin kerf sawing capability.

Project Requirements: Sawmill operators usually resist adoption of improved sawing technology on three grounds. First, they point out that the equipment will cost more money. Secondly, they state that such equipment usually requires more, or better-trained, personnel. Finally, they anticipate an initial period involving lower productivity, manifesting itself in higher per unit cost.

The KDIA program offsets additional capital costs. Manpower training programs help offset the cost of training new skills. This project is designed to offset anticipated lower productivity during the initial months of operation.

The skills involved in using and maintaining this improved sawing equipment will require an initial learning period during which lower productivity will be experienced. This lower productivity will manifest itself in higher manufacturing costs. This project provides a cash incentive during the break-in period intended to offset these increase production costs.

It is recognized that this assistance is "in addition" to other federal and provincial programs that may apply and is intended to facilitate the transition to new technology. As such, assistance under this project will be available to all mills adopting the sawmill standards.

Project Costs: The project costs will be confined to cash to new or rebuilt sawmills which meet the criteria outlined above.

Estimated Five-Year Cost	\$500,000
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3. SUPPORT SERVICES

Successful implementation of the Forest Management and Forest Industry Development programs requires a number of ancillary projects which have been grouped under Support Services. These consist of refinements to the resource data base, the organization of forest management crews, and the establishment of consulting foresters.

(a) Forest Inventory Refinements

Situation: A serious deficiency of the on-going provincial forest inventory is that information on the volumes by product in the growing stock is difficult to obtain. Such data are essential when companies are considering expanding or examining the feasibility of establishing a new wood-using plant.

In a related sphere, there has never been any concentrated effort made to statistically assess the status of cut-over and burnt lands. Such information is virtually essential to a forest management program such as that contemplated in this Agreement. At present, there is a very substantial back-log of work to locate and assess regeneration and establish the necessary data base. On those cut-over areas that have obvious harvesting waste, there is a need to assess the volume of wastage so that in future utilization practices can be improved.

The current spruce budworm problem has imposed special requirements for information in the areas affected. It is of particular importance that the situation be monitored closely so that measures contained elsewhere in this Agreement can be implemented most effectively.

Project Requirements: Until recently, there has not been a reasonably suitable method for obtaining required information on volume by product. The introduction of 3P Dendrometry Sampling permits the compilation of data by product into various merchantable limits according to need with little effort once the initial data has been collected. The requirement here is to establish the necessary data base to utilize this new technique.

Due to the very substantial back-log of regeneration survey work, it is strongly recommended that this be eliminated as quickly as possible so that adjustments can be made in the forest management projects. Large scale photo inventory will also be evaluated in an attempt to develop better resource data at lower cost.

In order to plan for special management measures in areas subject to severe budworm attack, special aerial surveys, film processing, photo interpretation and mapping will be undertaken. This will permit accurate estimates of species content, age and volume per acre, size of stands and stage of defoliation.

Project Costs: The required work, as described above, will be performed by consultants or contracted to qualified individuals.

Estimated Five-Year Cost	\$353,000
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(b) Organization of Forest Management Crews

Situation: The dramatic changes in the ownership of rural land which have occurred over the past fifty years have resulted in a decreasing number of owners who are willing and able to actively manage their holdings for forestry purposes. Furthermore, difficulties are frequently encountered by these owners in hiring skilled and reliable woods workers on a periodic basis. The activities which will be stimulated under this Agreement, especially the extensive forest improvement projects, will result in additional demands for skilled forestry workers.

Project Requirements: Once this Agreement is implemented and planning on private land commenced, there will be an immediate need for forest improvement capability which is not available at the present time. Even though land owners will be encouraged to do the necessary work wherever possible, there will be many instances where skilled labour will be required. Therefore, provision has to be made for the organization, training and equipping of small forestry crews to do forest improvement work. It is difficult to estimate how many crews will be required, but at a minimum eight crews should be organized and placed in operation during the term of this Agreement. The main requirement is for the organization and equipping of these crews. No direct expenditure for training should be necessary as work can be performed on lands placed under management plans or lands under management by group ventures. Alternatively, the practical training could be on Crown land forest improvement projects. While in some instances organization and training can be handled by group management ventures and extension staff of the Department of Lands and Forests, provision has to be made for organization and equipping where necessary.

Project Costs: Expenditures under this project will cover the cost of retaining the services of an individual or group to provide the necessary services for the organization and training of these crews and direct grants to assist with the acquisition of essential machinery and equipment.

Estimated Five-Year Cost	\$125,000
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(c) Establishment of Consulting Foresters

Situation: During the term of this Agreement, a majority of private forest owners may not avail themselves of the opportunity to enter into formal group management organizations. Since many of these owners would not have access to the professional and technical staff employed by the group management units or the larger forest industries, it will be up to the extension service of the Nova Scotia Department of Lands and Forests to promote forest management. In order to achieve the goals in each region and the Province in the next five years, it will be necessary to have part of the promotional and forest planning work on private lands handled by consulting foresters. However, there are few consulting foresters in the Province at present and the success of this approach has not been tested here. Accordingly, it is the intention to proceed on a pilot project basis. In keeping with this approach, consulting foresters will be encouraged to locate in two areas of the Province during the first year of this Agreement.

Project Requirements: As indicated above, consulting foresters are not readily available in the Province. Therefore, it will be necessary to provide some incentive to qualified consultants to locate in the areas selected. Provision has been made in the private land forest management projects for the preparation of management plans. This activity, coupled with the implementation of the plans will provide remuneration. However, it will require one to two years for the consulting foresters to become self-sustaining. During this period, the consulting foresters will be engaged by the Department of Lands and Forests to promote the private land forest management projects, prepare management plans, and develop a clientele among the land owners.

Project Costs: Costs under this project cover payments to consulting foresters for services provided in implementing private forestry during the first few years of this Agreement.

Estimated Five-Year Cost \$60,000

(d) Survey of Private Ownership Characteristics

Situation: For various reasons, the essential data or information pertaining to the small ownerships are inadequate and incomplete. For example - estimates of the number of small private ownerships range from approximately 27,000 to almost 50,000.

The data that are necessary in this connection would normally complement property ownership maps. In the absence of the latter, such data can be of perhaps greater use in planning for assistance to the private sector. Essentially, what is required are answers to a number of questions relating to who the owners are, where they are located and what their attitudes and objectives are towards woodland ownership and use. When these questions are answered, quantitative measures with respect to the number of owners, timber availability on private land and attitudes towards forest land management should be available. Moreover, this should provide the basis for a practical data bank which could be assessed when quantitative or qualitative analysis for policy or specific project purposes during the course of this Agreement, and subsequent to it, is required. Moreover, such data can be updated periodically and trends can be analyzed.

Project Requirements: The data as outlined can be collected most efficiently by means of a questionnaire mailed out to a representative sample of property owners throughout the province. This approach has been quite successful when used elsewhere and can be administered much more economically than personal interviews.

Project Costs: Costs are based on a complete survey during the first year of the Agreement to be repeated twice by the fifth year.

Estimated Five-Year Cost \$61,000

4. EDUCATION, PUBLIC INFORMATION AND EVALUATION

Lack of knowledge of forest management harvesting and timber utilization is a contributing factor in the generally low productivity of private forest lands, and harvesting and processing waste. The following projects are intended to assist in overcoming this barrier as well as to inform land owners and industry of the benefits to be derived from programs under this Agreement. Ongoing evaluation of the Agreement is also provided for.

(a) Education and Public Information

Situation: There is an important educational component implicit in the Private Land Management and Sawmill Improvement projects which, while not referenced specifically, nor funded under this Agreement, will be pursued vigorously by the Province. An expanded extension service will promote forest management directly by personal contact. Extension activities can be expected to have an immediate and sustained demonstration effect and coupled with the proposed changes in forest land taxation and implementation of the Forest Improvement Act, will serve to heighten the awareness of

and necessity for forest management and the advantages of cooperative groupings. Such activities will also be instrumental in improving the allocation of timber harvested from private lands and the impact will be incremental to the conditions placed on financial assistance provided under this Agreement. Provincial extension work in sawmill development will be continued and expanded in keeping with the intent of the Sawmill Improvement project. The foregoing activities will be rendered most effective if they are supplemented by a more general public information program, which will serve to reach a larger target population.

Project Requirements: In addition to the Provincial actions enumerated above, funding is required for the preparation and dissemination of suitable printed and audio-visual materials on forest management operations (silviculture, harvesting, road construction, etc.), and utilization of forest products. Such materials will emphasize the advantages of more intensive forest management and group management ventures and will inform land owners on the best methods for various forest operations and use of wood harvested. The requirements of the Forest Improvement Act and the implications of the proposed revisions in forest land taxation will be explained and emphasized. All effective means of communications, including the preparation of films, film clips, slides, booklets and brochures as well as judicious use of the electronic and print media will be employed to best advantage. The most beneficial effect will be to inform a much larger segment of the target population than would otherwise be the case. Concurrent thereto, it will be necessary to inform the private land owners and the forest industry generally of the purpose and advantages of the various programs contained in this Agreement. To ensure that the public education and information effort is adequately and effectively implemented, a qualified communications consultant will be retained to evaluate and advise on the most effective means of implementation.

Project Costs: Expenditures under this project will cover the production of suitable materials referred to above and dissemination of these materials through suitable channels and the retention of the services of a qualified consultant. In addition, costs have been included to cover the preparation and distribution of suitable information materials on this Agreement.

Estimated Five-Year Cost	\$600,000
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(b) Evaluation

Situation: The manner in which the subsidiary agreement is implemented and the rate of success in the various projects will be among the most important measures of performance. An ongoing evaluation of the implementation process, which will permit changes to be introduced as necessary, is essential.

Project Requirements: It is expected that the evaluation requirements can most effectively be handled by a consultant approved by the Management Committee on a periodic basis.

Project Costs: Costs are based on engaging a consultant for one month during years two, three and four of this Agreement and for three months upon completion.

Estimated Five-Year Cost	\$35,000
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- (e) Recommending to the Coordinating Committee adjustments or amendments of Project Briefs; and
- (f) Preparing progress reports on projects as requested by the Coordinating Committee.

Responsibility for project implementation will rest with the Province, which may in the case of some projects employ designated agencies to actually administer the work. Management direction and control over this implementation process will be through the Management Committee.

AMENDMENT NO. 1

CANADA/NOVA SCOTIA

SUBSIDIARY AGREEMENT FOR FORESTRY

DATED JUNE 28, 1977

AMEND

AMENDMENT

107801(b) - Forest Management on
Crown Lands

7,563/80/20

107801(c) - Spruce Budworm Salvage

1,563/80/20

107801(b) - Forest Management on
Crown Lands

7,963/80/20

107801(c) - Spruce Budworm Salvage

1,163/80/20

FOR THE PROVINCE

FOR CANADA

Recommended: _____

Recommended: _____

Date: _____

Date: _____

Approved: _____

Approved: _____

Date: _____

Date: _____



Regional
Economic
Expansion

Expansion
Économique
Régionale

Minister

Ministre

CANADA/NOVA SCOTIA
SUBSIDIARY AGREEMENT FOR FORESTRY
AMENDMENT NO. 2

I, Marcel Lessard, Minister of Regional Economic Expansion, hereby authorize Allan J. MacEachen, Deputy Prime Minister and President of the Privy Council, to sign on my behalf an Agreement with the Government of Nova Scotia, substantially in the form annexed hereto, to amend the Canada/Nova Scotia Subsidiary Agreement for Forestry dated the 28th day of June, 1977.

DATED AT OTTAWA THIS
21st day of July, 1978.

Marcel Lessard

AMENDMENT NO. 2

CANADA/NOVA SCOTIA

SUBSIDIARY AGREEMENT FOR FORESTRY

DATED JUNE 28, 1977

AMEND

AMENDMENT

Section 4

Delete the following:

Add:

4.1 The four programs listed in Part I of Schedule "A" to this Agreement constitute the several initiatives to be pursued in the attainment of the development opportunity agreed to by the Ministers.

4.1 The five programs listed in Part I of Schedule "A" to this Agreement constitute the several initiatives to be pursued in the attainment of the development opportunity agreed to by the Ministers.

4.5 This Agreement shall have effect from April 1, 1977 and shall terminate on March 31, 1982 except that activities approved and commitments made in writing prior to this date shall continue in force until completion. However, Canada shall not pay any claim after March 31, 1983.

4.5 The Agreement shall have effect from April 1, 1977 and shall terminate on March 31, 1982 except that activities approved and commitments made in writing prior to this date respecting Programs 1, 2, 3 and 4 listed in Part I of Schedule "A" shall continue in force until completion. Program 5 listed in Part I of Schedule "A" shall have effect from June 1, 1978 and shall terminate on March 31, 1982. However, Canada shall not pay any claim received after March 31, 1983.

However, in consideration of Nova Scotia's identified project requirements, subject to the Federal Government's ultimate decision in regard to the future of the Employment Strategy presently scheduled to expire in March, 1982, the Federal Government would be prepared to renew the support provided under Program 5 of this Agreement for a fifth year.

Section 5

Delete the following:

- 5.1 Each of the Ministers shall designate one or more senior officials in equal numbers to be responsible for the administration of this Agreement. These officials shall constitute the Management Committee whose function it shall be to oversee the planning and implementation of the programs specified in sub-section 4.1 and to fulfill responsibilities identified for the Management Committee elsewhere in this Agreement. In the event of any disagreement in the Management Committee, the relevant matter shall be referred to the Ministers whose decision shall be final.

Add:

- 5.1(a) Each of the Ministers shall designate one or more senior officials in equal numbers to be responsible for the administration of this Agreement. These officials shall constitute the Management Committee whose function it shall be to oversee the planning and implementation of the programs specified in sub-section 4.1 and to fulfill responsibilities identified for the Management Committee elsewhere in this Agreement. In the event of any disagreement in the Management Committee, the relevant matter shall be referred to the Ministers whose decision shall be final.

- 5.1(b) With respect to Program 5 listed in Part I of Schedule "A", the definition of Federal Minister in Section 1(e) and 1(h) shall be deemed to include the Minister of Employment and Immigration.

Section 6

Add:

Delete the following:

6.1 Canada shall contribute eighty per cent (80%) of the eligible costs and the Province shall contribute twenty per cent (20%) of the eligible costs of any project approved under subsections 6.4 and 6.5, except for projects 2(a) New Uses for Hardwoods, 3(a) Forest Inventory Refinements, and 3(d) Survey of Private Ownership Characteristics, specified in Schedule "A", to which Canada shall contribute fifty per cent (50%) and the Province fifty per cent (50%).

6.1(a) With respect to Programs 1, 2, 3 and 4 listed in Part I of Schedule "A", Canada shall contribute eighty per cent (80%) of the eligible costs and the Province shall contribute twenty per cent (20%) of the eligible costs of any project approved under subsections 6.4 and 6.5, except for projects 2(a) New Uses for Hardwoods 3(a) Forest Inventory Refinements, and 3(d) Survey of Private Ownership Characteristics, specified in Schedule "A" to which Canada shall contribute fifty per cent (50%) and the Province fifty per cent (50%).

(b) With respect to Program 5 listed in Part I of Schedule "A", Canada shall contribute 100% of eligible direct labour costs up to an average level of \$8,100 per eligible man year, a man year being defined as the equivalent of one person having been employed for fifty-two work weeks, a work week being further defined as forty hours of work at jobs identified in the projects. Respecting this same Program, the Province shall contribute direct labour costs in excess of federal contribution limits and shall contribute one hundred per cent (100%) of the eligible non-labour costs of any project approved under this Program.

During the 1979-80 fiscal year of this Agreement, the average level of \$8,100 shall be reviewed and shall be the subject of an upward renegotiation for the second, third and fourth years in the event of, and subject to, an overall increase in funds available for the Canada Works Program as approved in the Employment Strategy.

6.3. Notwithstanding anything in this Agreement, the total amount payable by Canada under this Agreement shall not exceed \$20,212,000.

6.3 Notwithstanding anything in this Agreement, the total amount payable by Canada under this Agreement shall not exceed \$36,142,000, of which the total amount payable under Program 5 listed on Schedule "A" shall not exceed \$15,930,000 to be made in annual amounts not exceeding:

FY 1978-79 - \$2,880,000
FY 1979-80 - \$4,350,000
FY 1980-81 - 4,350,000
FY 1981-82 - 4,350,000

During the 1979-80 fiscal year of this Agreement, the fiscal year allocations of \$4,350,000 shall be reviewed and shall be the subject of an upward renegotiation for the second, third and fourth years in the event of, and subject to, an overall increase in funds available for the Canada Works Program as approved in the Employment Strategy.

6.5 Subject to sub-section 6.6, the eligible costs of non-capital projects to be implemented under this Agreement consist of all costs actually incurred by the Province pursuant to a contract entered into in accordance with this Agreement, with any person or corporation, for the performance of work, the supply of goods or the rendering of services for the implementation of a non-capital project, but do not include any costs in respect of the services of any regular employee of the Province or its agencies.

6.5 Subject to sub-section 6.6, the eligible costs of non-capital projects to be implemented under Programs 1, 2, 3 and 4, listed in Part I of Schedule "A" of this Agreement, consist of all costs pursuant to a contract entered into in accordance with this Agreement, with any person or corporation, for the performance of work, the supply of goods or the rendering of services for the implementation of a non-capital project, but do not include any cost in respect of the services of any regular employee of the Province or its agencies. Eligible costs of non-capital projects to be implemented under Program 5 listed in Part I of Schedule "A" of this Agreement are eligible direct labour costs, but not exceeding federal contribution limits and also do not include any cost in respect of the services of any regular employee of the Province or its agencies.

6.9 If, at any stage of a program, it appears to the Province that the costs thereof will exceed the estimated costs specified for any program in Schedule "A", the Province shall promptly so inform the Management Committee and state the reasons for such increase.

6.9. If at any stage of a program it appears to the Province that the costs thereof will exceed the estimated costs specified for any program other than Program 5 in Schedule "A", the Province shall promptly so inform the Management Committee and state the reasons for such increase.

Section 7

Add:

7.5 The services and facilities of the Canada Employment/Manpower Centres shall be used for the selection and referral of workers to be employed under Program 5 listed in Part I of Schedule "A".

Schedule "A", Part I

Add:

5. WOOD SALVAGE/STORAGE AND ANCILLARY FOREST MANAGEMENT

Estimated total cost: \$34,967,500

DREE (Canada) share: \$15,930,000

Provincial share: \$19,037,500

(a) Wood Salvage/Storage

Estimated total cost:
\$26,377,500

Cost-sharing: Canada \$10,440,000
Province \$15,937,500

(b) Ancillary Forest Management

Estimated total cost:
\$ 8,590,000

Cost-sharing: Canada \$ 5,490,000
Province \$ 3,100,000

Schedule "A", Part II
Section E. Programs

Add:

5. WOOD SALVAGE/STORAGE AND ANCILLARY FOREST MANAGEMENT

The current spruce budworm outbreak in Nova Scotia has been most severe on Cape Breton Island. Widespread damage is in evidence particularly in the Highlands. Immediate action is necessary to obtain the maximum economic benefit from the wood at highest

risk, and to alleviate the impact of wood shortages in the longer term.

The immediate goal of this program is to expand the salvage on Cape Breton Island beyond the volumes now planned by industry over the next four years and to undertake Forest Management activities in eastern Nova Scotia aimed at alleviating the impact of spruce budworm damage. These activities are highly labour intensive and will provide up to 1,966 man years of additional employment.

(a) Wood Salvage/Storage

Situation: At the present time, approximately 3 million cords of softwoods (mainly balsam fir) are at very high risk on the Cape Breton Highlands. In addition, projections suggest a comparable quantity could be lost on the Lowlands if the present trend of the infestation continues. The Access Road Construction Program provided for elsewhere in this Agreement, has resulted in a substantially increased wood harvest on the Highlands during the past two years. However, market conditions, wood quality and industry capacity limit the annual volumes which can be utilized in the short term.

Annual consumption by Nova Scotia Forest Industries (NSFI) plant at Port Hawkesbury averages 500,000 cords per year. Existing round wood inventories stand at 250,000 cords and, at least for 1978, the Company will not be in a position to take delivery of more than 420,000/450,000 cords.

Distances involved make it uneconomic to truck salvaged wood to the Scott Maritimes Limited mill at Abercrombie Point, and such action would only result in a decrease in employment elsewhere in the Province.

Other uses for salvage harvest in eastern Nova Scotia are limited. Quality renders much of the wood unsuitable for lumber production unless the better quality stems can be sorted for this purpose. Similarly, budworm infested wood is not suitable for the traditional annual export of

approximately 40,000 cords to European markets. Neighbouring Atlantic Region Provinces are also experiencing a budworm infestation and have no capacity to accommodate Nova Scotia's temporary surplus of infested wood.

The foregoing situation requires immediate action if the economic and employment benefits are to be realized from this forest resource before deterioration renders it useless. Storage of large volumes, coupled with increased lumber production, will yield attractive short-term employment benefits and help alleviate wood supply problems in the mid-1980's.

Project Requirements: During the next four years, it is planned to harvest and store up to 540,000 cords of pulpwood. This wood is incremental to volumes now planned for harvest and utilization by industry over the same period. Nova Scotia Forest Industries have indicated a willingness to undertake the accelerated salvage program to place wood in storage. This will be accomplished by awarding additional harvesting contracts and maintaining the harvest operation on a year-round basis. The increased activity will require additional camps and harvesting equipment and is expected to generate in excess of 1,200 man years of employment. Stored wood will be stacked at suitable locations. Materials suitable for sawlogs will be sorted and sold to local sawmills. During the storage period, inventories will be protected by insurance and will be closely monitored to guard against serious degradation. Wood will be withdrawn from storage as dictated by deterioration or as the need arises to supplement anticipated shortages of healthy wood.

The Province of Nova Scotia will provide the necessary staff resources to oversee implementation of this project.

Project Costs: Costs to be funded under this project will be divided into two components as follows:

- (i) eligible direct labour costs involved in the harvesting and storing of pulpwood, estimated to average \$23 per cord over the four-year period; and the direct labour costs involved in sorting sawlogs estimated at \$2 per thousand f.b.m.
- (ii) eligible non-labour costs (camps, camp operations, relocation and commuting expenses, machine costs including maintenance, insurance and overhead) involved in harvesting and storing pulpwood, estimated to average \$30 per cord over the four-year period.

A contribution will be made, from the Canada Works Program, toward eligible direct labour costs at the rate of \$8,100 per eligible man year within the series of maxima as set out in section 6.3 above. Direct labour costs in excess of federal contribution limits will be funded by the Province and no claim for such costs will be made against this project.

The Province will reimburse Nova Scotia Forest Industries for both direct labour and non-labour costs under an agreement with the Company, detailing harvesting/storage costs, management and disposal of the wood. As wood is drawn from storage, the Province will be reimbursed at the current market price at time of withdrawal, less a negotiated allowance for wood deterioration. Revenues, if any, to the Province, in excess of original non-labour costs, will be applied to expand forest improvement programs in Cape Breton.

Estimated Project Costs:

\$10,440,000 - Direct Labour
\$15,937,500 - Non-labour

(b) Ancillary Forest Management

Situation: Forest Management Programs in this Agreement, coupled with improvement programs undertaken by private industry, will produce benefits in terms of increased forest productivity, jobs and incomes over the coming years. However, certain facets of Nova Scotia's forestry resource requires special attention beyond the programs in this Agreement or the activities being undertaken by the private sector. For example, the spruce budworm ravaged forests of Cape Breton will require massive reforestation aimed at altering the specie composition to reduce susceptibility to future budworm attack. Similarly, there are extensive stands of young softwoods in eastern Nova Scotia which require cleaning or spacing of a magnitude which cannot be accommodated under existing government programs and will not be undertaken by industry, mainly due to the high labour inputs required.

There is also a need for boundary line maintenance on some large ownerships in order to facilitate other forest management activities.

Particularly in the budworm ravaged areas of the Cape Breton region, opportunities exist to undertake pilot projects aimed at testing the concept of a new forest designed to support the growth of fibre, as well as intensive recreational use. The validity of such projects would be measured against areas where natural forces, rather than intensive forest management, respond to budworm attacks.

In addition to the longer-term implications, the activities outlined above will create very substantial job opportunities immediately, particularly in rural areas of eastern Nova Scotia, where unemployment rates are well above provincial averages and alternative employment opportunities are limited.

Project Requirements: The activities to be undertaken in this project are basically labour intensive. Forestry crews will be organized to undertake re-forestation and silviculture treatments and the bulk of the work will be on Crown lands. Individual projects will be developed, detailing the work to be undertaken over the next four years.

It is estimated that full implementation of this project will generate approximately 700 man years of employment.

The Province of Nova Scotia will provide the necessary staff resources to oversee implementation of this project.

Project Costs: Costs to be funded under this project will be divided into two components as follows:

- (i) eligible direct labour costs for forestry crews involved in reforestation and silviculture treatment; and the labour costs associated with implementation of multiple-use forest pilot projects.
- (ii) eligible non-labour costs (seedlings, buildings and equipment, vehicles) necessary to undertake the activities in this project.

A contribution will be made, from the Canada Works Program, toward eligible direct labour costs at the rate of \$8,100 per man year within the series of maxima as set out in section 6.3 above. Direct labour costs in excess of federal contribution limits and eligible non-labour costs will be funded by the Province and no claim for such costs will be made against this project.

Estimated Project Costs:

\$5,490,000 - Direct Labour
\$3,100,000 - Non-labour

Authority for Amending Agreement

Federal: Order in Council P.C. 1978-8/2049 of June 22, 1978
Provincial: Order in Council P.C. 78-488 of May 9, 1978

WITNESSES BY:

Date

FOR CANADA

Witness

Minister of Regional Economic
Expansion

Witness

Minister of Employment and
Immigration

Witness

Minister of State (Environment)

FOR PROVINCE

Witness

Minister of Development

Witness

Minister of Lands and Forests

