Canada. D.N.A.N.R. Arctic Division.

A programme of economic development, east coast of Ungava Bay.

A PROGRAMME OF ECONOMIC DEVELOPMENT
East Coast of Ungava Bay

by

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TABLE OF CONTENTS

M A P S

INTRODUCTION

This report does not present an all-inclusive development plan. There are a great many details of organization and planning that have yet to be worked out. However, it is necessary at some point in the planning to set out the general pattern of development. This is the point.

The preliminary economic survey of the Ungava Bay area indicated the necessity of developing the local Eskimo economy on a regional basis. Relatively large concentrations of natural resources are found throughout the area, yet most of these resources are either neglected, harvested uneconomically or used in a most inefficient manner. Moreover, economic development is severely handicapped by a lack of cash.

During the summer of 1958, a field investigation was made by Mr. J. Evans of the Development Section into the possibility of economic development in the George River and Port Burwell areas. This paper combines a report of field study, market research pertaining to the sale of products from the area and a plan for economic development.

PURPOSE

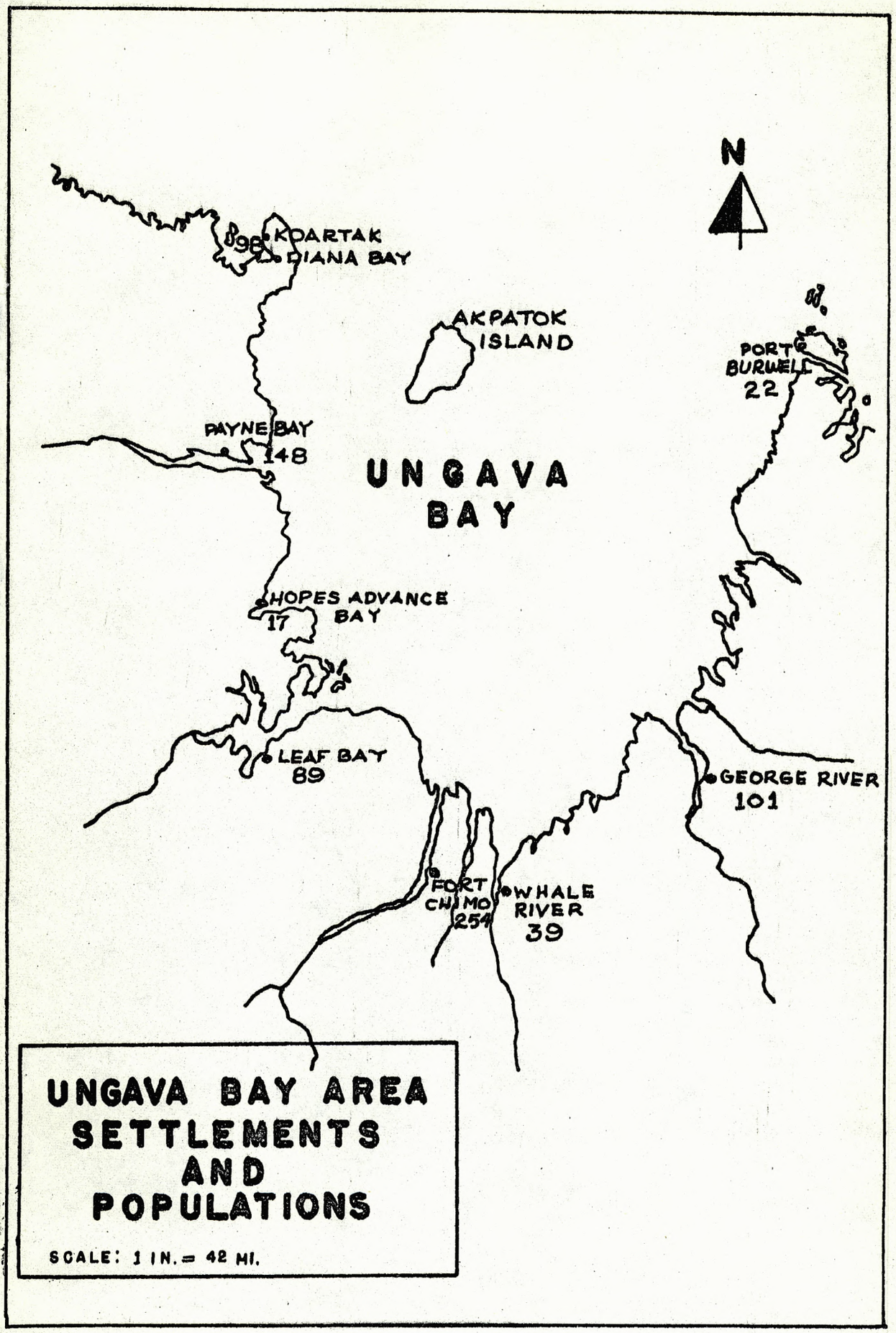
The economic problems facing the Eskimo people living along the east coast of Ungava Bay are exceedingly complex. The area is quite rich in such natural resources as Atlantic cod, Arctic char, Atlantic salmon, harp seal and timber. On the other hand, the people lack adequate housing, their diet contains too high a proportion of store food and they have very little opportunity of earning a cash income. The purpose of this economic development is to:-

1) Bring about the optimum utilization of natural resources by the Eskimo people;

2) Develop a form of community life which will improve basic living conditions;

3) Provide a means whereby the Eskimo people will be able to obtain a cash income through the sale of natural resources;

4) Gain information and experience of methods and techniques of economic development which may be applied to other communities in the north.


N
98
KOARTAK
DIANA BAY
AKPATOK ISLAND
PORT BURWELL
22
PAYNE BAY
148
UNGAVA BAY
HOPES ADVANCE BAY
17
LEAF BAY
89
GEORGE RIVER
101
FORT CHIMO
254
WHALE RIVER
39
UNGAVA BAY AREA SETTLEMENTS AND POPULATIONS
SCALE: 1 IN. = 42 MI.

ECONOMIC DEVELOPMENT

At the present time few of the renewable natural resources along the east coast of Ungava Bay are being subjected to an organized system of harvesting. As a result of this, only a few of the Eskimos are able to obtain sufficient human and dog food from the land. In the George River and Burwell areas, the average income per family derived through the sale of raw manufactured products obtained from the land is less than $200. However, the results of field study and market research indicate that a planned system of harvesting and marketing these resources could provide the average family with a minimum income of $800 to $1,000 per year and at the same time provide more food and material for local use.

Economic development would require a fairly substantial capital investment for equipment. As the Eskimo people do not have any cash which could be used to finance this development, the money would have to be made available by this Department, preferably through the Eskimo Loan Fund.

It is important that these industries be established under Eskimo ownership at a very early phase in their development. This is important for two reasons. First, it would not be wise for a Federal Government department to be engaged directly in industries harvesting the natural resources of the Province of Quebec. Secondly, the successful development of these industries would require a good deal of initiative, hard work and determination on the part of the participants. Each project would have a much better chance of success if the Eskimo participants have a financial and emotional stake in its development. Under such a pattern of development, this Department would make money available for the capital investment on a loan basis and provide technical and supervisory assistance until such time as the Eskimo people can manage the industry by themselves. There are two main reasons why this

../4

pattern of development can function most effectively under a programme of co-operative development:-

1) The general programme of development would involve a number of closely integrated industries, each of which would make a contribution to the general economic development. It would be essential that all the people participating in this programme understand the general pattern of development as well as the economics of each industry. Perhaps an example will help to illustrate this point. In the George River area, the Arctic char fishery would undoubtedly contribute a major proportion of the total cash income of the community. At the present time the George River people use char extensively for dog food. If the char were exported to southern Canada, a new source of dog food would have to be found. This would be available at Port Burwell in the form of Atlantic cod and seal products. The harvesting and transportation of this food to the George River would in turn support a small industry at Port Burwell. However, the successful operation of each of these projects would require a mutual understanding on the part of all participants. The George River people would have to be taught the fundamentals of controlled harvesting so that they realized that if they used the Arctic char as a source of cash, they would have to purchase their dog food from Port Burwell. This pattern would work to the mutual advantage of both groups.

2) The co-operative educational programme would stress such things as:-

   (a) Village and regional meetings to discuss common problems and seek their solutions.

../5

(b) The development of village and group leaders who would be able to assume the responsibility for the management of the administration of the local industries.

This type of educational programme would be extremely beneficial for economic development. It would also help teach the people how to organize and administer their own social and community activities.

This co-operative development should be established under the Quebec Co-Operative Syndicates Act. This Act is relatively simple in format and would permit the establishment of a blanket programme of development. Specifically, it would permit the establishment of one general co-operative which would include such things as cod and char fisheries, handicraft development, house building, sawmill operation, retail store, etc. This umbrella-type development would also have the advantage of simplifying the educational and supervisory programme.

PROPOSED DEVELOPMENT PROGRAMME

The development of this programme would be centred in two areas, George River and Port Burwell. Each area would have its own central co-operative which would function independently. There would be close co-ordination between the two groups and some exchange of products. Because of the risk and expense involved in establishing new enterprises in the Arctic, some of the industries proposed for this area should go through two stages of development:-

1) An experimental or proving stage which would be financed by this Department.

2) A development stage where the industry would be taken over by the Eskimo people and Government aid limited to the provision of loans and supervisory and technical assistance.

This pattern has already been used in a number of ways in the north. The Arctic char fishery, which was begun at Frobisher Bay in 1958, is a good example. This fishery involved a considerable risk.

The market demand, price of transportation and other problems were all unknown factors prior to the establishment of the fishery. A breakdown of any one of these prime factors would have resulted in the failure of the fishery. While the potential of this fishery was good, it was realized that the Eskimo people who knew nothing of the risks involved should not be asked to invest in an enterprise until it was past the experimental stage. Now that Arctic char have been accepted in southern Canada as a luxury food item and a large demand has been established, this industry can be turned over to the Eskimo people. The knowledge gained through the Frobisher Bay experiment will be helpful in establishing char fisheries throughout the Arctic.

There would be a number of small industries in the George River-Port Burwell area which, because of the risk involved, should be sponsored by this Department until such time as they prove to be economically feasible.

Note: If this programme is approved, the supplies for these industries will be sent to Port Burwell on the first available ship, probably a D.O.T. vessel. Early delivery of the supplies would permit some of the industries to export their produce in the first year of operation.

GEORGE RIVER PROGRAMME:

One hundred and two Eskimo people live in this area. Of this population, twenty-eight are able-bodied men between the ages of sixteen and sixty. One of these men has year-round employment as the Hudson's Bay camp trader. Two other men have partial employment from April to September with "Arctic Anglers", a sport-fishing camp. The remainder of the men earn from $25 to $300 from trapping during the winter months. This income is supplemented by small wages earned through stevedoring during the summer shipping season. However, perhaps more than in any other Arctic area, the real basis of the economy lies in Government relief and Family Allowance.

To overcome this completely undesirable situation, the following industries are proposed for the area:

../7

1) Arctic Char Fishery

Members of the Department of Fisheries, Arctic Research Unit, feel that the extensive system of lakes, streams and rivers in the George River region make this one of the most productive areas in the Arctic. Within a twenty-mile radius of the George River, eighteen rivers empty into Ungava Bay. The suggested pattern for the development of this fishery is as follows:-

(a) The fishery would be based on an annual harvest of 30,000 pounds a year. This is the limit set by the Quebec Department of Game and Fisheries for the 1959 season. If studies indicate that the area can support a larger fishery, the limit could be enlarged.

(b) A combination sharp and storage freezer would be located at the mouth of the George River. The fish from the surrounding area would be picked up each day by a freighter canoe and brought into the freezer where they would be cleaned, frozen and stored. The operation should normally be completed in a six-week period between July 15 and August 31. Under favourable operating conditions, the catch could be secured in four weeks. During the 1959 season, the operation of the fishery would undoubtedly be delayed until early August. The equipment, all of which would be capable of being broken down into small sections, would be shipped to Port Burwell on the first vessel going into the area. It would then be transported to the George River by Eskimo Peterhead. Barring unforeseen difficulties, this equipment should be ready for operation between July 20 and August 1.

(c) The marketing of this char would not present a problem. The demand stimulated by the Frobisher Bay fishery last summer will not be met for some time. A. Roy Clouston & Sons Limited, who is handling this fish in the south, does not anticipate any problem in marketing. The fresh frozen

../8

fish would have the advantage of being able to be held for a long period of time and can be released on the market gradually over the year. This system of marketing should help ensure a continuous supply of fish and should also help stabilize the price.

(d) The fishery would provide employment for approximately eighteen people on the following basis:-

i) Twelve fishermen, four at George River, four in fishing area west of George River, four in fishing area east of George River.

Note: The fishermen would work in groups of two.

ii) Two fish cleaners (women)

The fish would be cleaned by the fishermen when they are caught. However, a final cleaning operation would be performed just before the fish are frozen.

iii) Two boatmen. These men would operate freighter canoes which would make a daily pick-up and delivery to the freezer.

iv) Two cold-storage workers. The fish would be quick-frozen and dipped in the sharp freezer. Later they would be boxed and stored in the holding room.

(e) The fishery would require a considerable amount of equipment. This would include:

i) Combination sharp-freezer and storage unit, complete with power unit.

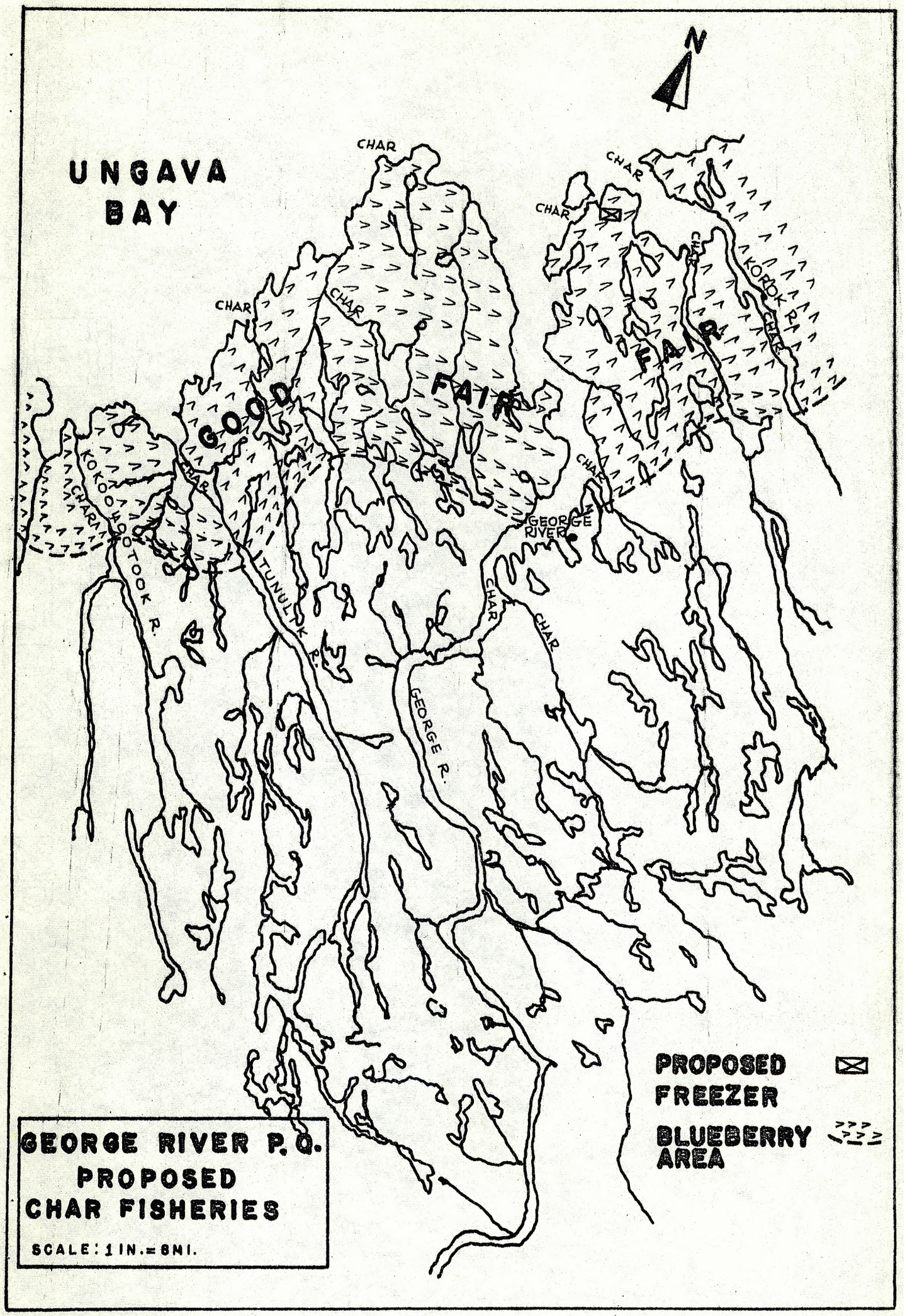
ii) Nets, boxes, packaging supplies and miscellaneous equipment.

iii) Two 22' freighter canoes, equipped with 25 h.p. outboards.

iv) Fuel for boats and freezing unit.

The cost of this equipment would be roughly $18,000.

../9


UNGAVA BAY
N
CHAR
GOOD
FAIR
FAIR
KOKOOHOOTOOK R.
TUNULIK R.
GEORGE RIVER
GEORGE R.
KOROK R.
PROPOSED FREEZER
BLUEBERRY AREA
GEORGE RIVER P.Q.
PROPOSED
CHAR FISHERIES
SCALE: 1 IN. = 8 MI.

(f) The general economics of this fishery could be worked out on the following basis:-

Income - 30,000 pounds of char @ 80¢ per lb.	$24,000
Costs	
Pay to fishermen - 30,000 lbs. @ 30¢ per lb.	9,000
Handling and packaging - 30,000 lbs. @ 03¢ per lb.	900
Transportation (local and shipping to Montreal) - 30,000 lbs. @ 07¢ per lb.	2,100
Commission to agent - 30,000 lbs. @ 05¢ per lb.	1,500
Interest on loan, plus reduction of principal (Based on repayment of loan in five years)	4,000
Depreciation on equipment	2,000
TOTAL -	$19,500
PROFIT would be distributed through dividends. -	4,500

2) Lumbering Operation:

A timber survey was made of the resources of the George River in 1958 by J. Evans (For details, see "Report of Timber Reconnaissance, George and Koksoak Rivers - July, August, 1958"). This survey indicated that there is approximately $1\frac{1}{4}$ million feet of black spruce in the area which could be used for commercial exploitation. In addition to this, there is another $3\frac{1}{2}$ million board feet of small dimension timber which would be suitable for Eskimo housing. There are a number of difficulties involved in the development of this industry which have not yet been overcome. However, with these limitations, the possibilities for development are as follows:-

(a) The economics of this operation must be governed by the understanding that there is not enough timber in the area to assure a continuous yield. To make the timber operation profitable, the yearly cut would have to be approximately 300,000 board feet. At this rate, the commercial timber would last for four years.

../10

(b) The timber-felling operation would be conducted during the winter months (November to March). At the time that the logs were cut, they would be transported to the river bank and piled so they could be spilled at the time of the spring high waters. The bulk of the timber is within one-half a mile from the river, so hauling to the river bank would not present a great problem. The hauling would be done in two ways:-

i) With Eskimo dogteams

ii) With a small tractor

The latter method would undoubtedly be the best, as eighty per cent of the George River dogs died during the winter of 1957-58 from rabies. As a result, the dogteams are small.

In June, after the river is free of ice, a timber drive would be conducted. This operation would take approximately three weeks and would move the timber to a catching point approximately five miles south of the proposed mill site. The George River is quite fast and has a considerable number of rapids. However, it should present no difficulty to the driving operation. Milling would be done from July to October and the lumber could be piled over the winter. Cull lumber, edgings and sawdust could provide an important source of fuel for the local people.

(c) The market demand for this timber is good. The main market appears to be at Hopes Advance Bay where the proposed mineral development could quite easily use the entire cut. Representatives of Ungava Iron Ores have shown a definite interest in purchasing this timber. Government construction programmes in the Ungava Bay area could also provide a modest market for this timber.

../11

The small timber in the area presents interesting possibilities for use in the construction of the Eskimo houses. "Arctic Anglers" provides an excellent example of how this small timber can be used successfully for building construction. In 1958 this camp began operation of a very small sawmill to supply their own needs. The operation used the small timber which grows adjacent to the camp. Rough dimension 2 x 4's, 4 x 4's, 2 x 6's were cut for building construction. Split log siding was also cut in the mill and used to construct warehouses and living accommodation. By using this little mill, "Arctic Anglers" has been able to supply good, cheap housing for its own operation.

(d) The number of people employed in the various aspects of this development could be quite flexible. However, the following pattern of operation is suggested:-

i) Felling, bucking and transporting to river bank - four sets (three men to a set)

ii) Driving operation (ten men for three weeks)

iii) Milling operation (four men - 1 boat operator
1 sawyer
1 helper
1 man for piling and work on green chain.

The equipment required for this operation would include:-

i) Portable mill
ii) Small river boat
iii) Light tractor with power take-off
iv) Miscellaneous equipment (saws, axes, etc.)

This would involve a capital outlay of approximately $10,000.

Note:

Fenimore Mining Company took a small mill into the Larch River during the summer of 1953. This mill was used only one summer and was abandoned when the exploration work in the area was completed. There is a good possibility that the mill can be purchased quite cheaply. If this is the case, the capital expenditure for the lumbering operation may be cut to $6,000.

../12

(e) Transportation presents the biggest problem to this project. No hydrographic work has been done on the George River and until charts and soundings are available, no shipping company will send its vessels up the river. The Hydrographic Service, Department of Mines and Technical Surveys, has indicated that they may be able to do some hydrographic work of the George River during the summer of 1959. Provided that the surveys are done and a channel established, timber exports could begin in the summer of 1960.

Barging timber from the George River to Hopes Advance Bay presents another possibility. We expect that a number of barges will be available at Hopes Advance Bay as soon as the docking facilities are completed. These could undoubtedly be used to transport lumber during the early part of the shipping season when there is not much danger of storms. However, such a pattern would involve a considerable risk and should be considered only if it is impossible to transport the lumber by ship.

(f) The economics of this operation on a yearly basis could be estimated on the following basis:-

Income - 300,000 board feet @ $125 per 1,000	$37,500
Costs	
* Felling, bucking and transportation to river bank, 300,000 board feet @ $20 per 1,000	6,000
* River driving	1,500
* Milling	5,000
Transportation at $50 per 1,000	1,500
Repayment of loan, plus interest (Based on four years of operation)	3,000
Depreciation	1,000

../13

Costs (Continued)

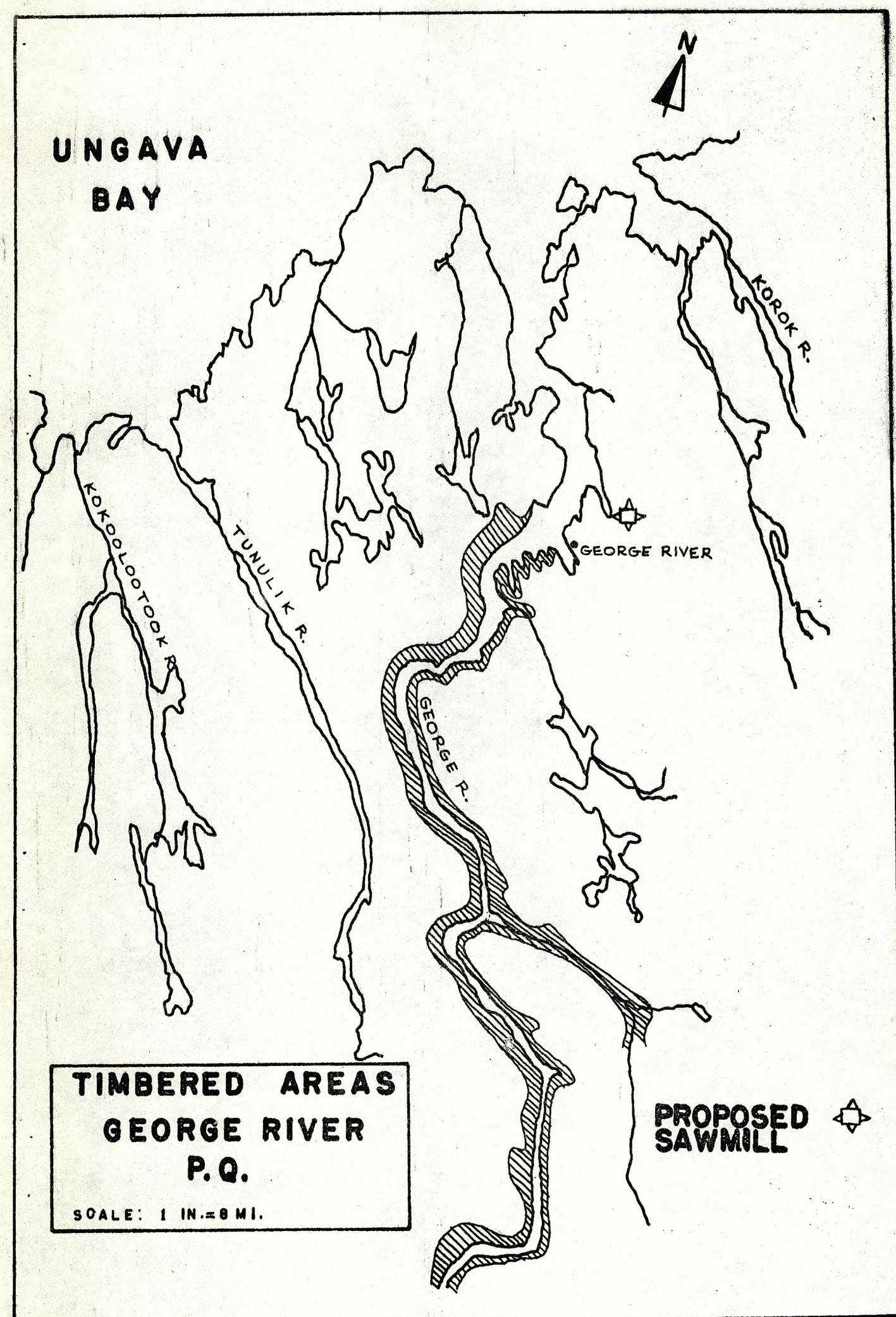
Stumpage at $4.00 per 1,000	$ 1,200
TOTAL -	32,700
PROFIT would be distributed to participants in form of yearly dividends.	4,800

Payable to local people.

(g) What has been classified as "commercial operation" includes only the processing of timber which could supply dimension lumber. It does not include the smaller timber which could be used for Eskimo housing. Members of the Building Research Unit, National Research Council, feel that this type of timber could be used to construct cheap, comfortable and well-designed houses. They suggest that this type of house could be made up in pre-cut units at the mill site and transported to the construction site. At the present time, few of the Eskimos in Ungava Bay could afford to buy such units. However, if the Hopes Advance mining development goes ahead, it will likely employ a large number of Eskimos. These people will be wage earners and will be in a position to buy their own homes.

(h) There are a great many "ifs" and "buts" involved in the development of this industry. Transportation is the greatest difficulty. If this problem can be overcome, a most successful operation could be started. As the situation now stands, a ship passage in the George River could not be established until late in the summer of 1959 and timber export could not begin before 1960. Until an adequate transportation system is established, it would not be wise for the Eskimo people to invest in a commercial lumbering operation. However, if the Fenimore mill could be purchased and transported to the George River for less

../14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UNGAVA
BAY
KOROK R.
KOKOOLOOTOOK R.
TUNULIK R.
GEORGE RIVER
GEORGE R.
TIMBERED AREAS
GEORGE RIVER
P.Q.
SCALE: 1 IN.=8 MI.
PROPOSED
SAWMILL

than $1,000, a local lumbering industry should be started immediately. There is a desperate need for approximately twenty-five housing units in the George River-Port Burwell area and this mill could be used economically for this purpose.

3) Handicraft Industry

At the present time, very little handicraft work is done by the George River people. This is a result of two factors:-

a) The people are not aware of the demand for their handicrafts.

b) Many of the articles that are manufactured require materials which must be purchased at the Hudson's Bay store. Very few of the people have enough spare cash to purchase materials for handicraft production.

The market research that has been done in southern Canada indicates that there is a great demand for the type of handicraft that can be produced in this area.

The following pattern of development is suggested:-

1) The George River men make good models of kayaks, harpoons, fish spears, etc. They also make excellent full-sized kayaks. The women are good seamstresses and are capable of turning out quality parkas, sealskin slippers, duffel mitts and socks. A handicraft co-operative should be established to produce articles familiar to the area.

2) By the spring of 1959 the Development Section will have made a thorough assessment of the market demand for most of the Eskimo handicrafts and should be in a position to direct orders for specific types of handicrafts to various production areas. Acting as co-ordinator between buyer and producer, the Development Section could see that specific orders are placed with the George River handicraft co-operative.

3) Fifteen hundred dollars should be made available under the general development loan for the purchase of handi-

../15

craft materials. For the first year of operation, at least, this co-operative would be operated as a cottage industry and all work would be done in the individual homes. The handicraft industry would serve to furnish supplementary income during slack periods.

4) Blueberry Picking

There is a large demand for fresh frozen blueberries. The Indian people of northern Saskatchewan and Manitoba supplement their income during the summer months by blueberry picking. In the Maritime provinces, most of the commercial fish freezing plants buy blueberries from the local residents and store them in their freezing facilities. A small industry should be established in the George River region:-

(a) Wild blueberries are very plentiful in the area west of the George River (see map) and are common along the George River and in the area west of the George River. While no estimate of production has been made, in all probability this resource could provide a most worthwhile income for women and children.

(b) Twelve fishermen and their families would be dispersed along the coast in connection with the char fishing. The blueberry picking industry could function during the latter part of the fishing season and after the fishing season has closed.

(c) This operation would require very little equipment. Rakes and gathering baskets would be all that would be required for the first year of operation. The industry would use the freight transport and freezing facilities of the char fishery. If the industry proved to be successful, a small shaker-table could be purchased to aid in the cleaning operation at the freezer.

(d) As an assessment of the crop potential has not been made, it is impossible to estimate the economics of the industry. However, a general evaluation could be worked out on the

../16

following basis:-

Value of berries - 25¢ per lb.

Note: This is the price paid at the freezer during the 1958 season.

Costs

a)	Price paid to pickers	15¢ per lb.
b)	Packaging, sorting, cleaning	3¢ per lb.
c)	Freezer storage costs	2¢ per lb.
d)	Transportation - local	2¢ per lb.
	TOTAL -	22¢ per lb.
	PROFIT to co-op	3¢ per lb.

(e) This operation would involve very little financial risk. It would need only a very small outlay for equipment and would use facilities that would already be established.

5) Government-Sponsored Experimental Projects

a) House-Building

The National Research Council has offered to help develop plans for Eskimo housing which will utilize the local timber. We recommend, therefore, that $2,000 be spent for materials to build prototype houses designed to meet the needs of:-

1) People who would be involved in the economic development of the George River and Port Burwell areas.

2) People who would be employed permanently in wage employment at Hopes Advance Bay.

This type of experiment would help to meet the need for local housing. If a suitable design could be developed, it would provide efficient housing for the people at Hopes Advance Bay, and the work involved in gathering the timber would help finance a lumbering operation at the George River.

b) Agricultural Development

During the summer of 1958 a member of the agricultural unit at Fort Chimo was able to make a brief study of the agricultural possi-

../17

bilities at the George River. The result of this study indicated that there were excellent possibilities for establishing small garden plots in the area. While gardening would probably never become a major industry in the area, it could provide a much needed source of fresh vegetables. We hope that if a permanent community is established at the George River, the people will be able to maintain small garden plots. We recommend, therefore, that under the guidance of the Department of Agriculture a small gardening project be undertaken.

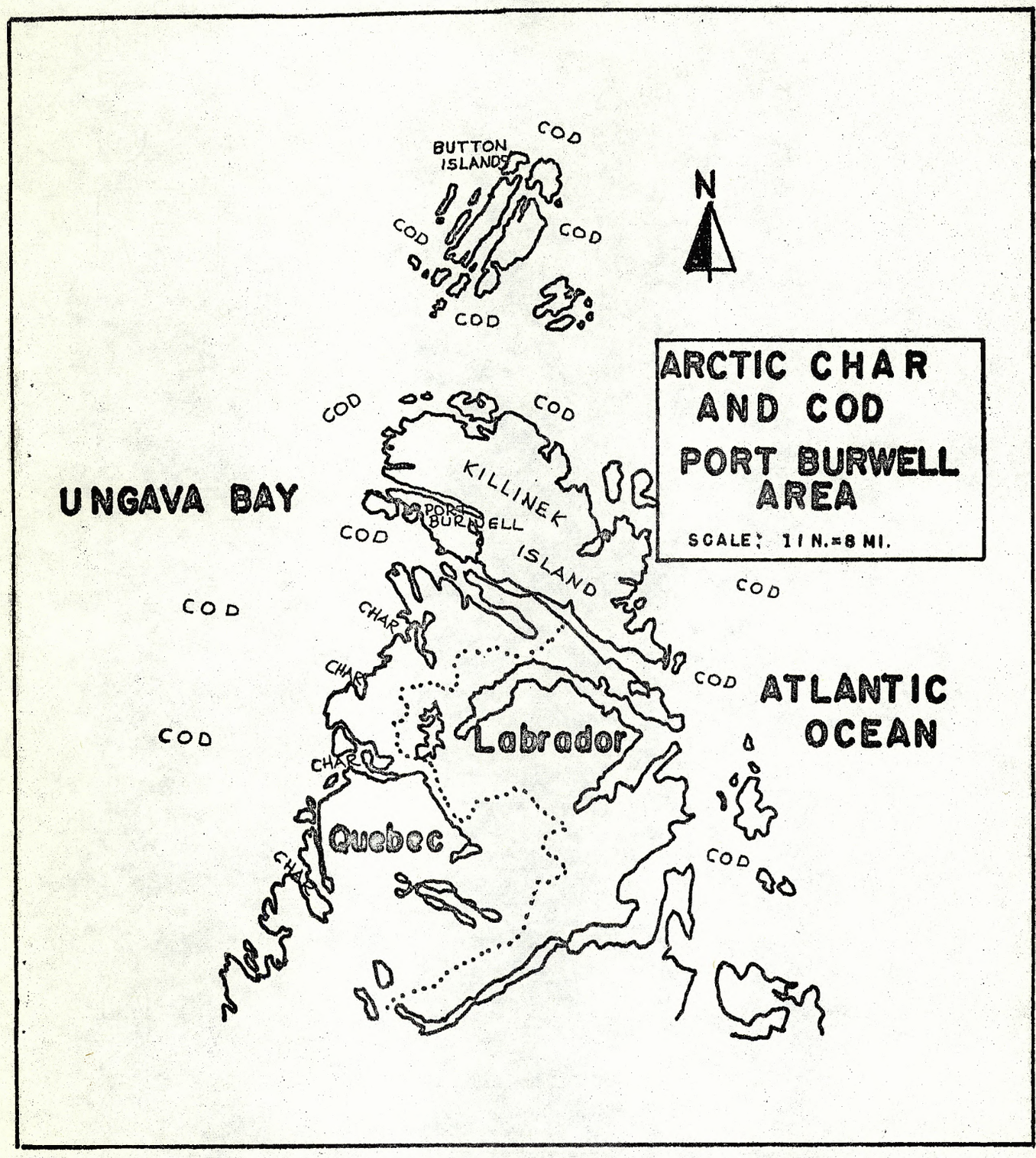
Supervisory Personnel

Very close supervision will have to be provided for each project during the initial stages of development. This is necessary for two reasons:-

1) Each industry would involve technical skills and understandings that are new to the Eskimo people. These new skills must be carefully taught to the people involved if the projects are to be successful. A slip-shod introduction to the methods and techniques of operation of any of these industries would make it almost impossible for the Eskimo people to ever take over management of these operations. The importance of adequate supervision, therefore, cannot be over-stressed.

2) The project would be developed on a co-operative basis. This would require an educational programme designed to acquaint the people with the theory of co-operation and self-help. The educational programme would also provide training in the administration of the enterprises and would help to prepare the Eskimos to assume the responsibilities of management. There is no short cut for this educational programme and if it is not done properly, the projects will fail. The following supervisory personnel would be required for the George River development:-

../18


BUTTON ISLANDS
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ARCTIC CHAR AND COD
PORT BURWELL AREA
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COD
UNGAVA BAY
KILLINEK ISLAND
PORT BURWELL
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COD
CHAR
CHAR
COD
ATLANTIC OCEAN
COD
Labrador
CHAR
Quebec
CHAR
COD

(a) Char Fishery and Blueberry Picking -

One man with a general knowledge of refrigeration and fish-handling techniques, also capable of supervising blueberry industry - June 15 to September 15.

(b) Lumbering -

One man skilled in sawmill operation and capable of supervising cutting and driving operation - April to October.

(c) Experimental Housing)
Experimental Agriculture) One man to organize and supervise
Handicraft Industry) development of these projects.

In addition to these personnel, it would be necessary for the co-operative development officer to spend some time in the area organizing the co-operative educational programme.

PORT BURWELL PROGRAMME:

At the present time the Eskimo population at Port Burwell numbers twenty-four persons, and only five of these are able-bodied men capable of participating in the industries that could be developed in this region. However, the possibilities for economic development are excellent and people now living at Whale River, Fort Chimo and along the coast of Labrador would welcome the opportunity of moving to Port Burwell, at least for the summer months to participate in the industries that could be developed there. The following pattern of development is recommended.

Note: As some of the industries will be similar to those already outlined for the George River, they will be covered only by a general explanation.

1) Char Fishery

The possibilities for the development of the char fishery in this area are excellent. A few char are taken by the Port Burwell people at the present time for their own use, but this catch represents only a very small percentage of the potential harvest. For the first year of

../19

operation, the industry would be based on a 30,000-pound catch. This is the limit set for 1959 by the Quebec Department of Game and Fisheries for the Quebec coastal area adjacent to Port Burwell.

Port Burwell is very accessible from a transportation point of view because it lies very close to the main shipping routes to the Arctic. An effort, therefore, would be made to complete the char fishery as soon as possible so that the fish can be shipped to southern Canada and the freezer made available for other purposes. The fishery would follow the same pattern of development as outlined for the George River area.

2) Handicraft Industry

Very little commercial handicraft production is done by the Port Burwell people at the present time. As was the case at the George River, this is caused by the fact that the people are not aware of the demand for handicrafts and they lack the money to purchase the manufactured materials necessary for the production of some of the handicrafts.

The handicraft industry at Port Burwell would be concerned mainly with articles which would be produced by the women. Hunting in the area is good and the men would be involved in this pursuit during most of the winter.

The Port Burwell women are known throughout the Arctic for their skill in manufacturing sealskin boots and sealskin slippers. There is an excess of sealskins available in the area so that no outside materials would be required for the manufacture of these products. The women are also capable of manufacturing excellent parkas, duffel socks, mitts, etc. It is, therefore, recommended that specific orders for crafts be placed with the Port Burwell handicraft co-operative during the summer of 1959.

3) Government-Sponsored Experimental Projects

a) Cod Fishery

../20

The Atlantic cod come into the Port Burwell area around the middle of July. They remain there until the latter part of October. The fish are plentiful around Killinek Island and along the Labrador coast close to Port Burwell. They are also found along the Quebec coast for a distance of approximately twenty miles from Port Burwell.

The Department of Fisheries did a considerable amount of research work in the Port Burwell area. However, they were not able to make an estimate of the cod population. Members of the Arctic Research Unit have suggested that if an experimental fishery programme was conducted during the summer of 1959, it could serve as a basis for estimating the potential catch for the area. The following pattern of experimental work is suggested:-

(a) A grid pattern for fishing would be set and specific areas fished at various times during the summer. Accurate records of: a) areas fished, b) number of fish caught, c) water temperatures, d) fish size and weight, would be kept and on the basis of this information the Arctic Research Unit would be able to estimate the size of the potential fishery. A minimum catch of 300,000 pounds of fish would be required to establish an economic cod fishery.

(b) The fish caught during the project would be experimentally:

i) Dried
ii) Salted
iii) Smoked
iv) Frozen

Thirty thousand pounds would be used for an experimental shipment to Montreal and the remainder would be used for local consumption.

(c) If the experiment indicated that the fish population was large enough to establish a 300,000-pound cod fishery, the economics of the enterprise could be worked out on the following basis:-

../21

Note:

Cod prices are subject to fluctuation. The price of 20¢ a lb. is meant to strike an average. The present wholesale price for cod is 24¢ a lb. and the demand is expected to remain high.

100,000 lbs. of cod fillets at 20¢ per lb. - $20,000

Costs:

a)	Price to fishermen, 100,000 lbs. @ 2¢ a lb.	2,000
b)	Handling and packaging, 100,000 lbs. @ 3¢ a lb.	3,000
c)	Transportation (including local and shipping to Montreal) - 100,000 lbs. @ 5¢ a lb.	5,000
d)	Interest on loan, plus reduction of principal (Based on capital investment of $30,000 to be paid in ten years)	3,500
e)	Depreciation on equipment	3,000
	TOTAL -	$16,500
	Profit	3,500

If this industry was established, it would not bring a large return to the participants. However, it would involve a number of fishermen in the processing and handling of the fish and also provide employment for women. It could, therefore, provide constructive employment for people who would otherwise be living on Government relief.

b) Greenland Shark Fishery:

Fishery research teams at Port Burwell have reported that Greenland shark are quite common in the area. The livers can be used as a source of butyl alcohol. The skins are used extensively in the leather industry and the meat, if properly dried and cured, can provide an excellent source of dog food. Two firms have made enquiries to this Department regarding the possibility of obtaining shark livers from an Eskimo fishery. The number of sharks that could be obtained in the area is not known so it is proposed that an experimental shark fishery be undertaken in conjunction with the cod fishery. If it proves successful, it could be established as an Eskimo-owned industry on a permanent basis.

../22

c) Sealskin Tanning and Seal Meat Processing:

Port Burwell lies close to the main migration route of the harp seal. These animals migrate northward during April, May and June and return south during October, November and December. Fisheries experts have estimated that an additional 5,000 harp seal could be taken each year at Port Burwell without damaging the herd. Such a harvest would provide a large amount of meat, oil and skins.

The oil could be used very effectively in the area. The people live in tents or shacks that require large heating. At present the only source of fuel utilized by the people is driftwood and this is often very difficult to obtain. A number of stoves have recently been developed in southern Canada which are capable of burning seal oil. The oil then could be used as a source of fuel. However, experiments should be conducted with:-

1) Heat-drying machines to acquaint the people with the processes of heat-drying and packaging. An evaluation would also be made of the acceptability of the processed meat by the people in the area. If the experiment was successful, an industry would be established and the meat sold or traded to -

   i) George River people for human and dog food;

   ii) Eskimo people at Hopes Advance Bay engaged in wage employment and who are unable to hunt;

   iii) Government administration who could use it as a wholesome addition to Eskimo relief rations which are very low in protein.

2) Tanned sealskins could be used effectively in handicraft production. A number of tanning processes have been developed which could be undertaken with a minimum of equipment. A test of these processes should be carried out and an evaluation made of the results.

Supervisory Personnel

Close supervision will be required for the projects to be

../23

undertaken at Port Burwell. The following personnel will be required:-

(a) Char Fishery -

One man with a general knowledge of refrigeration and fish-handling techniques - June 15 to September 15.

One man - June 15 to July 10.

(b) Cod Fishing Experiment
Greenland Shark Fishing Experiment
Sealskin Tanning and Seal Meat Processing Experiment
Handicraft Production

- One man skilled in cod fishing and processing techniques, capable of supervising other experiments - July 10 to September 15 -

COMMUNICATION

Good communication will play an exceedingly important part in the successful operation of these industries. Radio communication between Fort Chimo, Port Burwell and George River will be useful for such purposes as:-

1) Notifying each area of the time of ship arrivals.
2) Ordering parts when mechanical breakdowns occur.
3) Requesting additional labour for specific projects.
4) General communication
5) Medical advice.

It is, therefore, recommended that field transmitting and receiving sets be established at Fort Chimo, George River and Port Burwell.

Community Development:

The successful establishment of a planned economy at George River and Port Burwell will make it possible for the people to develop their communities. Projects to provide such things as fuel, water and possibly light will undoubtedly develop as the result of the increased

../24

cash income. The experience the people will have in the purchasing of equipment and supplies for the various projects will show them the advantages of having their own co-operative retail outlet. The results, therefore, of establishing a few well-planned industries will be to provide a sound economic basis for each community which in turn will make it possible for the people to gain a much greater amount of independence and control over their own lives which is not possible under the existing economy.

Role of Northern Service Officer:

It is essential that the Northern Service Officer play the major role in the overall development of these projects. This is important for two reasons:-

1) As a co-ordinator of Eskimo activities he is in a position to evaluate the social and economic requirements of the people. Undoubtedly, some of the people will benefit from the opportunities of wage employment; others will achieve more success working in the small local industries. The Northern Service Officer will play an important part in helping the people understand the ramifications of each way of life.

2) The Northern Service Officer will be resident in the area throughout the year and will be able to provide continuous supervision to the project.