

**BAFFIN REGION SUB-COMMITTEE ON FISHERIES
EXPLORATORY FISHING PLAN
1991-1996**



BACKGROUND:

Considerable progress has been made in the past five years toward identifying and establishing commercial fish quotas in the Baffin Region. In the offshore fishing industry 1.5 of the 17 available northern shrimp licences are owned by Qikiqtaaluk Corporation and this translates in up to a million dollars of wages and revenues to region annually.

Qikiqtaaluk has also made important gains in access to the developmental offshore groundfish quotas for silver hake (2500 tonnes) and mackerel (1000 tonnes).

In the inshore industry, most of the activity has taken place in Cumberland Sound though both summer and winter exploratory fisheries have taken place throughout the region, with the greatest concentration of activity occurring in the south Baffin.

The Cumberland Sound exploratory fishery has lead to the establishment of 1000 metric tonnes of turbot quota, and 220,000 pounds of commercial scallop quota. The winter turbot fishery in Cumberland Sound has translated into seasonal employment of up to 125 fishermen and plant workers, (and an attendant seasonal reduction of social assistance payments of up to 25%).

Commercial char fisheries have met with variable success over the years subject to the market price. The available commercial quota for the region of approximately 500,000 pounds is still only 30% utilized due in part to a combination of poor accessibility of stocks and low market prices. However, this relatively low utilization of the commercial char quota is seen by many as an opportunity to expand the fishery.

There is still a great deal of information required to determine if fisheries in the eastern Arctic are a viable economic activity. Factored into economic potential are such considerations as market demand for our fish products, high transportation costs, unknown extent of resources, underskilled labour force, and poorly charted waters. Nevertheless, based on the fisheries successfully developed to date, there is a reasonable expectation that the coastal waters surrounding Baffin Island contain commercially viable fish stocks.

Until now, planning an exploratory fishing effort has been limited by the general unavailability of program funds whether through the Department of Fisheries and Oceans or the G.N.W.T. The new EDA Agreement with dedicated funds to

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develop the Baffin fishery, is the first ever opportunity to plan a multi-year research program to determine the extent of the region's fish resources.

The Baffin Region Sub-Committee on Fisheries is proposing to undertake a four year exploratory fishing program to identify commercial fish stocks, as well as identify the appropriate technologies needed to viably exploit those stocks. Hand in hand, the four year exploratory fishing program must also introduce Baffin residents to the job opportunities in the fishing industry, and the appropriate technologies to exploit those opportunities.

PROGRAM OBJECTIVES:

The Baffin Region Sub-Committee on Fisheries are continuing to obtain information from communities, industries and relevant government Departments for the development of an exploratory fishing plan. To this point they have agreed to certain program objectives. The summer exploratory fishing plan must:

- a) foremostly be an investment in research on the incidence of fish stocks in Baffin coastal waters. The structure of the Baffin commercial fishing industry will follow from the results of this research and the technologies determined to effectively and sustainably fish those resources.
- b) achieve optimum coverage of coastal waters surrounding Baffin Island through a mix of vessel capacity and technology, including where possible, the use of certified local vessels.
- c) balance community environmental and economic concerns through recognition of community priorities on sustainable development.
- d) recognize as a priority that training of northerners must occur simultaneously with exploratory fishing.
- e) recognize four distinct fishing zones around Baffin Island that will be fished progressively over a four year period, subject to adjacent community consultation and support.
- f) have positive socio-economic impacts on adjacent communities through hiring, purchasing, identification of commercial fishing opportunities, training and technology transfer, and compatibility with traditional subsistence economy.
- g) stimulate increased regional interest in fisheries by making available catch from exploratory fishery to adjacent communities.

Program objectives will be further developed and refined at the conclusion of the first exploratory fishing season, once constraints and methodologies have been

worked out.

RESEARCH METHODOLOGY:

In January 1992, the Baffin Region Sub-Committee on Fisheries commissioned a study to examine the options for research fishing vessels for the Baffin Region. The study, completed by Co-Pro Ltd. of Ottawa made the following comments regarding the type of vessel and gear required for an exploratory fishing program:

- "an exploratory fishing vessel will have many features in common with a strictly commercial boat, but since its role is principally research, it must have a wider range of capabilities. For example, navigation capabilities must be extremely precise".
- "a research vessel will carry fishing gear for broad sampling of species and biomass".
- "the wide variety of target species in the Baffin Region suggests a fairly wide variety of gear choices. Fin fish can be harvested by longline, gillnet or trap, (fixed gear) or by otter trawl or seine, (mobile gear)....the greatest amount of research data can be gathered by mobile gear".
- "longlines are extremely effective for a directed fishery, but are inappropriate for test fishing, because the test will only reveal those species of a certain size that are attracted by a particular bait".
- "gillnets also discriminate as to size, but also kill fish they catch...Traps are effective in locations where fish are known to congregate, but take a long time to set, and are therefore inappropriate for exploration".
- "...all of the fixed gear techniques are well adapted to relatively small boats. Their selectivity makes them quite suitable for test commercial fishing, but a very hit and miss technique for actually finding a resource".
- "...the vessel required for otter trawling must however be generally larger, stronger and more powerful than needed for fixed fishing gear".
- "for particularly shrimp, the most effective exploration, and commercial fishing method is by trawl".

The limitations of the existing fleet of boats in the region is that, with exception of the scallop dragger in Pangnirtung, "all of the boats were brought North as general purpose vessels...while a good many are equipped with radar and depth sounders, none would appear to have exacting locational capabilities. The boats tend to be of relatively shallow draft, allowing close access to shore, but giving up hold capacity and a certain amount of stability in rougher water....None of the

local vessels have the power or equipment for trawling, but they are capable to a varying extent of handling fixed gear, and being rigged to tow a limited number of buckets for scallops".

The Co-Pro report also examined the option of bringing a multi-purpose vessel from outside the region which could be "equipped and geared to provide optimum performance within a given price structure". An outside vessel would be chartered expressly to handle the wide range of conditions to be encountered when fishing within the 12 mile limit of Baffin Island. For example an outside vessel should have:

- "operation fuel endurance for at least 15 days".
- capability "...of fishing in conditions that result from 40-45 knots of wind. This will bring the fishing days up to 80% of the open water season".
- "...capability of otter trawl. This will require substantial hydraulics for winches and net reel".
- "main engine power of at least 400 hp., but in addition there should be auxiliary power...in the event of a main engine breakdown".

Dave Gillis, a resource biologist with the Department of Fisheries and Aquaculture for the Government of Prince Edward Island reviewed the findings of the Co-Pro report relative to the Committee's objective to undertake a comprehensive resource inventory over all marine waters off Baffin Island.

Mr. Gillis agreed with Co-Pro that "a large multi-purpose dragger in the 55' range has wide capabilities to cover the majority of grounds. Such a vessel can be outfitted to operate, in turn, mobile groundfish gear, fixed groundfish gear and scallop gear, with a minimum of turnaround". Recognizing the mix of coastal conditions found in Baffin, Gillis recommended that three types of vessels were needed to effectively cover areas from the inland passages to the offshore (see diagram).

As we have already learned the offshore shrimp industry necessitates a large (100' plus), modern commercial shrimp trawler to effectively fish the resource. For the near shore banks and coastal area, Gillis recommends the use of a large modern mid-shore (50' to 65') vessel, equipped with a variety of fixed, mobile and scallop gear.

The limitation of making exclusive use of a large, multi-purpose mid-shore vessel for the exploratory fishing program within the twelve mile limit is that, as a rule, they are "not well suited to working in those very close coastal sites and inside passages. For this reason Gillis recommends that serious consideration should be given to "using a combination of one large modern mid-shore vessel (50'-65') and

one smaller vessel (39' to 45)". The smaller vessels are limited in their fishing ability in that they "would not be a good platform for mobile groundfish gear for research fishing and would be of limited use with any gear beyond the immediate coastal zone". However, the limitation of the smaller vessels is the strength of the larger vessel and vice versa.

A combination of vessel approach to the exploratory fishery is also attractive as an added safety measure not available when a single vessel is fishing. The strength of the combination approach lies in the exchange of the local knowledge with the technical industry information available from the experienced crew on the larger mid-shore vessels.

PROGRAM COSTS:

The Baffin Region Sub-Committee on Fisheries have recommended that \$300,000 of the \$470,000 EDA funds available in 1992/93 be set aside for the purposes of a summer exploratory fishing program. This decision stems from an examination of the problems and constraints facing the fishing industry and the emphasis the Baffin Inshore Fishery initiative of EDA would place on addressing those problems. With so little information known about the resource base, the extent and diversity of the coastal fish stocks, the Implementing Party Workplan of the EDA recommended that exploratory fishing should form a large component of the program.

In both the Co-Pro report and the Gillis report the subject of charter costs were examined. The Sub-Committee recommended against the purchase of a vessel in the first year of the program because of the uncertainty about a proponent and uncertainty over whether new resources would be found. A lease to own option was also considered but deferred until Year II of the exploratory program when the feasibility of leasing a vessel for a season has been evaluated. A lease to own arrangement would also require more time to negotiate than what was available prior to the 1992 fishing season.

Charter rates for both the inshore and mid-shore exploratory vessels will be negotiated with the respective owners based on the following criteria:

- vessel description and age
- fixed and mobile gear
- navigational gear
- fuel consumption and maintenance
- essential crew costs
- down-time charges
- price per fishing day
- steaming time charges
- experience and availability

The Department of Economic Development and Tourism, as Implementing Party for the Baffin Inshore Fishery will issue the contracts for summer exploratory fishing based on a recommendation from the Baffin Region Sub-Committee on Fisheries.

CRITERIA FOR PRIORIZING RESOURCE ASSESSMENT:

Criteria that will be used in prioritizing exploratory fishing zones and targeted areas over the four year program will include:

- 1) Resource indicators to date - Information will be collected from DFO, industry, and local fishermen on known concentrations of fish, observations, biomass information, local knowledge and incidental catch reports to piece together a map of best bet targets for exploratory fishing.
- 2) Local Support and Interest - All exploratory fishing effort and commercial effort within the Nunavut Claim area will require the support and participation of affected communities.
- 3) Previous Effort - Have previous winter or summer exploratory fishing efforts resulted in identifiable resources. Previous effort may make a case for further resource assessment or it may have demonstrated that further effort is unlikely to be effective.
- 4) Markets for target species - If other resources indicators are positive, market demand for the species must be ascertained. If certain species cannot be harvested at a viable and competitive market price, further exploratory fishing effort and commercial development must await a change in market conditions. Care must be taken to avoid creating new competition in markets that are already small.
- 5) Accessibility - Historical and prevailing ice conditions, and the location of the fishing grounds relative to ports and plant infrastructure will be factored into prioritization exercises.

CONSULTATION:

In March 1992 representatives of each Baffin community met in Iqaluit at a Baffin Fisheries Workshop organized by the Baffin Regional Inuit Association. Individual workshops on char, turbot, scallops and shrimp were held and recommendations arising from these sessions were incorporated into the EDA workplan for 1992/93.

In May 1992, resource questionnaires were sent to each Baffin HTA asking their opinions about fisheries development in their communities. Sub-Committee

member Joellee Papatsie followed this effort with phone calls to each Baffin HTA (reaching approximately seven) asking their opinion on exploratory fishing for their community.

While communities hold individual opinions on how fisheries should be developed in their respective communities there is a general consensus that more information is required to make decisions.

The Sub-Committee is proposing that during each winter of the four year exploratory fishing program, communities in the affected zones (where fishing will take place the following summer), will be asked if exploratory fishing should take place, where and how. A member of the sub-committee and a project officer with the Department of Economic Development and Tourism will travel to each of the affected communities and present the results of the previous year's efforts and information on the technology available to fish the resources.

Final decisions have not been made on the perimeters of the four zones to be fished over the four year life of the exploratory fishing program. However, the sub-committee has recommended that due to the short time available to launch the 1992/93 exploratory program. Frobisher Bay, Resolution Island and Loks Land, and eastern Hudson Strait demonstrate the most indicators to undertake the first exploratory fishing effort.

Further information on resource indicators will be gathered in the coming months to determine the best bets for exploratory fishing zones. Consultations will take place with industry, Department of Fisheries and Oceans, Tungavik Federation of Nunavut, the Nunavut Wildlife Management Board, and affected communities to ensure details are the plan are well circulated and understood.

The Department of Fisheries and Oceans have indicated that they are operating as if the Nunavut Claim is in effect. Thus any licence applications for fishing within the claim area must have approval from all the requisite boards and agencies.

