



**AREA 19 SNOW CRAB**  
**INTEGRATED FISHERIES**  
**MANAGEMENT PLAN**  
**2001 - 2010**



*Chionoecetes opilio*

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## ***Introduction***

This Integrated Fisheries Management Plan (IFMP) sets out the Policy of the Minister of Fisheries and Oceans with respect to the management of the snow crab fishery in Crab Fishing Area 19 (CFA 19). As with any Policy the Minister retains the discretion to make exceptions to or to change this Policy at any time; however, it is the expectation and intention of DFO to follow the management process set out in this IFMP with a view to contributing to increased certainty and direction for this fishery.

This IFMP will be in place for 9 years beginning April 1, 2001. After that period IFMP may be rolled over from year to year at the mutual consent of both parties.

New to this fishery is the introduction of Objective Based Fisheries Management (OBFM). OBFM introduces a more structured, systematic and inclusive approach to fisheries management. With the application of OBFM, resource users and DFO work together to develop clear, measurable, long-term fisheries management objectives for a fishery. On a more technical level OBFM provides a framework to quantify fisheries management objectives as well as risk analysis processes that result in the development of specific management strategies designed to achieve specific objectives. All DFO sectors (science, resource management and enforcement) play key roles and interact with the fishing industry as part of the OBFM process. In terms of performance measurement OBFM will track the progress made in achieving objectives through a formal process of performance measurement and post-season analysis.

Annual harvesting levels are not included in this document due to the fact that the TAC is established yearly and this IFMP is for multiple years. The TAC and other annual information can be found in the annual harvesting plan prepared each year for this fishery.

## **1. OVERVIEW OF THE FISHERY**

The snow crab fishery along the west coast of Cape Breton, now an inshore fishery using baited traps, was initially fished in the mid-1960's by a group of Danish seiners based in Chéticamp with fishers from Quebec and New Brunswick fishing sporadically in the area. With the increase in the commercial value of snow crab in the late 1970's, the fishery gradually expanded to cover all fishing grounds along the West Coast of Cape Breton Island. In 1978 the Department declared an area known as "the gully" (now Crab Fishing Area 19) an exclusive inshore zone.

The Area 19 snow crab fishery was the first in Atlantic Canada to adopt individual quotas (IQ's) as a management tool. From an initial 6 licences, the fishery expanded over time by reducing boat quotas and increasing the number of inshore licenses. For example in 1984 boat quotas were reduced from 82,000 lbs. per vessel to 50,000 lbs. per vessel to allow the number of licenses to increase from 27 to 61. These licenses were issued to existing inshore bonafide fishers, i.e., fishers holding licenses for major species such as lobster, groundfish, etc.

By 1992, the number of licensed fishers involved in the fishery had reached 74 (59 permanent and 15 temporary licenses). Due to significant price increases, heavy pressure remained to increase the number of participants. As a result of this pressure, DFO developed a pilot project to deal with the sharing of this lucrative fishery. This pilot project was to come into effect in 1995. Both licensed crab fishers and non-crabbers rejected the pilot project concept and were subsequently challenged by DFO to come up with an alternative plan. In the spring of 1995 the Area 19 Snow Crab Fisherman's Association came up with a sharing proposal to reduce their individual trap allocations from 20 to 18 and their ITQ's from 50,000 lbs. to 43,000 lbs. They suggested that a portion of this reduction go towards conservation and that the remainder be used to increase the number of participants by 37 new licences with each new licence holder receiving a 4-trap licence and approximately 8,000 lbs. ITQ's. In 1995 the proposal was implemented by DFO (with some slight modifications to accommodate a reduced TAC) with 37 new participants issued temporary permits.

In 1995, local DFO officials met with the Area 19 Snow Crab Fisherman's Association to introduce the concept of "partnering," which was an important part of a new Fisheries Act (Bill C-62) under consideration at that time. "Partnering" was being proposed as a way of giving fishers a greater voice and a greater share in the responsibility

for fisheries management, a responsibility they had been asking for in many cases. “Partnering” was seen as an opportunity for fishers’ organizations and the industry to have a direct voice in fisheries management, to develop ways to manage the fishery more efficiently, and to provide a more stable climate for long-term business planning.

After the 1995 fishery, “Partnering” negotiations began between DFO and the Area 19 Snow Crab Fisherman’s Association and continued throughout 1995 and early 1996. A series of “Points of Agreement” were negotiated and given preliminary approval by both DFO and the Association. These Points of Agreement were then communicated to the wider community. Some minor adjustments were made and a final set of “Points of Agreement” received ratification from the Area 19 Snow Crab Fisherman’s Association and Ministerial approval in July 1996.

By this time the legislation which had been anticipated had not materialized and the original concept of “Partnering” was not possible. In order to implement the Area 19 “Points of Agreement” to the extent possible a decision was made to use available existing administrative structures. The points of agreement were separated into two groupings. Those elements dealing with the management of the fishery were developed into a 5 year Integrated Fisheries Management Plan (IFMP). The elements which dealt with the roles and responsibilities of each party and their financial contributions to the management of this fishery were developed into a separate Joint Project Agreement (JPA) between DFO and the Association.

This new “Co-management Arrangement” was the first of its kind with inshore fishers in Canada, and would eventually serve as a model for others.

From July 1996 to March 2001 the Area 19 Co-management Arrangement served as the basis for the management of this fishery. Both sides fully respected the IFMP and the JPA.

## **1.1 Participants**

### **1.1.1 Base Fleet**

There are 111 regular commercial licenses issued for Crab Fishing Area (CFA) 19. For the purpose of this document the holders of these licenses will be referred to as the base fleet. Six of these licenses are held by First Nation Communities. The Administrative List of the base fleet in this fishery is included as Annex I. Because the information is subject to change as fishers enter and exit the fishery and request the re-issuance of trap/shares to other fishers, current information on base fleet and any temporary participants (listed in Annex 2) is provided in the Area 19 Snow Crab Annual Fish Harvesting Plan available from DFO.

### **1.1.2 Aboriginal Participation**

The Area 19 Snow Crab fishery has an aboriginal component which includes participation by three First Nations Communities who hold in total 4.46% share of the overall traditional fleet share in this fishery. It is intended this percentage share will be maintained for the duration of this IFMP. Notwithstanding this, should the temporary sharing provisions of this IFMP be triggered (see 5.2.2), each of these First Nations would be considered as an eligible core enterprise and would thus receive further temporary access. Any further access required for First Nations in response to the Marshall decision would be acquired through DFO’s Fisheries Access Program. As with other fisheries, should such access not be available (i.e. no licences /quota retired by DFO under voluntary retirement) other measures may be considered by DFO.

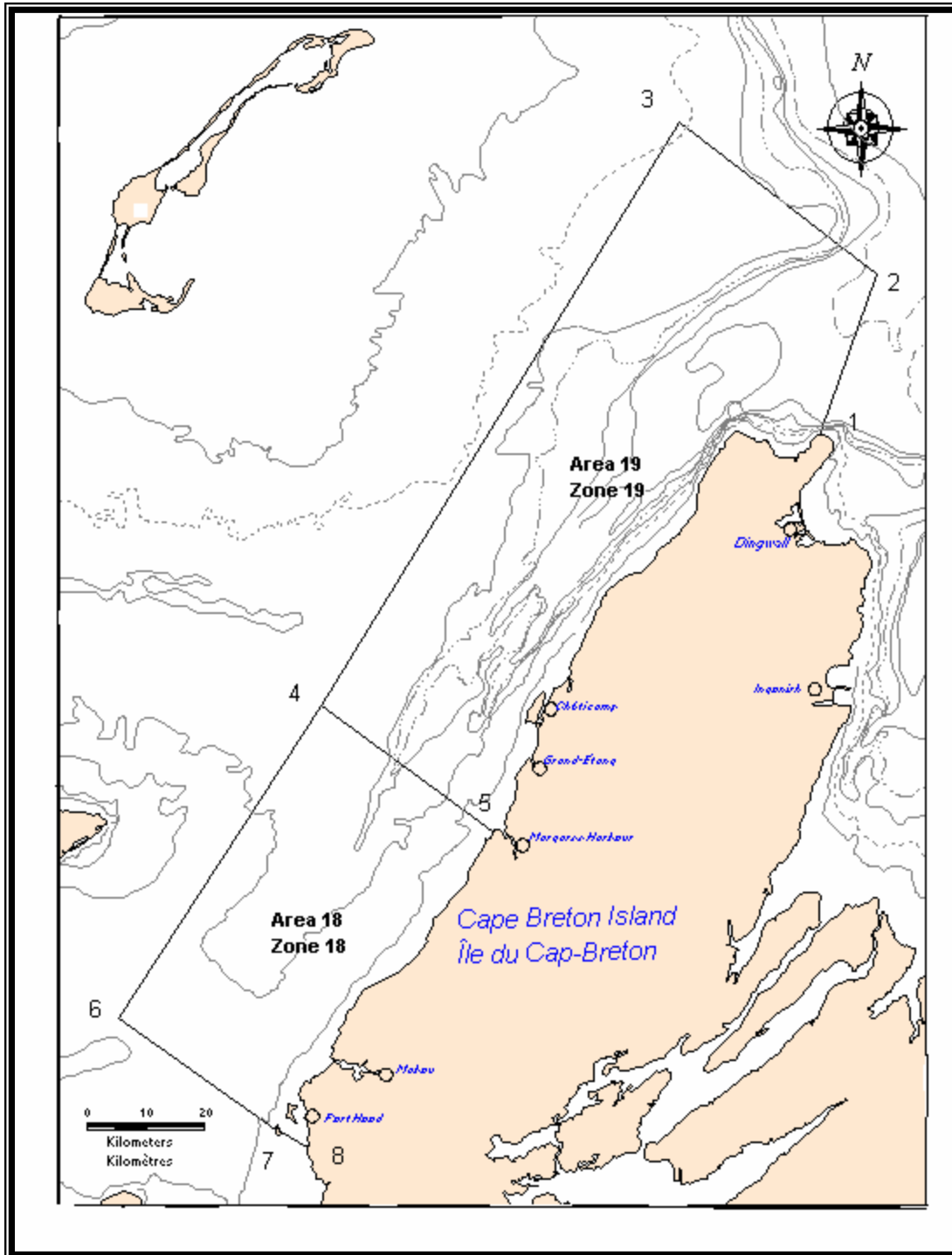
### **1.1.3 Temporary Participants**

This IFMP’s temporary sharing mechanism (item # 5.2.2) provides that an additional 73 temporary licenses may be issued. The core fishers eligible for temporary sharing who meet the eligibility requirements (item #5.2.3) for this temporary sharing are listed in Annex II. Because this information is subject to change as fishers enter and exit the fishery, current information will be provided in the Area 19 Snow Crab Annual Fish Harvesting Plan available from DFO.

In addition to the above participants others benefit from the Area 19 snow crab fishery. These include approximately 200 crew members and a processing sector which included six plants located in Gulf Nova Scotia in 2001. As well, an important quantity of crab is shipped to out-of-province plants.

### 1.2 Location of the Fishery

Area 19 is located off the coast of Cape Breton as indicated on the map below.

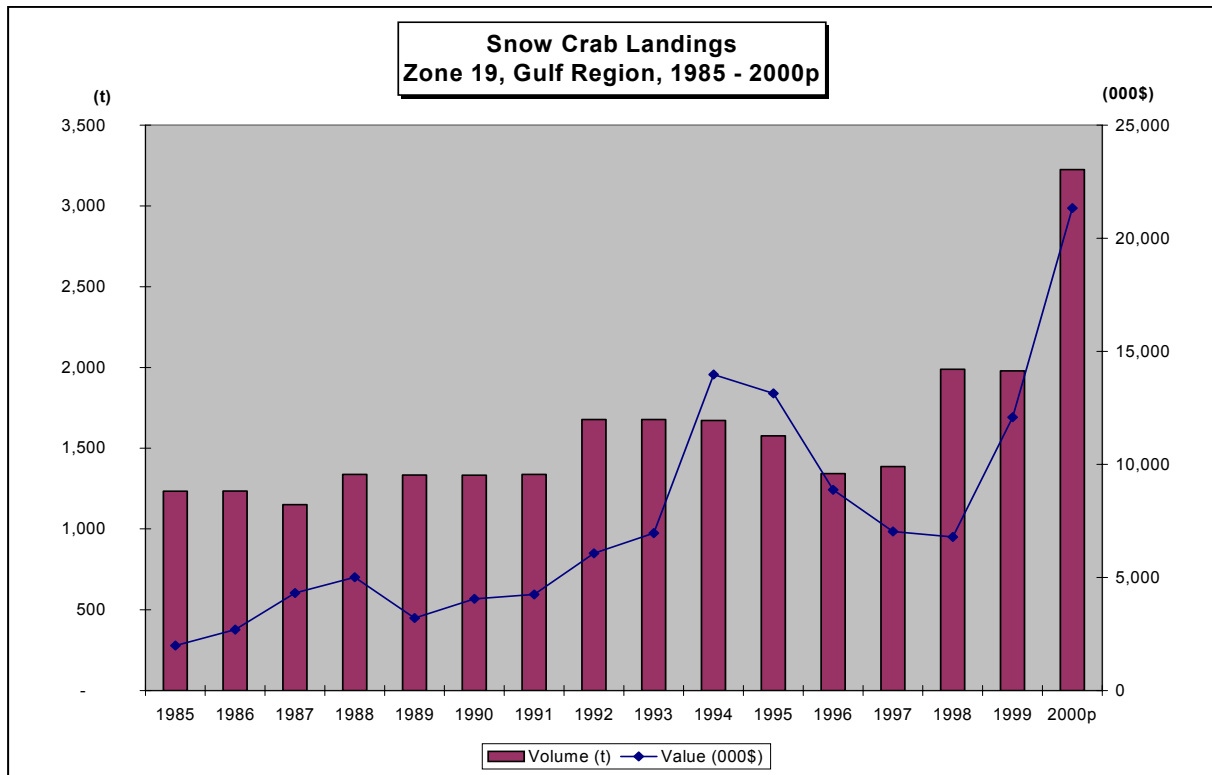


### 1.3 Time frame of Fishery

The Area 19 fishery is typically conducted from early July to mid-September.

### 1.4 Landings/Value/Markets

The following table outlines the landings and value of the of the Area 19 crab fishery.



The early market for southern Gulf snow crab was mainly for frozen meat in the U.S. However, during the 1980s, the Japanese market developed considerably to the point where frozen sections with in-shell products represent about 90% of the value of the southern Gulf production. Japan was by far the most important market (88% of export values in 1995), followed by the US (11%). In the mid 1990's, the Japanese market for the southern Gulf snow crab was very favorable due mainly to a decline in landings of Alaskan opilio crab and the appreciation of the Japanese yen in relation to the Canadian dollar. These factors helped contribute to high prices paid to fishers between 1994 to 1996.

Over the second half of the 1990s, the market for the southern Gulf snow crab has changed significantly. The Japanese economy is facing significant challenge and the relatively cheaper snow crab and king crab from Russia is now the main competitor. Exports to the U.S. market are increasing while those to Japan are decreasing. However, first quality snow crab is still going to Japan as sections or whole round. The price paid for southern Gulf Snow Crab is considerably higher than that paid for snow crab from other regions of the Atlantic. This is mainly due to the high quality of the product.

## **1.5 Consultative Process**

This IFMP was developed in an open and transparent manner in consultation with representatives of Gulf NS Area fishers, existing aboriginal participants and the NS Dept of Agriculture and Fisheries. DFO received representation from the Area 19 Snow Crab Fisherman's Association that they wished the existing co-management arrangement to remain substantially the same and to be renewed for a further 9 or 10 years. DFO then carried out a process of consultations with industry representatives and the Province of Nova Scotia to ensure a wide range of views would be considered in the renewal process, this was followed by a series of negotiations with the Area 19 Snow Crab Fisherman's Association.

This process resulted in Points of Agreement with the Area 19 Snow Crab Fisherman's Association, which were presented to DFO Ottawa for preliminary approval. This approval was received on June 29, 2001. The general assembly of the Area 19 Snow Crab Fisherman's Association met on June 24, 2001 to review the Points of Agreement. The Association voted over 90% in support.

Following further consultations with representatives from fishers seeking additional access to the fishery and the province of Nova Scotia, both of whom gave their full support. These "Points of Agreement" received Ministerial approval in July 2001 and provide the guiding principles for this multi-year Integrated Fisheries Management Plan.

A Management Committee made up of Area 19 fishermen and representatives of DFO (set out in Annex III) will act as an advisory body regarding implementation of this IFMP and will establish its annual Harvesting Plan. The Management Committee may consult with other industry groups, processors, or provincial fisheries departments, as it deems necessary. The Minister of Fisheries and Oceans may undertake independent consultations with the understanding that the provisions set out in the Integrated Fisheries Management Plan will be given priority consideration.

If the temporary sharing mechanism is triggered DFO will hold separate consultations regarding fishing of temporary allocations with representatives of eligible fishers.

## **1.6 Management Style**

This fishery is managed using a Total Allowable Catch (TAC) system whereby the amount to be fished is determined by using scientific and industry input. The TAC is based on harvesting a percentage (exploitation rate) of an estimate of the commercially available biomass (fishable biomass) so as to optimize the yield while at the same time not exposing the resource to risk of over exploitation. Once the TAC is set, the Individual Transferable Quotas (ITQ's) are set based on the percentage share established for each license holder. In addition to the above output controls (TAC, ITQ), several input controls are also applied in this fishery such as trap limits, size limits, no females retained, number of fishers, etc.

In addition to the development of the 2001 Area 19 Snow Crab IFMP industry has agreed to participate on a pilot basis in a new approach referred to as Objectives Based Fisheries Management (OBFM). OBFM is designed to improve the ability to achieve fisheries management goals and work towards long-term stability in the fishery. Its clarity makes it easier to track progress towards goals, identify problem areas and measure the effectiveness of efforts to address problem areas.

Under OBFM, fisheries management planning approaches conservation as an explicit, measurable goal. The Precautionary Approach and ecosystem considerations are considered in the development of fisheries management plans. The principles of risk assessment are also applied.



## 2. STOCK STATUS

### 2.1 Biology

Snow crab (*Chionoecetes opilio*) are crustaceans (like lobster and shrimp), with a flat circular body and five pairs of spider-like legs. As crab grow, the hard outer shell is periodically shed in a process called molting. At this stage, crab have a soft-shell for a period of time and are called soft crab (early postmolt stage) and white crab (all postmolt stages). Unlike lobster, male and female snow crab do not continue to molt throughout their lives. Females stop molting when they acquire a wide abdomen for carrying eggs, which occurs at shell widths less than 95 mm. Male snow crab stop molting when they acquire relatively large claws on the first pair of legs, which can occur at shell widths as small as 40 mm. This stage is called the terminal molt. Female crab produce eggs that are carried beneath the abdomen for approximately 2 years. The eggs hatch in late spring or early summer and the tiny newly hatched crab larvae spend 12-15 weeks drifting freely in the water. At the end of this period they settle on the bottom. It then takes at least 8-9 years for snow crab males to reach legal size. It is considered that the entire southern Gulf is a single stock. However, there seems to have been a pronounced seasonal movement activity and a continuous appearance of recruitment to population (small-sized crabs) in the southeastern region of the southern Gulf of St. Lawrence compared to the southwestern region.

### 2.2 Environment

It is known that snow crab prefer water temperatures between -1°C and 3°C. During the mid-1990's bottom water temperatures in the southern Gulf generally were colder than the long-term average. The lowest bottom water temperatures ever recorded occurred during the 1995-1996 period. Temperature measurements began in 1971. During 1995, 40% of the bottom waters in the southern Gulf were less than 1°C and in 1995 subzero temperatures were more prevalent throughout than recorded in the past 25 years. The declining temperatures in the snow crab habitat may have played a significant role in snow crab abundance.

### 2.3 Species Interactions

Groundfish species (cod and hake) are known as major predators of snow crab. However, little is known about the actual quantities of crab consumed by any predator. The actual impact that predators can have on crab stocks remains uncertain.

### 2.4 Stock Assessment

The stock assessment is based on an analysis of fishing activities and a research trawl survey. Logbook data are used to describe the general distribution of fishing effort per section (grid) of 5 minutes of longitude by 5 minutes of latitude, and to estimate relative abundance of different categories of crab (under-sized and commercial-sized males, soft-shelled and white shell males). A trawl survey is undertaken immediately following the fishery and provides estimates of large-clawed, soft-shell males larger than 95mm that will be part of the exploitable biomass in the following year as new recruits. The survey also provides estimates of uncaught mature crab during the fishing season and the abundance of male and female crab at smaller size classes.

### 2.5 Research

Survey and mapping techniques used to estimate biomass of snow crab have coincided closely with fishing performance as measured by catch per unit of effort (CPUE) and have proven to be a useful tool for stock assessment. However, further refinements need to be made to increase the accuracy and reduce the uncertainty of the biomass estimate, particularly at survey boundaries. Although available biomass and recruitment to the fishery for the following season can be predicted from the biomass of large claw and small claw males larger than 95 mm carapace width, the prediction of recruitment more than one year ahead remains uncertain because of the complex growth mechanisms of this species. In addition, factors affecting the highly oscillating recruitment pattern that have been observed by the trawl survey since 1988 are still unknown. In depth analysis of population dynamics and biological investigations (growth and reproduction) on the entire life cycle of the both sexes of the species is planned to improve the capability of predicting long-term changes in recruitment. In addition sex-ratio (proportion of mature males to premature females and to newly matured females) of the population will continue to be investigated.

## **2.6 Long Term Prospects**

The biomass level has been continuously increasing since 1996. The peak of biomass in this Area was observed around 1992. If the biomass has a cyclical pattern of 8-10 years as is believed for other Atlantic snow crab fisheries, the biomass in Area 19 may start to decrease in the near future. However the presence of strong cohorts of smaller-sized crabs seems to contradict this theory and a continuous increase in recruitment to the fishery may be foreseen in the future if these smaller-sized crabs stay and grow within Area 19. As there is a relatively under-exploited concentration of biomass located in sub areas between Area 18 and 19 and Area 12 the seasonal movement of crab towards Area 19 and the impact of any change in fishing pattern and effort on this concentration by fishers from other Areas may have a significant impact on the biomass level within Area 19.

## **2.7. Further research requirement**

Many conservation limits currently deployed for Area 19 require further fine tuning and readjustment. For example, the current exploitation level of 63% (applied to the biomass index) seems to be much higher than historically experimented exploitation levels since 1991 in the southern Gulf of St. Lawrence (32-53%). However there is some evidence (tagging experiment, instar distributions) showing that the current biomass level for Area 19 seems to be underestimated due to the existence of seasonal migration after the survey and before the fishing season, which results in an artificially high exploitation level. Therefore the current exploitation level of 63% should not be considered as comparable unit of exploitation with other fisheries. This issue will be studied by adding an extra spring trawl survey every three years to the existing annual fall surveys starting in 2002. Until this issue is clarified, 63-66% exploitation level has to be considered as a preliminary exploitation strategy as this level has been applied to Area 19 since 1996 and seems not to have impacted negatively on this stock. The current level of effort of conducting tag-recapture experiment will be increased so that more information can be obtained to elucidate the migration pattern of snow crab in Area 19 and adjacent areas, which enable scientists to refine the estimate of biomass just prior to the fishing season. The mean carapace size and carapace condition of exploitable male crabs may be a good criterion for re-adjusting exploitation strategies. In some snow crab fisheries, the fluctuation of mean carapace size over years seems to correlate well with the stock condition. However, there is no established criteria for determining how the mean size can be used as an indicative of the stock condition. The accumulation of older carapace crabs may suggest a lower actual level of exploitation and some adjustment of exploitation level would be necessary for the subsequent fishing seasons. Once the relationship between mean size and/or composition of stock by carapace condition and biomass has clearly been shown, this may also be applicable to Area 19 stock in the future. Although there are no universal criteria for setting an optimal exploitation strategy based on sex-ratio, this has to be further investigated as a potential tool for refining stock management. Related biological events such as percentage of fertilization of egg clutch in newly matured females, quantitative and qualitative analyses of the spermathecal load (indicative of mating activity) have to be closely monitored in Area 19. These items can be added to measurable management objectives in the future. The current agreement allows DFO Science to provide a progressive refinement of the measurable management objectives throughout the agreement period. In addition, two major scientific meetings were scheduled in 2002 (i.e. snow crab Technical Workshop in NFLD, January 2002, and Invertebrate Precautionary Approach Workshop in Halifax, May 2002), which may provide further ideas and tools to refine the currently set basic management objectives for Area 19. As such some of the science-based current basic management objectives should be considered as progressive measures rather than concrete ones.

## **3. CONSERVATION LIMITS**

The establishment of clear and measurable Conservation Limits for target species and related ecosystems will ensure conservation is not placed at risk. Once specified the limits will identify rigid reference points that will protect the target species and elements of the ecosystem from over exploitation.

### **3.1 Conservation Limits for Area 19 Snow Crab**

Conservation Limits for a Target Species are those biological characteristics which affect the reproductive and survival capacity of the stock. Based on the best scientific information available scientists attempt to establish benchmark values, i.e. "limits" for those characteristics. If measurements of these stock characteristics fall outside the conservation limits it is assumed that long-term stability of the stock may be adversely impacted and the stock has been subjected to unacceptable risk.

While more scientific information and analysis may be required to better ascertain conservation limits for Area 19

snow crab there are many basic precautionary limits that have been put in place and which are being adhered to by the Area 19 fishermen. The snow crab population is presently being managed to ensure that 100% of the crab harvested have had an opportunity to reproduce at least once. To meet this goal the following conservation strategies will continue to be implemented:

- Male only fishery.
- The TAC is based on an exploitation rate where at least 33% of fishable biomass is left in the water.
- A further conservation limit that provides for the (total or partial) closure of the fishery should the incidence of immature and post-molt crab exceed 20% as per a jointly managed DFO protocol.
- Fishing to take place only after peak mating seasons.

### **3.2 Conservation Limits for the Ecosystem**

Conservation limits for the crab related ecosystem are those related organisms and non living environmental factors and structures which directly affect the reproductive and survival capacity of the crab stock. Based on the best scientific information available scientist's attempt to establish benchmark values i.e. "limits" for these environmental factors. If measurements of these factors fall outside the conservation limits it is assumed the crab stock will be seriously compromised and placed in a situation of unacceptable risk.

The Gulf snow crab fisheries are presently considered relatively immune to the ecosystem impacts that we can identify such as over-fishing through by-catch. The impact of the fisheries on the ecosystem is also considered to be negligible as there is minimal by-catch and habitat damage from the fishing practices. Ecosystem conservation limits are not thought to be critical for the crab fishery at this time. However as more knowledge is gained and potential ecosystem impacts arise ecosystem limits could become more significant.

Oil and gas exploration and development in the southern gulf has the potential to impact on this fishery.

## **4. FISHERIES MANAGEMENT OBJECTIVES**

### **4.1 Fisheries Management Objectives**

The Fisheries Management Objectives define clear and measurable goals of the fishery including biological targets and socio-economic factors and are developed by the Management Committee and approved by DFO.

#### **4.1.1 The Socio-economic Objectives:**

- To facilitate an orderly and productive fishery through maximizing harmony within the industry and adjacent communities.
- To provide the fishermen with increased opportunity to develop long-term business plans.
- To promote the development and use of good fishing practices.

#### **The measurable activities supporting the Socio-economic Objectives:**

- Stabilization of the access and allocation process.
- Improved management of fishery through co-management.
- Inclusive and open consultations in development of the IFMP.
- Management decisions are made through the annual harvest planning process.
- First Nations access and allocation formulas are maintained in the IFMP and opportunities for additional access are addressed through the Fisheries Access Program.
- Development of multi-year fisheries management plan (5-9 years).
- Use of top entry traps.
- Research on designing improved escape mechanisms.

#### **4.1.2 The Biological Objective:**

- To preserve the reproductive potential of the stock.

The measurable activities to support the Biological Objectives:

- Zero harvest of female crab.
- TAC set to leave at least 33% of fishable biomass (sexually mature males) in the water.
- Incidence of immature (non terminal molt) and terminal molt with soft and white-shell males in the commercial catches does not exceed 20% as per Soft Shell Protocol.
- Define fishing area.
- No fishing during peak mating season.
- Fishing effort capped at 1,480 traps.

**5. FISHERIES MANAGEMENT STRATEGIES**

The Fisheries Management Strategies outline the activities and controls that are used in achieving the Fisheries Management Objectives. Table 5.1 identifies the specific strategies that are used to achieve each of the stated Fisheries Management Objectives.

**Table 5.1 Fisheries Management Strategies**

<b>Measurable Objectives/Activities</b>	<b>Fisheries Management Strategies</b>
Increased stabilization of the operating environment.	<ul style="list-style-type: none"> <li>- Description of management strategies and intentions with respect to access and allocation to the resource.</li> <li>- Implementation of individual trap share system</li> <li>- Temporary sharing mechanism including eligibility criteria for new entrants.</li> </ul>
Zero harvest of female crab.	<ul style="list-style-type: none"> <li>- Male fishery only.</li> <li>- Trap mesh size requirements.</li> <li>- Trap equipped with bio-degradable panels.</li> </ul>
Set TAC to leave at least 33% of fishable biomass (sexually mature males) in the water.	<ul style="list-style-type: none"> <li>- Estimated fishable biomass based on annual fall trawl surveys and best available science.</li> <li>- TAC never set above 66% of fishable biomass.</li> <li>- Minimum carapace size 95mm.</li> <li>- Ensure fishers harvest the full range of snow crab available (no high grading).</li> <li>- Logbook data entry.</li> </ul>
Incidence of immature crab not to exceed 20%.	<ul style="list-style-type: none"> <li>- Soft-shell protocol.</li> <li>- White shell rule.</li> <li>- Top entry traps.</li> </ul>
Fishing season opens only after peak mating season.	<ul style="list-style-type: none"> <li>- Normally fishing starts after 1st week of July.</li> </ul>
Capping the fishing effort at 1,480 traps.	<ul style="list-style-type: none"> <li>- Trap Tags.</li> <li>- Gear buoys marked with VRN.</li> <li>- Delayed entry of temporary licences.</li> </ul>

## **5.1 Description of General Management Strategies**

### Setting the TAC

DFO Science determines an estimate of the exploitable biomass index in their annual Stock Status Report. Based on the estimate of the exploitable biomass index the total allowable catch (TAC) is determined yearly by multiplying the exploitation level as established in 5.1.1 by the exploitable biomass index.

### **Quota Allocations**

The TAC is allocated through a transferable trap/share system as per the sharing mechanism described in 5.2 and 5.2 sub-sections described below.

### Annual Harvesting Plan

The management committee will develop an annual harvesting plan each year. This plan will establish specific fishing guidelines consistent with the IFMP such as the fishing season (as per 5.1.2), quota allocations (as per 5.2), soft-shell protocol (as per 5.1.3), and harvest levels (TAC) as described in 5.1. Specific information about the fishable biomass, the exploitation level and the TAC will be provided in the Area 19 Snow Crab Annual Fish Harvesting Plan.

#### **5.1.1 Setting of Exploitation Level**

The Association may set the exploitation level within the range of 40% to 50% of the exploitable biomass index. Exploitation levels above or below this range require consent of DFO.

#### **5.1.2 Fishing Seasons**

Fishing seasons for this fishery will not take place during the peak mating season. The actual opening date to be recommended to DFO by the Management Committee. The fishing season will not normally extend beyond September 21<sup>st</sup> to provide sufficient time for the annual fall trawl surveys.

#### **5.1.3 Soft Shell Protocol**

Consistent with the soft shell protocol elements a, b, c & d below, should the incidence of immature crab (soft shell) taken at sea exceed 20 % at any point in the season in any year of the plan the fishery will close for the year. The level of observer coverage required to implement this measure will be established through the Management Committee and will be set out in the Annual Area 19 Snow Crab Fish Harvesting Plan.

- a) Daily report for soft-shell percentages will be sent to industry when the average percentage of soft-shell crab exceeds 10% during the fishing season over a two-day period
- b) When the average soft-shell crab exceed 20% over a two day period a 48 hour notice will be given for fishers to adjust fishing activities.
- c) If soft-shell remain over 20% after 48 hours the fishery will close for the season.
- d) For enforcement of the soft-shell crab management protocol, the industry has put together a communication team/network to ensure the fisher collaboration. This team/network will act as a contact point with the DFO representatives.

## **5.2 Area 19 Snow Crab Sharing Mechanism**

The TAC for this fishery is established each year as per section 5.1. Any quota allocated to the association representing fishers will be deducted from the TAC. Trap shares and sharing units will be proportionately reduced to accommodate any such quota allocation. The mechanism for this process will be established each year by DFO in consultation with Area 19 fishermen and the Management Committee. This will be documented in the annual fishing plan.

### 5.2.1 Access for Existing Fleet

An individual trap transfer quota management system is in place for this fishery.

1. All proposed transfers of traps/shares must be pre-approved by DFO.
2. Each trap/share will have a direct relationship to the TAC.
3. Total number of trap/shares for the existing fleet is 1,480.
4. One trap is allocated to each share.
5. Maximum number of traps/shares any one fisher can hold is 26; the minimum is 4.
6. In any 12-month period a snow crab Area 19 fisherman can only do one of the following, not both.
  - ◇ Transfer traps to another fisherman or
  - ◇ Receive traps in a transfer
7. No fisher who holds a snow crab licence can obtain a second one, therefore the last 4 traps/shares held by any fisher may only be reissued to a qualified new entrant or a core fisher not already holding a snow crab licence (as per Commercial Fisheries Licensing Policy for Eastern Canada 1996).
8. The number of licence holders in the “base fleet” is 111.
9. Fishers are permitted to combine up to 26 traps to be fished on one vessel; however, all licence holders involved must be on board during all fishing operations.
10. Area 19 Snow Crab Fisherman’s Association in co-operation with DFO will administer the transferring of trap/shares. The pre-approval of DFO will be sought for all proposed transactions at least two weeks prior to the opening of the fishery each year.

### 5.2.2 Temporary Sharing Mechanism

#### Step 1

1. TAC is established each year as per Item 5.1,
2. A projected price is established prior to the opening of the Area 19 fishery based on best market information available. Using the projected price and the TAC for that year the Pre-Season Estimated Value of the fishery is calculated
3. When the estimated value of the fishery exceeds \$8.5 million, sharing of the resource will occur. This is referred to as the "trigger value".
4. Should the estimated dollar value be less than or equal to 90% of the trigger value, 100% of the quota is allocated to the base fleet licence holders.
5. In the event the Pre-season Estimated Value of the fishery is in excess of 90% of the trigger value the following steps are taken:
  - a. Sufficient quota is allocated to the base fleet to allow the fishery to proceed in an orderly manner while ensuring that temporary allocations are not jeopardised.
  - b. DFO calculates a “sharing formula price” based on market prices after one week of fishing in Area 19. DFO establishes this price by considering all available information and in direct consultation with the Management Committee
  - c. Once the “sharing formula price” has been determined, it is again multiplied by the TAC to find the in-season Estimated Value of the fishery. The sharing allocations are based on the in-season Estimated Value of the fishery.

#### Step 2

For the purposes of the following formula a “sharing unit” is equal to the TAC divided by 1,480.

The remaining TAC is then allocated in the following order of priority

1. Sufficient quota is allocated to bring existing base fleet of core licence holders to \$8.5 million.
2. If there is quota still remaining, each core enterprise eligible for temporary sharing is provided access up to the equivalent of one “sharing unit”.
3. If there is quota still remaining, base fleet shares remaining quota up to maximum value of \$1.4 million.
4. If there is quota still remaining, each core enterprise eligible for temporary sharing is provided access up to the equivalent of a second “sharing unit”.
5. If there is quota still remaining, base fleet shares remaining quota up to maximum value of \$2.8 million.

6. If there is quota still remaining, each core enterprise eligible for temporary sharing is provided access up to the equivalent of a third “sharing unit”.
7. If there is quota still remaining, existing fleet base fleet shares remaining quota up to maximum value of \$4.2 million.
8. If there is quota still remaining, each core enterprise eligible for temporary sharing is provided access up to the equivalent of a fourth “sharing unit”.
9. Once each core enterprise eligible for temporary sharing has received four “sharing units”, all remaining quota is allocated on a prorated per trap basis for all participants. For the purpose of this final calculation each temporary participant will be deemed to hold 4 traps.

### **5.2.3 Eligibility Criteria for Temporary Sharing**

1. Only those fishermen with inshore core enterprises (using vessels less than 45 feet length overall) with a home port within the boundaries of CFA 19 on or before Jan 15th 2000 who have not previously held a snow crab licence and or do not have access to snow crab through other means are eligible for temporary sharing. (See Annex II)
2. Notwithstanding the above an eligible core enterprise that is reissued to a new entrant with a homeport outside the boundaries of CFA 19 will lose its eligibility.
3. If a core enterprise is reissued outside of CFA 19 eligibility for temporary sharing in CFA 19 is transferred by draw from core enterprises which have moved into a home port within CFA 19 since Jan 15th 2000 providing they have not previously held a snow crab licence or do not have access to snow crab through other means
4. Should temporary fishing area Zone F be discontinued by DFO, those existing four core enterprises with vessels less than 45ft LOA located in Bay St Lawrence may be added to the list of eligible fishers subject to the above conditions.
5. Each of the First Nations currently holding licences in CFA 19 is considered as an eligible core enterprise for the purpose of the temporary sharing mechanism.
6. Individual Core Enterprises eligible for temporary sharing under this arrangement are not eligible for temporary sharing in CFA 12.
7. The number of core enterprises/fishers eligible for temporary sharing is 73 (subject to ZONE F provision, item 4).

### **5.2.4 Rules for assigning and fishing Temporary Allocations (consistent with consultations with both traditional and temporary participants)**

1. Each eligible fisher is “assigned” an equal share of the available temporary allocation.
2. No more than 1,480 traps overall are allocated to fish at any one time in CFA 19
3. In the temporary fishery, one trap is allocated for each “sharing unit” (for uneven amounts an additional trap may be issued if the excess amount is 50% or more of a sharing unit.)
4. With the pre-approval of DFO eligible fishers have the option of “reassigning” their share to one of the existing fleet or combining their “assignment” with other eligible fishers.
5. Shares assigned to existing fleet members may be fished within that fleet members trap compliment immediately, subject to the 26-trap share maximum. This maximum is for sharing units or trap shares or combination of both.
6. Temporary fishing licences are issued to fishers only after they have accumulated four traps.
7. With the pre-approval of DFO temporary fishing licences may be combined together or with existing fleet members to a maximum 26 traps however, all licence holders involved must be on board during all fishing operations.
8. Entry into the fishery for temporary license holders will be administered by DFO through a draw process with criteria established in consultation with industry.
9. Subject to DFO pre-approval, a licence holder may be permitted up to one trap per 1,000 lbs. of quota subject to the overall 1,480 trap maximum rule after the fishery has been ongoing for at least 4 weeks.

## 6. FISHERIES MANAGEMENT CONTROLS

The Fisheries Management Controls are the specific actions that are taken to ensure the execution of the Fisheries Management Strategies. The development of the Fisheries Management Controls involves identifying, analyzing and controlling hazards related to the implementation of the fisheries management strategy. To review the hazards related to each strategy and the linkage to the controls refer to Annex IV. The controls will form the basis of the Annual Harvesting plan for the Fishery. Table 6.1 lists the Fisheries Management Controls.

**Table 6.1 Fisheries Management Controls**

<b>Fisheries Management Controls</b>
<ul style="list-style-type: none"> <li>- ITQs monitored through DMP.</li> <li>- Industry self-reporting.</li> <li>- Quota Monitored.</li> <li>- Price monitored.</li> <li>- Mechanism applied as Area 19 Snow Crab Sharing Mechanism; 5.2.2, 5.2.3, 5.2.4</li> <li>- Licence re-issuance monitored by DFO.</li> <li>- Legal sanctions.</li> <li>- Fishing monitored by observer's coverage.</li> <li>- Random gear inspections prior to trips and at sea by C&amp;P.</li> <li>- Random inspection of catch at sea and at dockside by C&amp;P.</li> <li>- Adherence to soft-shell protocol and white-shell rule monitored by Observers and DMP.</li> <li>- Fleet receives regular reports on the % of soft-shell crab catch in the various sub-areas.</li> <li>- Pre-cautionary biomass estimates.</li> <li>- Industry will have the responsibility to set the exploitation level within the range of 40% to 50% of the exploitable biomass index.</li> <li>- Spring trawl survey every 3 years to calibrate exploitation level.</li> <li>- Comparison of catch composition from observed to non-observed fishing vessels.</li> <li>- Establish fishing season.</li> <li>- At-sea-surveillance / At-sea-boardings by C&amp;P.</li> <li>- Air surveillance by C&amp;P Officers.</li> <li>- Rules for assigning and fishing temporary allocation Area 19 Snow Crab Sharing Mechanism; 5.2.4</li> </ul>



**Table 6.2 Control and Monitoring Activities**

<b>Control and Monitoring Activities</b>	
-	Dockside inspections will be performed by Conservation and Protection Officers, on a random basis to verify that the fishing gear and traps comply with the regulatory requirements.
-	Industry self reporting through logbook data and dockside monitoring.
-	Surveillance at sea activities will be performed by Conservation and Protection Officers on board DFO designated patrol vessels to monitor the fishing fleet and its activities to verify fishing boundaries are respected, no illegal gear is being fished, no fishing is occurring during closures and to ensure no poaching by unlicensed vessels occurs.
-	At sea boardings will occur where Conservation and Protection Officers suspect illegal fishing practices are taking place.
-	Air surveillance will be performed by DFO to deter poaching, verify fishing closures and to ensure boundaries are respected. Industry may request and contribute financially to additional air and sea patrols.
-	Observers at sea will be deployed on the crab fleet throughout the fishing season to verify the amount of soft shell crab catch and verify that under sized crab and females are returned to the water.
-	100% Dockside Monitoring will be performed by an independent 3 <sup>rd</sup> party, DFO approved, monitoring company. Monitors will verify landings and make information available to DFO for ensuring the TAC is not overrun and that under sized crab, soft-shell crab or female crab are not landed nor processed.
-	C&P monitoring and auditing of Dockside Monitors will occur to ensure information collected is accurate and meet DFO specifications.
-	Industry communication strategy will be put in place to keep DFO and fishers informed of the incidence of soft-shell catches in the various sub-areas of Area 19 and to report any violations or operational hazard.
-	Science sampling will take place at dockside during landings to capture population data on the crab stock. Incidences of under size and female crab will be reported to C&P.

## 7. PERFORMANCE REVIEW

The Performance Review is a comprehensive evaluation of the execution and results of the IFMP. It focuses on the effectiveness of the Fisheries Management Controls and Strategies in meeting the Fisheries Management Objectives and respecting the Conservation Limits. The purpose of the Performance Review is to determine “what works and what does not” and provides the basis for continuous improvement. Some of the performance indicators will be measured throughout the fishing season while others that rely on the compilation of data gathered during the fishing season will be evaluated at season’s end and from season to season. The Performance Review will have three levels of evaluation;

- 1) The first level of evaluation is the Evaluation of the Application and Effectiveness of the Fisheries Management Controls. This level of evaluation will focus the operational delivery of the Annual Harvesting Plan by determining if the planned controls and monitoring were implemented, and if so, were they effective in ensuring the implementation of the strategies. The evaluation will require monitoring specific indicators during the fishery and at season end. Two simple questions will be asked:
  - i) Were the controls applied as planned?
  - ii) Were the controls effective in achieving the planned results, delivery of the Fisheries Management Strategies?
  
- 2) The second level of evaluation is the Evaluation of the Effectiveness of the Fisheries Management Strategies in meeting the Fisheries Management Objectives. This level of evaluation will focus on whether the short-term and long term objectives are being met and will require monitoring specific indicators during the fishery, the

annual evaluation of the results of the fishery and the ongoing evaluation of trends over the long term. The basic question being investigated is; “Are the Fisheries Management Objectives being met”?

- 3) The third level of evaluation is a Compliance Assessment to the Conservation Limits. This level of evaluation will focus on whether the Conservation Limits were respected during the fishery.
- 4) Performance criteria will be developed to be consistent with the annual harvesting plan.

The results of the performance review will indicate which components of the plan that were a success and where in the plan there is a need for improvement and provide direction for adjustments to the plan.

**Annex I: Base Fleet License Holders**

<b>FISHER'S NAME</b>	<b>ITQ NO.</b>	<b>TRAP / SHARES</b>
Adams, Brian Edward	1900	19
Afton First Nation	1970	18
Afton First Nation	1974	4
Aucoin, Bernard J.	1901	18
Aucoin, Gary	1905	18
Aucoin, Janice	1959	18
Aucoin, Marcel Richard	1902	18
Beaton, Stuart Joseph	1903	21
Bishop, Larry Gordon	1904	18
Bonnar, Wild Allan	1975	4
Boudreau, Gerard	1906	18
Boudreau, Guy	1976	4
Bourgeois, Bernell	1977	4
Buchanan, Alex J.	1907	18
Buchanan, John A	1978	4
Buchanan, Stanley	1908	18
Burns, Colleen E.	1910	18
Burns, Cyril Jean	1909	18
Burns, Lionel Henry	1911	18
Camus, Daniel G.	1913	18
Camus, Ricky	1912	18
Camus, Wayne	1979	4
Chiasson, Leopold	1915	18
Chiasson, William J.	1916	18
Cormier, Jean Louis	1981	4
Cormier, Maurice A.	1980	4
Curtis, John Augustus	1917	18
Curtis, Maurice	1918	18
Deveau, Bernard	1919	20
Deveau, Herman Charles	1921	18
Deveau, Joseph Daniel	1922	18
Deveau, Joseph Robert	1923	18
Doucet, Gerard Ronnie	1924	18
Doucet, Joseph Gaston	1925	18
Doucette, Sandy James	1930	4
Fitzgerald, Caleb	1973	19
Fraser, Cyril Alexander	1982	4
Fraser, John David	1983	4
Fraser, Kenneth R.	1926	18
Fraser, Richard Bruce	1927	18
Fraser, Walter David	1928	18

**Annex I: Base Fleet License Holders**

<b>FISHER'S NAME</b>	<b>ITQ NO.</b>	<b>TRAP / SHARES</b>
Gaudet, Bruno	1914	18
Hines, Melvin George	1984	4
Kanarie, Ronald James	1929	22
LaPierre, Georgie	1985	4
Larade, Alfred Bernard	1986	4
Larade, Claude	1987	4
Larade, Patrice	1931	18
Larade, Stanley	1988	4
LeBlanc, Clarence	1933	18
LeBlanc, Edward Francis	1989	4
LeBlanc, Guy D.	1934	20
LeBlanc, Leonard J.	1990	4
LeBlanc, Philip W.	1938	18
LeBlanc, Rheal	1935	18
LeBlanc, Thomas	1936	18
LeBlanc, Wayne	1937	18
LeBrun, Marcel Joseph	1991	4
Lefort, Marc Rene	1932	18
MacDonald, Allan James	1992	4
MacDonald, Floyd Joseph	1939	18
MacDonald, Hugh J.	1940	16
MacDonald, Thomas J.	1993	8
MacDonald, William Walter	1942	18
MacDougall, Daniel A.	1943	18
MacDougall, Jordon L.	1941	26
MacIntosh, Donaldson R (Estate)	1944	18
MacKay, Byron	1994	4
MacKay, Gordon Francis	1945	18
MacKinnon, Alexander	1995	4
MacKinnon, Allan Joseph	1946	18
MacKinnon, Allister K.	1947	18
MacKinnon, Charles Wayne	1996	4
MacKinnon, Daniel Leo	1997	4
MacKinnon, David P.	1948	18
MacKinnon, Douglas	1949	15
MacKinnon, Hector Daniel	1951	18
MacKinnon, Hugh A.	1998	4
MacKinnon, James Dale	1950	18
MacKinnon, John Allister	1952	11
MacKinnon, Lee	1953	18
MacKinnon, Peter Joseph	1954	18

**Annex I: Base Fleet License Holders**

<b>FISHER'S NAME</b>	<b>ITQ NO.</b>	<b>TRAP / SHARES</b>
MacKinnon, Travis D.	1999	4
MacKinnon, William R	3900	4
MacKinnon, Wayne A.	1955	20
MacLean, Basil	3901	18
MacLellan, Donald R.	1956	18
MacLellan, Francis August	1957	18
McLellan, Clyde Bernard	3902	4
Miller, Michael	3903	4
Muise, Amedee John	1960	18
Muise, Roger	1961	18
Panuska, Matthew Tresler	1958	18
Paturel, Robert Joseph	3904	4
Pictou Landing First Nation	3905	18
Pictou Landing First Nation	1971	4
Poirier, Michel	1962	18
Poirier, William Basil	3906	4
Power, John Bernard	1963	18
Rankin, Wayne	1920	10
Sutherland, John Bernard	1964	18
Taylor, Douglas James	1965	18
Timmons, Gordon Dale	3907	4
Timmons, Herman	3908	4
Timmons, Joseph Grant	1967	13
Timmons, Keith	1966	18
Timmons, Murdock Eldon	3909	4
Wagmatcook First Nation	1972	18
Wagmatcook First Nation	3910	4
Wellde, Paul Edward	1968	18
Young, Murdock (Estate)	1969	16
<b>TOTAL FISHERS 111</b>		<b>TOTAL TRAPS 1,480</b>

**Annex II: List of enterprises (fishers) eligible for temporary sharing**

<b>FISHER'S NAME</b>
Afton First Nation
Aucoin, Arthur Leonard
Aucoin, Lenus J.
Aucoin, Maurice
Belliveau, Alfred Linus
Bishop, Darren Troy
Bonnar, William Peter
Boudreau, Joseph Cyril
Boudreau, Neil
Buchanan, Hugh James
Burns, Glen
Burton, James Earl
Burton, Violet W.
Campbell, Thomas S.
Camus, Joseph Patrice
Chiasson, Daniel Gerard
Chiasson, Lionel
Cormier, Joseph Armand
Cox, Dennis Ralph
Curtis, Mary Joanne
Deveau, Alfred Joseph
Fiset, Kevin
Fraser, David D.
Fraser, John Allister
Fraser, Justin
Fraser, Kevin
Fraser, Percy Alven
Fraser, William Jai
Larade, Brian Joseph
Larade, Dale
Larade, Joseph Roger
Larade, Leonard J.
Larade, Robert
Lawrence, Frederic B.
LeBlanc, Eugene Ernest
LeBlanc, John Wilfred
LeBlanc, Nivard Michael
LeBlanc, Owen G.
LeBrun, Joseph Patrick
LeBrun, Wayne
Lefort, Jacques J.
MacDonald, Charles

**Annex II: List of enterprises (fishers) eligible for temporary sharing**

<b>FISHER'S NAME</b>
MacDonald, Paul J.
MacEvoy, John Kenneth
MacIntosh, Byron C.
MacIntosh, Franklin L.
MacKinnon, Adrian James
MacKinnon, Archibald L.
MacKinnon, Brendan A.
MacKinnon, Clarence A.
MacKinnon, Dan Hugh
MacKinnon, Hector Dan
MacKinnon, William A.
MacLellan, Frank Jermone
MacLellan, Kenneth
MacLellan-Buchanan, Anna M.
MacLennan, Donald G.
Moore, Hector John
Morrison, Norman A.
Muise, John Alfred
Pictou Landing First Nation
Poirier, Alexis
Poirier, Alexis
Poirier, John Philip
Timmons, Earl
Timmons, Ralph E.
Timmons, Raymond Reed
Timmons, Wesley Roderick
Wagmatcook First Naiton
Wagmatcook First Nation
Wagmatcook First Nation
Williams, Dale Noel
Young, Tracey Madeline

**Annex III: Members of the Management Committee**

<b>Representatives for the Minister</b>	<b>Title</b>
Area Director, Gulf Nova Scotia	Co-Chair
Chief, Resource Management, Gulf Nova Scotia	
Chief, Conservation & Protection, GNS	
Head/Snow Crab Section, Science Branch, Gulf Region	
<b>Representatives for the Association</b>	
President	Co-Chair
Vice-President	
Secretary	
Directors (3)	



**Annex IV: Fisheries Management Controls**

<b>Fisheries Management Strategies</b>	<b>Operational Hazards</b>	<b>Fisheries Management Controls</b>
- ITQ trap transfer system	- ITQs are exceeded	- ITQs monitored through DMP - Industry self-reporting
- Temporary sharing mechanism including eligibility criteria for new entrants and rules for temporary fishing.	- Quota inaccurately monitored. - Market price not monitored. - Sharing mechanism incorrectly applied. - Ineligible fisher receives access - Violations of fishing rules	- Quota Monitored. - Price monitored. - Mechanism applied as Area 19 Snow Crab Sharing Mechanism; 5.2.2, 5.2.3, 5.2.4 - Licence re-issuance monitored by DFO. - Legal sanctions
- Male fishery only - Minimum carapace size 95mm - Trap mesh size requirements - Traps equipped with bio-degradable panels.	- Female crab retained - Undersize crab retained - Illegal gear fished	- Fishing monitored by observer's coverage. - Random gear inspections prior to trips and at sea by C&P. - Random inspection of catch at sea and at dockside by C&P. - Industry self-reporting
- Soft-shell protocol - White shell rule - Top entry traps	- Over fishing of soft-shell crab. - Fishing fleet not informed of catch levels of soft-shell crab. - White-shell crab rules not followed. - Top entry traps not used.	- Adherence to soft-shell protocol and white-shell rule monitored by Observers and DMP. - Fleet receives regular reports on the % of soft-shell crab catch in the various sub-areas. - Industry self-reporting - Random gear inspections prior to trips and at sea by C&P
- Estimated fishable biomass based on annual fall trawl surveys and best available science. - TAC not set above 66% of fishable biomass. - Fishers harvest the full range of snow crab available (no high grading).	- Uncertainty not considered in scientific estimates - TAC set over 66% of fishable biomass.  - High grading	- Precautionary biomass estimates. - Industry will have the responsibility to recommend the exploitation rate within the range of 40% to 50% of the exploitable biomass. - Spring trawl survey every 3 years to calibrate exploitation rate. - Industry self-reporting  - Comparison of catch composition from observed to non-observed fishing vessels.
- No fishing during peak mating season.	- Poaching / Illegal fishing	- Establish fishing season - Industry self-reporting - At-sea-surveillance / At-sea-boardings by C&P - Air surveillance by C&P Officers )

**Annex IV: Fisheries Management Controls**

<b>Fisheries Management Strategies</b>	<b>Operational Hazards</b>	<b>Fisheries Management Controls</b>
<ul style="list-style-type: none"> <li>- Trap Tags</li> <li>- Gear buoys marked with VRN.</li> </ul>	<ul style="list-style-type: none"> <li>- Too many traps</li> <li>- Untagged Traps</li> <li>- Unmarked Buoys</li> </ul>	<ul style="list-style-type: none"> <li>- Random gear inspections by DFO prior to trips and at sea by C&amp;P Officers.</li> <li>- Industry self-reporting</li> </ul>
<ul style="list-style-type: none"> <li>- Delayed entry of temporary licensees</li> </ul>	<ul style="list-style-type: none"> <li>- Greater than 1,480 traps in the water at any one time</li> </ul>	<ul style="list-style-type: none"> <li>- Rules for assigning and fishing temporary allocation Area 19 Snow Crab Sharing Mechanism; 5.2.4</li> </ul>

## JOINT PROJECT AGREEMENT

This Joint Project Agreement is made in duplicate

**BETWEEN:** **HER MAJESTY THE QUEEN IN RIGHT OF CANADA**, as represented by the Minister of Fisheries and Oceans (“the Minister”)

**AND:** **AREA 19 SNOW CRAB FISHERMAN’S ASSOCIATION**, a body duly incorporated under the *Societies Act* of Nova Scotia, with a head office located at P.O. Box 477, Cheticamp, Nova Scotia (“the Association”).

**WHEREAS** the Minister and the Association (“the Parties”) wish to undertake a joint project to efficiently manage the fishery in Snow Crab Fishing Area 19 in Nova Scotia through a long term co-operative relationship, fostered by trust and respect, and based on principles of conservation and environmental sustainability (“the Project”);

**AND WHEREAS** the Parties are of the view that the performance of enforcement and management and scientific functions beyond the core level normally provided by DFO will be of benefit to the Parties and to the fishery as a whole;

**NOW THEREFORE**, in consideration of the premises and the mutual covenants hereinafter set forth, the Parties agree as follows:

1. **THE PROJECT**

1.1 This Project is described in Schedule A hereto. The responsibilities of each Party with respect to the Project are described in the Annual Work Plan, attached as Schedule B, which shall be revised each year in accordance with Clause 3.2.

2. **THE MANAGEMENT COMMITTEE**

2.1 The Management Committee formed by the Parties to oversee the management and administration of the Joint Project Agreement entered into by the Parties in November, 1996 is continued for the purpose of managing and overseeing this Agreement, and shall continue to consist of:

a) Representatives of the Minister:

Area Director, Gulf Shore Nova Scotia (co-chair);  
Chief Conservation & Protection, Gulf Shore Nova Scotia;  
Chief Resource Management, Gulf Shore Nova Scotia; and  
One Science Representative.

b) Representatives of the Association:

President (co-chair); and  
A maximum of 6 Members of the Association Working Group.

2.2 The Management Committee may call upon such other persons for assistance as it considers necessary.

3. **DUTIES OF THE MANAGEMENT COMMITTEE**

- 3.1 The Parties shall ensure that during the term of this Agreement the Management Committee meets at least once in each period running from April 1 to March 31 (“the fiscal year”).
- 3.2 The Parties shall ensure that the Management Committee:
- a) by March 31 of each year has finalized an Annual Work Plan for the following fiscal year, specifying the activities to be undertaken and the monetary and in-kind responsibilities of each Party with respect to this Project;
  - b) monitors the progress and performance of the Parties under the Annual Work Plan; and
  - c) verifies the costs and expenditures of each Party in connection with this Project.

4. **OBLIGATIONS OF THE MINISTER**

- 4.1 Funds paid to the Minister by the Association as specified in Part II of the Annual Work Plan, together with the monetary and in-kind responsibilities of the Minister as specified in Part I of the Annual Work Plan, shall be used by the Minister to perform the activities specified therein.
- 4.2 The monetary and in-kind responsibilities of the Minister towards this Project for fiscal year 2002/2003 shall be in the order of \$140,000 (one hundred and forty thousand dollars). It is expected that the monetary and in-kind responsibilities of the Minister for each subsequent fiscal year shall also be in the order of \$140,000 (one hundred and forty thousand dollars).
- 4.3 Once each Annual Work Plan has been accepted and signed by the Parties, the monetary and in-kind responsibilities of the Minister as itemized therein shall be binding upon the Minister for that fiscal year.
- 4.4 Funds received by the Minister shall be accounted for in accordance with applicable Treasury Board Regulations and expended in accordance with the *Government Contracts Regulations*. Any amount in excess of \$100.00 (one hundred dollars) remaining from the funds paid to the Minister under this Agreement shall be repaid to the Association in accordance with the *Repayment of Receipts Regulations*.

5. **OBLIGATIONS OF THE ASSOCIATION**

- 5.1 The Association shall pay the funds to the Minister and shall perform the activities and fulfill the monetary and in-kind responsibilities specified in Part II of the Annual Work Plan.
- 5.2 The monetary and in-kind responsibilities of the Association towards this Project for each fiscal year of this Agreement shall be in the order of \$225,000 (two hundred and twenty five thousand dollars).
- 5.3 Once each Annual Work Plan has been accepted and signed by the Parties, the monetary and in-kind responsibilities of the Association as itemized therein shall be binding upon the Association for that fiscal year.
- 5.4 Upon acceptance and signing by both Parties of each Annual Work Plan, the funds payable by the Association to the Minister shall be paid to the Minister in accordance with the Payment Schedule in Part II of the Annual Work Plan. The paying instrument shall be made payable to the Receiver General for Canada.

5.5 Funds shall be forwarded to the following address:

Dept. of Fisheries & Oceans  
Gulf Region,  
Finance and Assets management,  
P.O. Box, 5030,  
Moncton, NB  
E1C 9B6

5.6 The Association shall, by March 31 annually, provide in writing to the Management Committee a list of the members that it represents.

6. **AUDITING AND MONITORING**

6.1 The Minister and the Association agree to maintain books, records, documents, and other evidence pertaining to all costs and expenses incurred and expended and funds acquired under this Agreement to the extent and in such detail as will properly reflect all costs, direct and indirect, of labour, materials, equipment, supplies and services. Records and documentation shall be retained by each Party for a period of three (3) years after the termination of this Agreement for whatever reason. Both Parties agree that all records pertaining to this Project shall be made available, subject to the provisions of the *Access to Information* and *Privacy Acts*, to the other Party for verification and audit, upon request.

7. **REPRESENTATIVES**

7.1 For the Minister:

- a) Project Authority: Area Director, Gulf Nova Scotia  
133 Church Street  
Antigonish, N.S.  
Phone (902) 863-5670  
Fax (902) 863-5818
- b) Scientific Authority: Section Head Offshore Crab Fisheries  
Gulf Fisheries Centre  
P.O. Box 5030  
Moncton, N.B.  
Phone (506) 851-6135  
Fax (506) 851-7732

7.2 For the Association:

- a) Project Authority: President  
Area 19 Snow Crab Fisherman's Association  
P.O. Box 477  
Cheticamp, N.S.  
Phone (902) 224-3103  
Fax: (902) 224-1668

7.3 A change in any of the representatives shall be forthwith made known, in writing, to the other Party.

8. **PUBLICATION**

- 8.1 Subject to the *Access to Information and Privacy Acts*, Project Data and any other Project-related information shall be freely available to both Parties to this Agreement and may be used, disseminated or published, by either Party, at any time. Any material which is to be published by either Party shall be provided to the other Party prior to public dissemination.
- 8.2 Each Party shall retain the right to have the name of any of its employees who may have been involved in specific scientific projects, analysis or report writing named as a co-author of any scientific publication resulting therefrom.

9. **COMING INTO FORCE AND TERM**

- 9.1 This Agreement shall come into force on the date on which it has been executed by both Parties and, other than Schedule "B", shall remain in force until March 31, 2010.

10. **TERMINATION**

- 10.1 This Agreement may be terminated at any time with the consent of both Parties.
- 10.2 Termination for Cause:
- a) The Association may terminate this Agreement, upon written notice to the Minister:
    - i) if the Minister breaches any of the terms or conditions of this Agreement;
    - ii) if the Integrated Fisheries Management Plan for Area 19 Snow Crab is changed by the Minister; or
    - iii) if the Association, in its opinion, is unable to fulfil the obligations under this Agreement.
  - b) The Minister may terminate this Agreement, upon written notice to the Association:
    - i) if the Association breaches any of the terms or conditions of this Agreement;
    - ii) if the Association is bankrupt, files for bankruptcy, or is involved in any bankruptcy proceeding; or
    - iii) if the Minister, in his or her opinion, is unable to fulfil the obligations under this Agreement.

11. **EVENTS UPON TERMINATION**

- 11.1 Upon termination of the Agreement, the following events shall occur:
- a) the Minister shall return to the Association any unused portion in excess of \$100 (one hundred dollars) of the funds received from the Association under this Agreement, after deducting all amounts required to pay for goods and services and other commitments which the Minister is unable to cancel;
  - b) the Minister shall make available to the Association any and all data, reports or analyses generated pursuant to this Agreement; and
  - c) the Association shall make available to the Minister any and all data, reports and analyses generated pursuant to this Agreement.

11.2 Equipment purchased by the Minister under this Agreement shall remain the property of the Minister upon termination.

12. **INDEMNIFICATION**

12.1 The Minister shall indemnify and save harmless the Association and all of its officers and employees from and against any loss, damage, expense or cost of whatsoever nature and kind arising out of or resulting directly or indirectly from any negligent acts committed by the Minister or his or her employees or agents acting on his or her behalf under or in connection with this Agreement.

12.2 The Association shall indemnify and save harmless Her Majesty, the Minister, and all his or her employees from and against all claims, actions, causes of action, loss, damage, expense and cost of whatsoever nature and kind arising out of or resulting directly or indirectly from any negligent acts committed by the Association or its employees or agents acting on the Association's behalf under or in connection with this Agreement.

13. **NOTICE**

13.1 Any notice under this Agreement shall be in writing and shall be addressed to the appropriate Project Authority as listed in Clause 7.

14. **DISPUTE RESOLUTION**

14.1 Where a dispute arises as to the interpretation of this Agreement or of matters relating to its termination, or of performance hereunder, the Parties shall attempt in good faith to resolve the dispute through negotiation. Should negotiation prove unsuccessful, the Parties shall submit the matter to a mutually acceptable third party for mediation. The costs of the mediation shall be divided equally between the Parties.

15. **NO AGENCY**

15.1 Neither the Association nor any of its personnel or agents is an employee, servant or agent of the Minister or of Her Majesty and shall not hold themselves out to be so. The Association is alone responsible and liable for all claims, demands, losses, costs, debts, actions, damages, suits or other proceedings brought against it in any way arising out of or attributable to its obligations under this Agreement.

16. **TIME OF THE ESSENCE**

16.1 Time is of the essence of this Agreement.

17. **NO ASSIGNMENT**

17.1 No Party may assign this Agreement without the prior written consent of the other Party.

18. **HOUSE OF COMMONS**

18.1 No member of the House of Commons shall be admitted to any share of this Agreement or to any benefit arising herefrom.

19. **PUBLIC SERVANTS**

19.1 A present or former public servant or public office holder who is not in compliance with the applicable provisions of the Conflict of Interest and Post-Employment Code for Public Office Holders or the Conflict of Interest and Post-Employment Code for the Public Service shall not derive a direct benefit from this Agreement.

20. **APPLICABLE LAW**

20.1 The laws in effect in the Province of Nova Scotia shall apply to the interpretation and administration of this Agreement.

21. **ENTIRE AGREEMENT**

21.1 The terms and conditions herein, together with Schedule A and with Schedule B, as amended annually, form the entire Agreement of the Parties with respect to this Project.

**IN WITNESS WHEREOF** the Parties hereto have executed this Agreement by their duly authorized representatives.

\_\_\_\_\_  
Witness

\_\_\_\_\_  
For the Minister of Fisheries and Oceans

\_\_\_\_\_  
Date

\_\_\_\_\_  
Witness

\_\_\_\_\_  
President, Area 19 Snow Crab Fisherman's Association <sup>corporate seal</sup>

\_\_\_\_\_  
Date

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Secretary, Area 19 Snow Crab Fisherman's Association

\_\_\_\_\_  
Date



**PROJECT DESCRIPTION**

**PROJECT DESCRIPTION**

The activities which will form the Project are listed below. Responsibilities under the Project will be defined in greater detail in the Annual Work Plan (Schedule B).

Management & Enforcement

- a) Fishery Officer Allocations
- b) At-sea Observer Coverage
- c) Patrol Vessel Coverage
- d) Air (fixed and rotary) Surveillance
- e) Trap tags
- f) Log Books
- g) Management & Administration

Science

a) Trawl Survey

An annual fall trawl survey supported by a spring trawl survey every third year will cover Area 19 snow crab fishing grounds and other areas agreed to by the Parties. The main result expected from the trawl survey is a stand alone Stock Status Report for CFA 19 which addresses:

- annual biomass estimates
- prediction of recruitment fluctuations
- estimation of population characteristics and predictions regarding changes therein
- preparation of stock distribution charts
- increased knowledge of the snow crab life cycle and migration patterns.

b) Other Scientific Activities

- i) Monitoring the Fishery
- ii) Statistical Analysis
- iii) Data Analysis and Reporting
- iv) Consultation with Association and its Members

**ANNUAL WORK PLAN**

**2002/2003**

**PART I - THE MINISTER**

**A. ACTIVITIES**

**B. MONETARY AND IN-KIND RESPONSIBILITIES**

**MINISTER'S 2002-2003**

**TOTAL PROJECT CONTRIBUTION**

**\$**

**PART II - THE ASSOCIATION**

**A. ACTIVITIES**

**B. MONETARY AND IN-KIND RESPONSIBILITIES**

**1. DIRECT EXPENSES OF THE ASSOCIATION**

**2. FUNDS TO BE PAID TO THE MINISTER**

**Total Funds to be paid to the Minister**

**\$**

**C. PAYMENT SCHEDULE**

**Financial Coding:** 7H100-410-760-3239-72C34-6 (receipts)  
7H100-410-760-3339-72C34-6 (expenditures)  
71502-110-760-3239-71C34-6 (receipts)  
71502-110-760-3339-71C34-6 (expenditures)

**ASSOCIATION'S 2002/2003  
TOTAL PROJECT CONTRIBUTION**

**\$**

**WORK PLAN APPROVED BY:**

\_\_\_\_\_  
John Hanlon  
Area Director, Gulf Nova Scotia

\_\_\_\_\_  
Brian Adams, President,  
Area 19 Snow Crab Fisherman's Assoc.

\_\_\_\_\_  
Leopold Chiasson, Secretary,  
Area 19 Snow Crab Fisherman's Assoc

**DATE WORK PLAN APPROVED:**

\_\_\_\_\_

**ANNUAL WORK PLAN****2002/2003****PART I - THE MINISTER****A. ACTIVITIES****ENFORCEMENT AND MANAGEMENT****Fishery Officer Allocation**

- Assign Conservation and Protection personnel for a total of 652 regularly scheduled hours for the purposes of carrying out the following regular enforcement activities: dockside / waterside checks; boardings; air/boat/vehicle surveillance, stakeouts and investigations and planning.
- Assign Conservation and Protection staff for a total of 408 overtime hours for the purposes of carrying out additional enforcement activities prior to, during and after the Area 19 Snow Crab fishery.

**At-Sea Observer Coverage**

- Establish and enforce appropriate standards that must be met by At-Sea Observer Coverage
- Certify observers according to established standards
- Co-ordinate the Observer Program
- Make available to the Association all reports and analyses obtained or resulting from observer activities
- Determine the appropriate level of observer coverage

**Patrol Vessel & Air (fixed & rotary) Surveillance Coverage**

- Co-ordinate and plan patrol vessel and air surveillance activities in and around Area 19 in consultation with the industry
- Make a Patrol Vessel available during the 2002 snow crab fishing season for a total of 156 hours
- Provide a maximum of 8 hours of rotary wing air surveillance to monitor activities during the 2002 snow crab fishing season

**Log Books / Data Entry**

- Be responsible for entry of log book data, data analysis and report generation
- Order and distribute log books to fishers for 2002 fishery

**Trap Tags**

- Purchase trap tags and allocate numbers to licences held by fishers in zone 19

## **Management & Administration**

- Monitor individual quotas and fishery in general
- Issue vessel and fisher registrations and licenses
- Co-ordinate appeal processes
- Consult and participate in co-management process
- Administer the sanction process

## **SCIENCE**

### **Monitoring of the Fishery**

- Monitor the performance and characteristics of the fishery (e.g. abundance of soft-shelled crabs in catches, level and distribution of fishing efforts, landings, CPUE, etc.)
- Validate fishery data (catch, effort, size distribution, catch composition and trap catchability) using data obtained from previous years

### **Trawl Survey**

- Survey a total of **54** stations in Crab Fishing Area 19 and vicinity
- Conduct spring survey

### **Statistical Analysis**

- Estimate the abundance of various classes of crab, including soft-shelled males and females, and produce density distribution maps for these classes
- Evaluate the accuracy of biomass estimates and estimate population parameters
- Conduct basic biological observations on growth and reproduction

### **Data Analysis and Reporting**

- Estimate biomass of different categories of crab (juvenile, primiparous, multiparous and barren females, juveniles, physiologically mature, morphometrically immature and morphometrically mature males) to provide basic information to industry for short term catch projection
- Provide long term catch projection based on quantitative and qualitative information from juvenile crabs
- Provide charts showing commercially exploitable crabs
- Provide spatio-temporal distribution of different categories and sizes of crab to elucidate crab population dynamics
- Improve accuracy of biomass estimates and sampling techniques
- Conduct ad hoc biological investigations (e.g. carapace disease, biological abnormalities, stomach contents, condition and quality of carapace, etc.)

### **Consultation with the Association**

- Conduct timely consultation with Association Working Group
- Distribute scientific information (charts and predictions) and hold meetings with Association membership
- Maintain contact with Association members and encourage input from fishers regarding catch experience and other knowledge regarding crab stocks

- Permit Association representative to observe and video tape the trawl survey and other scientific field projects undertaken in Area 19 involving snow crab
- Whenever possible, train and educate fishers about snow crab biology, statistical and measuring techniques so that fishers may participate in data collection and studies to enhance the knowledge about crab and to ensure responsible co-management decisions
- Participate in information sessions with Association membership by 1 March 2003.

## **B. MONETARY AND IN-KIND RESPONSIBILITIES**

### **1. SALARIES**

- Enforce. & Mgmt	\$ 41,890
- Science	<u>\$ 48,887</u>
Total	\$ 90,777

### **2. EMPLOYEE BENEFITS**

- Enforce & Mgmt	\$ 7,875
- Science	<u>\$ 10,013</u>
Total	\$ 17,888

### **3. OPERATING EXPENSES**

- Enforce.& Mgmt	\$ 15,823
- Science	<u>\$ 14,200</u>
Total	\$ 30,023

### **MINISTER'S 2002-2003**

**TOTAL PROJECT CONTRIBUTION      \$ 138,688**

## **PART II - THE ASSOCIATION**

### **A. ACTIVITIES**

#### **MANAGEMENT AND ENFORCEMENT**

##### **Observer Coverage**

- Provide a minimum of 5% observer coverage during the fishing season. Observer costs will be paid through a direct contract with a DFO approved service provider

##### **Log Books / Data Entry**

- Be responsible for the collection of log books and delivery to the Minister within 48 hours of landing
- Purchase log books for 2003 fishery

## Management & Administration

- Consult and participate in the co-management process

## SCIENCE

### Trawl Survey

- Charter a properly equipped and calibrated vessel, approved by the Minister.
- Assign, on an optional basis, one industry representative to participate in the survey
- Encourage fisher members to make accurate entries in logbooks, including daily counts of catches, fishing effort, fishing time, position of catches and provide all other relevant observations concerning the stocks being exploited and explain the importance of accurate and careful data collection
- Inform fisher members of the importance of reporting to the Minister any significant observations concerning the biology and exploitation of the snow crab
- Encourage fishers to communicate to the Minister all information relating to crabs with very old shells observed during the fishing season
- Support a tag return Project by actively encouraging members participation and support
- Participate actively in the process of preparing stock status reports
- Organize information sessions for presentation of Project-related information by the Minister.

## B. MONETARY AND IN-KIND RESPONSIBILITIES

### 1. DIRECT EXPENSES OF THE ASSOCIATION

#### a. Management/Enforcement

At sea observer coverage - 5% coverage	\$ 38,750
Fixed Wing Aircraft	\$ 9,600

#### b. Science

Vessel Charter	\$ 43,500
Data Entry/Data Analysis (2 surveys every 3 yrs.)	
Science – Key Punch	\$ 8,300
Science – Trawl Technician	\$ 3,100
Spring Trawl survey	\$ 40,250
Trawl Technician 2 <sup>nd</sup> Survey	\$ 3,100
Key Punch	<u>\$ 1,100</u>

**Total Direct Expenses** **\$147,700**

### 2. FUNDS TO BE PAID TO THE MINISTER

#### a. Management/Enforcement

- Operating Expenses (fuel, maintenance, etc) for vehicles, vessel and helicopter
- Travel & Accommodations for DFO personnel
- Administrative costs

\$ 50,930

- 2003 Log books	
- Contingency	
- DFO Salary costs and others	
<b>b. <u>Science</u></b>	<b>\$ 56,000</b>
- Related travel cost of DFO employees (DFO Technician)	
- Trawl Survey (54 stations)	
- Miscellaneous supplies	
Miscellaneous trawl supplies	
Preparation of color charts	
Miscellaneous computer supplies	
- Trawl net repairs	
<b>Total Funds To be Paid to the Minister</b>	<b>\$ 106,930</b>

**C. PAYMENT SCHEDULE**

16 July 2002:	\$59,165
01 Aug. 2002:	\$47,765

<b>Financial Coding:</b>	7H100-410-760-3239-72C34-6	(receipts)
	7H100-410-760-3339-72C34-6	(expenditures)
	71502-110-760-3239-71C34-6	(receipts)
	71502-110-760-3339-71C34-6	(expenditures)

**ASSOCIATION'S 2002/2003  
TOTAL PROJECT CONTRIBUTION** **\$254,630**

**WORK PLAN APPROVED BY:**

\_\_\_\_\_  
V. Leroy MacEachern  
A/Area Manager, Gulf Nova Scotia

\_\_\_\_\_  
Brian Adams, President,  
Area 19 Snow Crab Fisherman's Assoc.

\_\_\_\_\_  
Leopold Chiasson, Secretary,  
Area 19 Snow Crab Fisherman's Assoc

**DATE WORK PLAN APPROVED:** \_\_\_\_\_