

# Written Presentation

To the

National Advisory Panel on MPA Standards

By

SW Fundy Progressive Protection Council

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Fundy North Fishermen's Association

Fundy Weir Association

Grand Manan Fishermen's Association

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## Executive Summary:

Seafood Stakeholders in Southwest New Brunswick make up the largest part of the local economy, involving and affecting the lives of most, if not all, of the local population. This has grown from a deep-rooted culture much older than Canada. The Maritime provinces were maritime long before Canada existed.

As this culture of interaction with the sea grew, so did respect and care for the sea and the life that it supports. Different sectors recognized this identified marine protection needs and voluntarily took steps to address these directly.

In the last several decades, the presence of marine science locally has allowed protection initiatives to be more effective. The value of mutual learning cannot be overstated: those who work on the water learn from science; science learns from the first-hand working water experience.

Drawing on centuries of marine culture and decades of marine caring, the Seafood Stakeholders came together, worked together and respected protection initiatives driven by each sector. Each initiative was a collaboration between science and enterprise; each made important and measurable progress toward protection goals.

Most recently, as an expansion of Marine Protected Areas (MPAs) was being undertaken, the Seafood Stakeholders came together to promote locally driven, science based and accountable protection measures as an attractive alternative to MPAs. The Prime Minister's Mandate Letter to the Minister of Fisheries & Oceans indicates that expanding MPAs is the goal. This, in the view of the Seafood Stakeholders, misses the point: the actual goal should have been actual *protection* needs. But instead the interpretation of the letter establishes a protection *tool* as the goal.

“Progressive Protection” marks and rewards progress toward marine protection goals. The “marking” of a protection initiative is its accountability, the “reward” is commensurate credit toward the marine protection goal. The concept was promoted in a letter to the Minister dated January 12, 2018.

The Minister responded in a letter on March 23, 2018, that “DFO is open to discussion about how to best advance collaborative approaches to the management and protection of marine resources and areas”. Further clarification was provided by the Director General in a meeting on April 18, 2018.

The Seafood Stakeholders, coming together as the “SW Fundy Progressive Protection Council” (herein referred to as “the Council”), therefore, respond to the Panel from a slightly different perspective: to reframe the question to a much more targeted result. Instead of “standards for marine protected areas”, the Council suggests “objectives for marine protection”.

The IUCN guidelines provide significant scope within which to develop protection measures, with more options than the conventional regulatory tools to establish MPAs in Canada. IUCN

guidelines accept collaborative management options; these suggest possibilities for the progressive protection tool.

The Council sees merit in exploring the establishment of “collaborative management for SW Fundy”, operating within a cooperative management governance model.

The Council recommends that the Advisory Panel:

1. Reframe the challenge from “standards for marine protected areas” to a much more outcome-based “objectives for marine protection”.
2. Acknowledge the need for socio-economic objectives as well as marine protection.
3. Foster collaboration between science and enterprise on establishing marine protection targets and working to achieve them.
4. Encourage mutual learning of all partners in each protection initiative.
5. Recognize that other protection initiatives can achieve the protection intent of some MPAs.
6. Recommend that Canada expand the use of collaborative management as a valuable protection option.
7. Encourage DFO to work with the Council to explore the possibility of establishing “collaborative management for SW Fundy” projects, in which collaborative management brings together the partners: science, enterprise and government, to address protection needs.
8. Consider proven outcomes for science-based, collaborative marine protection initiatives as acceptable alternatives to federal regulation-based MPAs having similar protection goals.

### **Conclusion:**

The coastal regions of SW Fundy have a long economic and cultural relationship with the sea, with attendant respect and care for the resources.

The Oceans Act and the Minister’s Mandate Letter give latitude to consider and accept marine protection measures other than regulation-based MPA. IUCN demonstrates international openness to accept a greater latitude in marine protection options.

The Council urges the MPA panel to acknowledge the importance of working together to take full advantage of the excellent marine science capability we have and the culture of caring in our coastal communities; that the MPA process respect the ingenuity of our enterprises to pursue protection possibilities and that government is willing to work in partnership to deliver innovative initiatives to approach marine protection goals.

## **Background**

### **The Early Years:**

The New Brunswick coast of the Southwest Bay of Fundy was sparsely settled in the 1700s but received a boost with the massive influx of Loyalists in 1784, refugees from the newly formed United States. The soil was rugged, lumber presented possibilities, but the sea was bountiful beyond expectation. Early fishing was by hook and line, for mackerel, hake, cod and pollock.

By the 1800's a market had been developed for herring; they were salted and smoke-cured and sold for "bloaters". A New Brunswick law of 1827 set the box size at 18 pounds. Herring were caught in "weirs", wooden poles driven into the ground below low tide in a kidney shape and interwoven with "brush" (hardwood saplings) to trap and hold herring. The "whip" pile driver expanded opportunities and by the 1830's there were several brush weirs in operation.

The major spawning ground for herring in the Bay of Fundy at that time was off the southern head of Grand Manan. In 1849, 120 vessels set gill nets there to catch herring. Reports of the day tell of thick layers of spawn covering everything and great windrows of spawn washed up on the beach. Netting herring on the spawning ground became very controversial. Many people felt the spawn herring should be protected, resulting in an early "MPA". A Fisheries Act of 1851 (provincial, because this was before Canada existed) prohibited the taking of herring on the spawning grounds from Red Point to Bradfords Cove (southern Grand Manan Island) from July 15 to October 15 of any year; a closure which remained in effect for many decades.

The catching and processing of herring grew to the point where Grand Manan was the major supplier of smoked herring in the world in the early 1880's. Hundreds of workers came from Maine and Nova Scotia each season to work in smoked herring. The population peaked; in 1884 Grand Manan produced a million boxes of smoked herring from over 20,000 tons of locally caught herring. Merchants built opulent houses; herring turned self-sufficiency into prosperity. Indeed, that same year, local merchants bought a steam ferry to link the Island to the mainland 20 miles away, and the local merchants' private company put it into operation.

Meanwhile, the forerunner of the modern lobster trap came into use about 1870, the lobsters being caught in the sheltered harbours. The population and economy waxed and waned on the success of the fisheries. The boom of the 1880's gave way to more difficult years in the 1890's, when many families pulled up stakes and headed west to seek their fortunes. This cycle has repeated itself over the decades leading up to today. Throughout the changes, there has been an evolution of concern for the resources.

It is clear from this rich history, that the coastal people of Charlotte County have a strong economic and cultural attachment to the resources of the sea. In earlier years, the bounty of the sea was taken for granted, but repeated cycles of plenty followed by scarcity have ingrained in the coastal culture a deep respect for the resilience of resources and a cultural commitment of care for the future. This is an evolutionary process, not well appreciated by regulators whose lives are remote from the sea.

### **“Three Islands” Sanctuary Still Respected:**

There are conservation zones that have been in place for decades without regulation but based on respect for agreements. In 1929, renowned Grand Manan naturalist Allen Moses was part of an expedition into Africa, sponsored by J. Sterling Rockefeller, to collect specimens for the American Museum of Natural History. Moses shot a particularly rare bird with deadly accuracy to permit mounting for the Museum display. Rockefeller wanted to do something in gratitude and Moses suggested that for a fraction of the cost of the Africa expedition, the “Three Islands” group on Grand Manan could be bought and turned into a bird sanctuary for nesting eider ducks to rebuild a very threatened population (threatened by the popularity of eider down). Rockefeller bought the archipelago and established the sanctuary, and eventually Bowdoin College set up a research station there, and the conservation status is respected to this day, nine decades later. The intertidal zone there is also respected by dulse pickers and rockweed harvesters, who do not harvest there. And the now the eiders are doing well. This is an example of the local culture of resource respect. The educational role of the Bowdoin College facility, while indirect, has an ongoing imprint on local resource protection. The value of education in developing a culture of protection has not been fully recognized or appreciated by regulators.

### **The Lessons of 1981:**

The world economy was weak in 1981, resulting in a weak market for lobsters, a fishery that was, in 1981 southwest New Brunswick, mediocre at best. The inshore herring fishery in 1981 was a disastrous failure. With multi-licence capability, fishermen turned to scallop fishing. At this time the use of Loran for plotting position proved to be a major factor in creating a successful scallop fishery which gave fishermen valuable returns and avoided an economic disaster.

The culture of care for our ocean resources welled up in the fishing community. There were lessons to be learned in 1981. A looming disaster had thankfully been avoided. We needed to look after our resources and not take things for granted. The fishermen of Grand Manan came together and formed the “Grand Manan Fishermen’s Association” and their first major undertaking was to propose an “Inshore Conservation Zone” (ICZ) for scallops. The ICZ limited times for inshore scallop fishery to periods when lobster fishing was either out of season or in period of low productivity. This had the benefit of not only helping scallops, but also preventing gear conflict and reducing ghost fishing consequences. The Fundy North Fishermen’s Association was formed during these years with slightly different issues but bringing the same collaborative approach to problem solving.

### **Aquaculture: A New Marine Partner**

This evolution of concern continued with the introduction of marine based aquaculture in New Brunswick in the 1980s. From a relatively new industry in the 1980s, aquaculture in SW Fundy has grown significantly over the last four decades. The most economically important sector is that producing farmed Atlantic salmon in the southwest region of the province.

The finfish aquaculture industry is an important generator of employment and economic activity throughout New Brunswick. Benefits to the province include the creation of year-round employment in rural and coastal communities, an increased tax base, and the ability to retain youth in their home communities or repatriate youth who have left. The development potential of the finfish aquaculture industry and its prospective contribution towards the provincial goal of economic self-sufficiency have been recognized. The industry has continued to develop in cooperation with other users of the marine resource including commercial fishers, tourism, nature and the local community.

World population is outstripping food production. By 2030, the world's population is predicted to increase by another two billion. The amount of food that will be consumed in the world in the next 50 years will exceed **ALL** the food eaten in human history to date. The United Nations Food and Agriculture Organization forecasts a global seafood shortage of 50-80 million tonnes by 2030. One answer is aquaculture.

More than half of all fish and seafood consumed already originates from aquaculture. In fact, some wild salmon we eat are raised in hatcheries before being released into rivers.

Farmers know that pristine seawater is essential for the production of healthy, high-quality salmon. Everything done on a salmon farm is intended to help grow stress-free, healthy fish. Caring for the farm's fish means caring for the ocean and the environment and for our future.

Each farm's location is carefully chosen in areas with the right temperature, water depth and currents. Farmers follow strict codes of practice to ensure their fish are healthy, properly contained in their pens and waste is managed responsibly.

Aquacultures' development strategy in SWNB addresses the development needs of finfish aquaculture industry, while recognizing the importance of environmental and socio-economic sustainability and coexistence with other aquatic resource user groups and interests

### **The “Harbour Porpoise Release Program”:**

The “Harbour Porpoise Release Program” (HPRP) was born out of close collaboration between fishing and science, introduced by science and taken up by the fishery. The HPRP owes its success to importance of education for all parties in collaboration. As fishery learns the rationale of science, and science learns the rationale of fishery, then protection initiatives are designed and executed with greater resilience. The HPRP also has the accountability of measured results. It is furthermore credited with saving the economic viability of the weir fishery. The HPRP identified a very specific protection issue: threatened harbour porpoise bycatch in herring weirs. Then the HPRP applied a very specific and effective solution with excellent results.

As we see risks change, with better education, we adapt protection measures with resilience to maximize effectiveness. As an example: 2001 saw an unusually high number of threatened harbour porpoises caught in Grand Manan weirs, which could have been devastating for a threatened species. But the HPRP ramped up efforts to address this with the result of an excellent 94.6% live release rate. No regulation or carefully mapped out areas could have

anticipated 2001, nor dealt with the changed risk as effectively, while allowing an important fishery to flourish.

### **Intertidal Sustainability Model:**

When Acadian Seaplants sought an agreement to allow rockweed harvesting in New Brunswick in early 1990's, collaboration between the industry and both levels of government led to licence conditions that required the development of an intertidal sustainability model, based on rigorous science. Applying good science can provide jobs and protect our natural seaweeds too.

The Acadian sustainability model assesses stock health on an ongoing basis and adjusts harvest plans to ensure that stock is healthy and rich. Acadian has a six-member resource science team. These scientists conduct biomass stock assessments on a sector-by-sector basis and advise the company and its harvesters of the sustainable volume of seaweed that can be harvested in each sector, each season, staying within the NB government-prescribed 17% harvest rate. These data form the basis for the company's annual Harvest Plan, that is presented to government prior to the start of the harvest season.

In the MPA model, sustainability is assumed because limited human disturbance is allowed; in the Acadian model, sustainability is assured; scientific measurement guides direct intervention.

In MPA model, economic benefit generated from the rockweed is secondary, indeed, non-existent, if it cannot be disturbed. In the Acadian model, carefully controlled harvest contributes to New Brunswick jobs for 63 harvesters and another 26 in the processing facility ashore.

### **Right Whales and Shipping Lanes:**

During the 1990's, several right whales were found dead in the Bay of Fundy, victims of vessel strikes. The project to protect right whales from vessel strikes began with a working group in 1998 examining the right whale science with advice from the New England Aquarium, and in 2003 established new shipping lanes in Fundy, supported both by science and Transport Canada, the first time that shipping lanes were modified to help protect a whale species. It should be noted that since 2003, no known right whale strikes have occurred in these shipping lanes. Scientific observations have suggested that the modification showed a 90% reduction in the probability of vessel strikes. This marks significant and measurable progress toward the goal of protecting right whales.

### **Grand Manan NARW Mitigation Strategy:**

North Atlantic Right Whales (NARWs) have been protected internationally since 1935 and are listed as "endangered" under Canada's *Species at Risk Act* (SARA). The lower Bay of Fundy is recognized as an important NARW habitat. The area's highest NARW concentration has historically been in the Grand Manan Basin, a large area in the middle of the Bay of Fundy, east of Grand Manan, first noted by the New England Aquarium in 1980. This area was declared a conservation area by the Canadian government in 1993 and legally designated as Critical Habitat under SARA in 2009. In the years from 2000 to 2005, between 62% and 87% of the total number

of annual Right Whale identifications were made in this area. In addition to the numerous sightings, the Bay of Fundy was an important summer and fall nursery area for NARWs in Canadian waters.

The Grand Manan Whale and Seabird Research Station (GMWSRS) has been operating since 1981. Over the years, the GMWSRS has learned a lot about whale behavior and habits. Their consistent presence and reputable work has helped those on the water to learn about and appreciate “our whales”; the GMWSRS has helped create a culture of caring about whales. The GMWSRS shows the value of developing a good relationship between science and a coastal community through positive presence in the community.

The expected season for NARWs in the Grand Manan Basin is summer and early fall, a time when the lobster fishery is closed. However, in the fall of 2006, NARWs were observed late into the fall, which prompted attention to the potential for NARWs interacting negatively with lobster gear.

As a result of this later NARW season, consultations quickly began between the fishing industry and Fisheries and Oceans Canada which lead to the development of a mitigation strategy which offered additional protection to the NARWs while also allowing the lobster fisheries in Southwest New Brunswick to continue. Both the GMWSRS and New England Aquarium assess the strategy regularly. The strategy is reviewed annually and remains in practice in Lobster Fishing Areas (LFAs) 36, 37, 38. An extensive list of protocols were developed and adhered to under a voluntary code of conduct.

The strategy recognizes the importance of mutual learning for all parties involved: fishers, regulators and those in marine science. As noted in the protocols: “Continuing education of all parties will be required to ensure the best possible outcome. Fishers are encouraged to learn as much as they can about whales and how fishing gear affects whales. A good source of information and the ‘Voluntary Code of Conduct for Fishermen Working near Whales’ is available at the Grand Manan Whale and Seabird Research Station. Information on the hotline, whale identification and avoidance tactics will be disseminated annually by SWNB DFO Area Office and by GMFA and FNFA via existing channels such as advisory committees, newsletters, etc.” With the now common use of smart phones by the fishing community, they can also refer to the **Whale App** while with whales which also allows them to submit sightings and photos.

It is stressed that the strategy recognizes that education benefits ALL parties. Fishers can learn more about the whales and their habits from marine science, scientists can learn from the practical, on-the-water experience of fishers and their knowledge of the gear and practice of their profession and the extended period of possible observations when most researchers are not in the field, and government, regulators of the strategy, can learn from both science and fishers.

Placing high value on mutual learning means that as more is understood about whales, their habits, fishing gear and interaction, the mitigation strategy can be adjusted to yield better protection results. It is very important to allow the strategy to be improved each year as more is learned and tested.

Originally, it was suggested that the Grand Manan Basin be made into a right whale MPA. However, the NARW mitigation strategy has capacity to change and evolve as whale behavior, feed supply and ecologies change. Up to this time, it has proven to be very effective, with no right whale gear entanglements from LFA 38 gear (the Grand Manan fishing area) since 2006, when the strategy was first put into effect.

The NARW mitigation strategy has worked successfully for 12 years.

In 2018, a lone NARW was sighted briefly. Had the mitigation strategy been permitted, protection a protection plan and measures would have been in place within 24 hours with careful monitoring of the whale’s movements, under the guidance of scientists who understand whale behavior.

However, the DFO regulators ignored the mitigation strategy, ignored advice on whale behavior and chose to shut down the entire basin to fishing, to take effect six days after the whale was seen, inflicting a million dollars damage to the economy and providing no protection whatsoever to the long-departed whale which had left the basin several days before the protection took effect. It is easy to see why local people have lost trust and confidence in DFO.

A comparison of regulated approach to collaborative approach is presented:

<b>Grand Manan Basin Regulation</b>	<b>GM NARW Mitigation Strategy</b>
Area defined in regulation; probably the Grand Manan Basin	Strategy applies where whales and lobster gear can potentially interact (even in other LFAs)
No educational component	Values and depends on continuing mutual education of all parties to the strategy
Structured on regulation	Structured on collaboration
Regulation freezes a snapshot in perception of ecological conditions	Collaboration adjusts continually to changing animal behaviour, feed supply and ecologies
Regulation freezes gear approval	Collaboration can test gear improvements to promote less risk of gear interaction
Regulation is commonly perceived as adversarial	Collaboration is developed through mutual respect and partnership
Regulation does little for industry or community good will	Collaboration fosters industry and community support as partners for protection goals

Regulation does not provide for measuring of protection effectiveness	The mitigation strategy records all relevant whale sightings and any action taken
Regulation has no provision for direct public accountability	Partners in collaboration are accountable to each other, their respective industries and communities and to government

**Ghost Gear: Tackling a Problem and Delivering Results:**

“Ghost gear” is the term for fishing gear that has been lost on the ocean floor, no longer accessible to the fisherman. Lost on the sea floor, ghost gear can continue to trap fish, which die and rot in the gear. As ghost gear accumulates on bottom, it snares other gear, making a network of ghost gear. This is even worse in areas of strong tidal currents, where gear can be dragged by the current, entangled with other gear, creating even greater hazards for active fishing gear and marine life.

In the Bay of Fundy, the most common ghost gear relates to lobster fishing, both traps and lines. Gear loss can happen in storms, fishermen entangling with other fishermen’s gear and interaction with non-fishing marine industry. In areas of heavy marine traffic, there is greater likelihood of a propeller unintentionally cutting a line from a buoy to a trap. With the line cut, the fisherman cannot retrieve the trap and it becomes ghost gear. And as ghost gear snags other ghost gear, the likelihood of entanglement greatly increases. A single line up from bottom may slide off a whale, but several lines tangled with one another pose a far greater entanglement risk.

In 2008, lobster fishermen around Saint John initiated a ghost gear retrieval project. This is an area of greater intensity of heavy marine traffic: tug boats, ferries, oil tankers, container ships; large ships which cannot easily avoid lobster trap buoys. Over four years, 662 derelict lobster traps were recovered in Saint John Harbour waters.

With success in Saint John, Fundy North Fishermen’s Association decided to replicate efforts in another area of the coast. Layering maps of whale observation over active fishing areas, they decided to tackle the more challenging Head Harbour Passage area off Campobello Island. Here the water is much deeper and tidal currents are very strong, which meant working around the slack tide with much heavier retrieval gear. Over three years, the project retrieved 338 traps in this passage. With more diversity of marine activity in the vicinity, other debris was tangled with traps and lines: weir twine, gill nets, aquaculture debris, all likely broken up and lost in storms. These intense tangles of debris, having rolled and tumbled back and forth across bottom in the powerful tidal current, wreaked havoc on active lobster gear, not to mention hazard to marine life.

Fishermen have reported a significant reduction in loss of gear where ghost gear had been retrieved. This has positive economic benefits for fishermen, but it also slows down the accumulation of more ghost gear, which has positive benefits for marine life also.

It would be difficult to predict accurately the benefits to marine mammals, but with the removal of 23,768 metres of rope, all entangled with ghost gear, the probability of marine mammal entanglement would be expected to have been significantly reduced by removing all that rope.

Ghost gear retrieval was conceived by fishermen and carried out by fishermen, who had the foresight to document their results to demonstrate real deliverables.

### **Fundy Salmon Recovery: collaboration at its best:**

Inner Bay of Fundy (iBoF) Salmon are genetically different from other Atlantic salmon: they spawn in 32 rivers in the inner Bay of Fundy, from St. Martins on the New Brunswick coast around to Wolfville on the Nova Scotia coast, and they don't venture as far in their growing up phase, only to the outer Bay of Fundy or upper Gulf of Maine. These Atlantic salmon once thrived in the inner Bay of Fundy, but the numbers dwindled from 40,000 half a century ago to fewer than 250 by the year 2000. They are now listed as endangered and are protected under the Species at Risk Act.

The approach taken was broad collaboration, with the specialized partners bringing innovative solutions to the challenge. That goal, of recovering and better understanding wild Atlantic salmon, is being led by "Fundy Salmon Recovery". The group includes Parks Canada / Fundy National Park, Cooke Aquaculture, Atlantic Canada Fish Farmers Association, Fort Folly First Nation, the Province of New Brunswick, Fisheries and Oceans Canada, the University of New Brunswick, the Village of Grand Manan, and the Atlantic Salmon Law Enforcement Coalition. The role of each partner is specialized and distinct.

DFO's Mactaquac hatchery maintains the genetically distinct brood stock for iBoF fish from three primary rivers and some of these smolt are made available to the FSR project. **Fundy National Park** and the Petitcodiac River system has ideal pristine rivers in which to rebuild stocks. When ready for salt water, the smolts are captured and kept alive and healthy by a team of skilled workers from **Fort Folly First Nation Habitat Recovery** and **Fundy National Park** personnel.

The smolts are brought in tanks on a truck to Dark Harbour, Grand Manan, to grow up in the World's First Wild Atlantic Salmon Conservation Marine Farm, a partnership of **Cooke Aquaculture**, the **Atlantic Canada Fish Farmers Association**, **Grand Manan Village Council** and the **Province of New Brunswick**. When grown to spawning maturity, the salmon are carefully taken out of Dark Harbour and transported live back to the Petitcodiac or Fundy National Park as appropriate. In the Park, due to the remoteness of the best spawning areas, large tanks of live fish are picked up by **Canadian Coast Guard** helicopter and taken up river, where the fish are released in the Upper Salmon River, to continue up river to spawn. Once the fish are in the river, the **University of New Brunswick** and other members of Fundy Salmon Recovery use advanced tracking and monitoring technologies to research salmon behaviour.

**The Results:** On October 12, 2017, over 780 mature iBoF salmon, ready to spawn, were added to rivers in Fundy National Park from the FSR project (135 had previously been added to rivers in Petitcodiac watershed). Compared to the earlier natural population of 200, this is a very

significant population boost in a species at risk. Furthermore, with the highly sophisticated tracking capabilities of the UNB research team, it is hoped that more can be learned about what happens when they return to the Bay again. The project has already seen individual salmon return for a second spawning season.

**The Evolution of a Culture of Caring:**

This background has been lengthy, the intent has been to trace the evolution of caring for the sea in southwest Fundy over the past two centuries. This has developed a cultural connection with the sea, not often acknowledged or appreciated by regulators who are more remote from the sea.

As has been repeated and cannot be overstressed, mutual education is key to this evolution: those on the water learn from science; those in science learn from those on the water. And those who govern will do so more successfully by learning from both. Mutual respect and education has made the large mammal strategies work effectively. When respect is gone, protection suffers.

Out of this Culture of Caring has arisen a collaboration among sectors, with each other and with science, a coming together to undertake caring together.

The seafood stakeholder groups of southwest Fundy realized that collectively they had undertaken a variety of valuable protection initiatives toward important protection goals. These initiatives needed to be highlighted and credited toward protection goals.

## **“Progressive Protection”**

**Definition: “Progressive Protection” marks and rewards progress toward marine protection goals.**

On January 12, 2018, the organizations representing seafood stakeholders in the Bay of Fundy, together wrote to the Minister of Fisheries and Oceans with the following proposal: “It is proposed that the federal government recognize scientific evaluation of protection initiatives that contribute to protection goals and allow these to be applied as credits toward MPA goals.”

In background to this proposal, it was noted that the goal is biological and ecological protection; the MPA network, proposed to be expanded, should not be considered the goal, but an important tool toward that goal. The group suggested the MPA network is not the only tool: valuable protection initiatives have been developed by various partnerships between science and economic livelihood.

The stakeholders in their letter asked the Minister to consider a partnership with Fundy stakeholders in a pilot project for the SW Bay of Fundy, to develop a more collaborative model, stakeholders working with government, for achieving progress toward biological and ecological goals for a healthy Bay of Fundy.

The Minister responded in a letter on March 23, 2018, that “DFO is open to discussion about how to best advance collaborative approaches to the management and protection of marine resources and areas”. Further clarification was provided by the Director General in a meeting on April 18. He envisioned a new approach to protection, developed “from the ground up” in recognition of protection initiatives developed by the stakeholder groups.

The group then formed the **“SW Fundy Progressive Protection Council”** (herein referred to as “the Council”) and developed a Terms of Reference for operation of the group to undertake a science-based, collaborative approach to protection. The Council takes this mandate and responsibility very seriously.

## Advisory Panel Question 1

*“Experience around the world indicates that well-managed marine protected areas can help safeguard ecosystems and wildlife, rebuild fish stocks, and generate increased economic opportunities. What practical recommendations do you have for creating standards for marine protected areas?”*

- (a) *On what do you base these suggestions? Best available science, indigenous knowledge, ecosystem approach or something else”*

This statement makes some sweeping assumptions that may apply to some marine protected areas, in certain circumstances, but is misleading in its broad, general assertion of wide-ranging positive benefits on the basis of declaring in regulation that an area is protected.

Marine protected areas (MPAs) are tied to spatial parameters. In the case of benthic protection, this may be reasonable. But protection of fish and marine mammals does not necessarily fall into neat spatial containment. For example, protection of inner Bay of Fundy (iBoF) salmon, a species at risk, is readily acknowledged to be beyond the scope of an MPA. Technology and collaboration has helped to rebuild iBoF stocks, but more needs to be learned and done. No spatial-based MPA could have accomplished this.

The Council, therefore, suggests that recognition of protection be broadened from focus on “marine protected areas” to “marine protection”

Furthermore, “standards” tend to be pre-set, generally input based rather than outcome driven. “Objectives”, on the other hand, are outcomes, which as they occur, can be developed and refined for better outcomes.

**Recommendation: Reframe the challenge from “standards for marine protected areas” to a much more outcome-based “objectives for marine protection”.**

It is the view of the Council that the broad goal is “resilience”. Nature demonstrates resilience among competing species, as some dominate and then wane in changing circumstances, and then surge to dominate again. Resilience is a dynamic quality, adapting to changing effects, such as climate change, feed distribution, which add complexity to the predator-prey relationships in the sea.

The goal for species under stress in changing circumstances is a healthy resilience to adapt and thrive. Protection measures may also need to adapt to allow nature’s capacity for the positive outcome of resilience.

Similarly, these changing marine circumstances can have negative effects on economic activities for coastal communities. Coastal livelihoods that depend on the marine environment require flexibility to respond and realize economic resilience.

**Recommendation: Acknowledge the need for socio-economic objectives along with marine protection objectives.**

Natural marine relationships are in constant flux, which puts the relationships of nature and economy in constant flux. This constant flux is a reason why it was respectfully suggested that the parameters be re-framed from “standards for marine protected areas” to “objectives for marine protection”.

Having reframed the question toward objectives for marine protection, the next recommendation would be collaboration between science and enterprise on establishing protection targets and working to achieve them.

**Recommendation: Foster collaboration between science and enterprise on establishing marine protection targets and working to achieve them.**

It has been the experience of the Council’s marine Seafood Stakeholders that mutual learning plays a very important role in project success. Science and enterprise learn from each other. Those who work on the water are often the ones who can make protection initiatives work; these partners can learn protection rationale from science. But those who work on the water bring with them vast experiences and observations to pass along to science to help achieve practical success. And those who are tasked with regulating would do well to learn from both.

The value of mutual learning cannot be overstressed.

“Best available science”, therefore, will give better results when partnered in mutual learning.

**Recommendation: Encourage mutual learning of all partners in each protection initiative.**

The Council respects indigenous knowledge. In the Council’s structure are places for representatives of First Nations governments to contribute their advice as “government advisory participants”.

It is often overlooked that there is a wealth of heritage in our Fundy coastal culture. Many of our Fundy communities are almost twice as old as the Nation. With such a strong dependence on the sea, the bond between people and their sea has grown and evolved. Strengthened by mutual learning, this bond can become the basis for valuable and practical protection initiatives.

This bond between our Fundy coastal culture and our marine environment holds within it the capacity and motivation for “objectives for marine protection”.

### Advisory Panel Question 3

*“The IUCN has developed an existing structure to categorize marine protected areas. What do you see as the strengths and weaknesses of the IUCN Guidelines?”*

The IUCN defines a Marine Protected Area:

**“A clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values.”**

This definition suggests broader possibilities than the view of MPA which is currently advocated in the Canadian context. The current view in Canada is that an MPA can only be defined and given legitimacy through one or more federal regulations, as noted in the Fisheries & Oceans web page “Spotlight on Marine Protected Areas in Canada” in which is stated: “A range of legislative and regulatory tools exists to establish marine protected areas in Canada, each designed to achieve a particular conservation purpose.” The perception, therefore, is that Canadian protection is by “legislative and regulatory tools”, while IUCN MPA definition opens the door to managing the conservation of nature through “other effective means”.

One of the strengths, therefore, of IUCN is that it supports a variety of protection options, along with a variety of governance models.

**Recommendation: Recognize that other protection initiatives can achieve the protection intent of some MPAs.**

#### **IUCN Governance Types**

*“The management categories are applied with a typology of governance types – a description of who holds authority and responsibility for the protected area. IUCN defines four governance types:*

***Governance by government:*** Federal or national ministry/agency in charge; sub-national ministry/agency in charge; government-delegated management (e.g. to NGO)

***Shared governance:*** Collaborative management (various degrees of influence); joint management (pluralist management board); transboundary management (various levels across international borders)

***Private governance:*** By individual owner; by non-profit organisations (NGOs, universities, cooperatives); by for-profit organizations (individuals or corporate)

***Governance by indigenous peoples and local communities:*** Indigenous peoples’ conserved areas and territories; community conserved areas – declared and run by local communities”

IUCN, therefore, clearly opens the door to a collaborative management model for protection. This is of interest to the Council, as it is broader than the general Canadian assumption that

protection must be by MPA and must be managed by federal legislation or regulation (as noted above).

The IUCN definition of MPA (above) is expanded by six categories. Of greatest interest to the Council is “Category V”:

*“**Protected landscape or seascape:** Where the interaction of people and nature over time has produced a distinct character with significant ecological, biological, cultural and scenic value: and where safeguarding the integrity of this interaction is vital to protecting and sustaining the area and its associated nature conservation and other values*

*Primary objectives for Category V are: “To protect and sustain important landscapes/seascapes and the associated nature conservation and other values created by interactions with humans through traditional management practices.”*

This definition makes no mention of regulation-based protection as the Canadian model would suggest. The recognition of historical and cultural interaction with nature and its need to be preserved, however, captures our southwest Fundy region rather well. As was pointed out in the extensive background section of this presentation, our region has experienced a rich “interaction of people and nature” over many generations; indeed, shaping a rich marine culture and heritage, which should be celebrated and protected just as much as the rich marine life that spawned it.

Category V for our Southwest Fundy region does offer a culture of interaction with our rich marine environment and through “progressive protection”, collaborative governance possibilities. This region has rich and diverse marine life and an equally rich and diverse marine culture and economy.

Furthermore, the Council was encouraged by DFO to propose a new approach to protection, one developed “from the ground up” in recognition of protection initiatives developed by the Council’s stakeholder groups. It was suggested that progressive protection fits better in the co-management mandate (Bullet 5 in the Mandate letter, “working with stakeholders to co-manage the ocean”) than the protection mandate (Bullet 1, “MPAs”). Most people seem to be pre-occupied by Bullet 1 and tend to overlook the possibilities of Bullet 5.

If one considers Section 35 of the Oceans Act, of the five categories of MPA listed there, it is noted that the MPAs being proposed are primarily (b), (c) and (d), categories that are most spatially dependent. Some of the work done by Council stakeholders satisfies the goals of category (a), without tight spatial dependence.

Subsection (e) “the conservation and protection of any other marine resource or habitat as is necessary to fulfil the mandate of the Minister” appears to have possibilities: “any other marine resource” is not rigidly spatially dependent. Furthermore, the economic and cultural dependence on the ocean in SW Fundy is very definitely a “marine resource”, one well worth protecting. And “fulfil the mandate of the Minister” does not specify exactly which part of the mandate. As

noted above, Bullet 5 (working with stakeholders to co-manage the ocean) is just as much a part of the mandate as Bullet 1 (MPAs). This is not far from the essence of IUCN Category V.

The Council is very interested in exploring the possibilities of a pilot “collaborative management” project, adapting concepts and intent from IUCN Category V model for SW Fundy to address marine protection needs. Under a collaborative management model, the Council would work closely with the Minister on a marine collaborative management framework that fulfills Bullet 5 of the Minister’s mandate letter, while also satisfying subsection 35(1)(e) of the “Oceans Act”.

“Collaborative management” is a partnership that is dynamic and adapts to foster resilience: biological resilience, ecological resilience and economic resilience. Resilience in all these forms is essential for a healthy sea coast.

“Collaborative management” is clearly recognized by IUCN as a valuable tool for addressing marine protection needs and pursuing marine protection goals. In a coastal region with such rich diversity, collaborative management brings all diverse partners together in a dynamic relationship with potential for better protection outcomes.

This could provide the framework within which to pursue the objective of DFO to develop a new approach to protection, developed “from the ground up”, building on protection initiatives developed by the Council’s stakeholder groups, making it work and providing authority under a collaborative management governance model.

This is a significant expansion of conventional thinking about marine protection, but this is a direction the Council believes to be worth very intentionally exploring.

**The Council, therefore, urges the Panel to recommend that Canada expand the use of collaborative management as a valuable protection option.**

**The Council further urges the Panel to encourage DFO to work with the Council to explore the possibility of establishing “collaborative management for SW Fundy” projects, in which collaborative management brings together the partners: science, enterprise and government, to address protection needs.**

## Advisory Panel Question 4

*“Overall, do the Guidelines developed by the IUCN work well in the Canadian context?”*

In the view of the Council, the conventional approach to protection in Canada is more rigid than the diverse IUCN models, with their internationally accepted capacity to work to a greater range of possibilities. The Canadian preoccupation with MPAs being developed and defined by federal regulation discourages possibilities for shared governance models and collaborative partnership models that may be more effective in this time of environmental flux (i.e., ocean warming trends).

The Oceans Act and the Minister’s Mandate Letter clearly offer a greater variety of marine protection possibilities, and the Council encourages the Panel to recommend DFO to be open to these.

**Recommendation: Consider proven outcomes for science-based, collaborative marine protection initiatives as acceptable alternatives to federal regulation-based MPAs having similar protection goals.**

## **Recommendations Summary:**

**The Council recommends that the Advisory Panel:**

- 1. Reframe the challenge from “standards for marine protected areas” to a much more outcome-based “objectives for marine protection”.**
- 2. Acknowledge the need for socio-economic objectives along with marine protection objectives.**
- 3. Foster collaboration between science and enterprise on establishing marine protection targets and working to achieve them.**
- 4. Encourage mutual learning of all partners in each protection initiative.**
- 5. Recognize that other protection initiatives can achieve the protection intent of some MPAs.**
- 6. Recommend that Canada expand the use of collaborative management as a valuable protection option.**
- 7. Encourage DFO to work with the Council to explore the possibility of establishing “collaborative management for SW Fundy” projects, in which collaborative management brings together the partners: science, enterprise and government, to address protection needs.**
- 8. Consider proven outcomes for science-based, collaborative marine protection initiatives as acceptable alternatives to federal regulation-based MPAs having similar protection goals.**

## **Conclusions:**

The coastal regions of SW Fundy have a long economic and cultural relationship with the sea, with attendant respect and care for the resources.

The Oceans Act and the Minister's Mandate give latitude to consider and accept marine protection measures other than regulation-based MPA. IUCN demonstrates international openness to accept a greater latitude in marine protection options.

The Council urges that we all work together to take full advantage of the excellent marine science capability we have, the culture of caring in our coastal communities, the ingenuity of our enterprises to pursue protection possibilities and a government willing to work in partnership to deliver innovative initiatives to approach marine protection goals.