

# MARINE MATTERS

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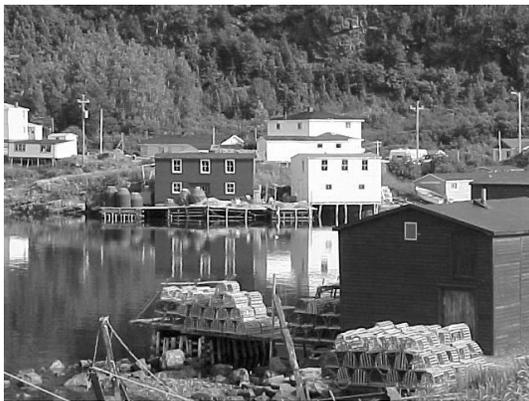
## Taking care of business

by Berry Wijdeven

Before George Feltham started his presentation at the Haida Gwaii Museum, he wanted to make one thing perfectly clear: he was not a conservationist. "My job is killing fish," he said. "I enjoy fishing, and hunting is probably my favourite pastime. I'm certainly concerned about the resource and willing to do what we can to make sure there's a resource there." But he wasn't a conservationist.

It was important for George to get this off his chest. Like many in his community, George grew up with little regard for the environment, for preservation, or government. Yet here was a man who had become the fishing industry representative on Fisheries and Oceans' (DFO) steering committee for Marine Protected Areas (MPAs) in Newfoundland. A man who was touting the benefits of MPAs to anyone willing to listen. A man who was preaching the gospel of preservation. What happened?

Blame it on the cod. George grew up in Eastport, a small village on Bonavista Bay located on the east coast of Newfoundland. The entire village, the surrounding villages, the entire bay was dependent on harvesting the sea. Life in these little outpost communities had its ups and downs, its seasonal rhythms. Until 1992. That's when the cod ran out.



*The coastal village of Eastport, Newfoundland*

In desperation local fishers turned to other fisheries, one of which was harvesting lobsters. Up until 1992, the lobster fishery was at best a secondary fishery. People generally caught lobster for two or three weeks until the cod arrived. Now, everyone with a license started fishing for the entire 16-week lobster season. Lobster catches went from accounting for less than 20 percent of people's income to 60 or 70 percent.

People were maximizing their licenses, maximizing their effort. Just about every lobster caught was retained. Poaching was a fact of life and it was perfectly acceptable to bring in undersized lobsters. Deep down, fishers knew that their practices were harmful and that harvest levels were not sustainable, but for many the lobster fishery was all they had left, their only way to make a buck.

It didn't take long for the lobster fishery to collapse. In 1993, Bonavista Bay experienced the lowest lobster landings ever. After the loss of the cod just the year before, this came as a wake up call. Something had to be done. With the fate of their livelihoods and communities in the balance, the fishermen in the Bay decided to take control of their future.

The first step was to create a sense of community ownership. The seven communities in Bonavista Bay came together and marked off an area of the Bay where they would take responsibility. A zone in which they would manage the lobster stocks.

The communities then identified and petitioned DFO to completely close off two areas within this zone. Two prime lobster areas. The areas were small, approximately two square kilometers, but they were carefully chosen using local knowledge. DFO scientists and university biologists were asked to verify the importance of these lobster grounds, for the communities were attempting a careful balancing act: Set aside a large enough area to give the lobster stock a real opportunity to stage a comeback yet don't unduly impact the income of the fishers who were already struggling to make a living.

The goal of the closed areas was to protect breeding lobster stocks, thereby increasing egg production creating a spillover effect that would result in more legal-sized adults for harvest outside the protected area. The fishermen started a tagging program to track lobster movement.

They also started V-notching some of the female lobsters: Fishermen used a tool to notch a small V in the tail of healthy looking females which were carrying eggs, before releasing them. Since it is illegal to possess V-notched females, fishers would return trapped ones to the water. It takes at least two years for the notch to disappear, so females have the opportunity to spawn up to three more times before being caught in the fishery.

A strong commitment on the part of lobster fishers is necessary since the V-notching is voluntary. Success demands involvement of the entire community. It also takes a lot of trust, for fishers must believe that all involved make similar short term sacrifices.

A final key component of the community effort was education. "Education has to play a major role," says George. "You're not going to change people overnight. It's a job to break habits that have been there for 30, 40, 50 years." The fishers involved local schools in entering data from the lobster tagging studies and developed an education package on responsible fishing that fit into the social science program.

After four years, the first results started to emerge. They were remarkable. The closed areas showed substantially increased egg production and were contributing larger lobsters to the surrounding areas, providing the spillover effect the fishers were looking for. The increased catch rate and increased lobster size were in sharp contrast to adjacent bays which were still showing declines. Other fishing communities in Newfoundland couldn't help but notice these results. They wanted in. There are currently six more no-take areas in the province and a number of others are under consideration, all initiated by local communities.

In 1999, the Bonavista Bay communities asked DFO to consider their closed areas as legislated Marine Protected Areas. Just a few years earlier, they would have balked at the suggestion that these productive areas be permanently removed from their fishing grounds. But the results had spoken for themselves. "I believe MPA's are the way to go," George says. "People think it is the management tool that is needed for the survival of the fishery."

At the end of the presentation, George summarized what he saw as crucial components for a marine protected area to be successful. "You have to have the public on your side, you have to have the stakeholders playing a role, you've got to have [an] education component. People have to be informed and there has to be funding for enforcement."

The following day I drove George to Masset for his next presentation. George was eager to see some of those island deer he had heard about. The conservationist label was still bothering him. "It's all about being responsible," he said, as we passed another deer. "You've got to look after the resource. That's all."

We passed two more deer grazing beside the road.

"I'm told you've got a lot of deer here" he said.

"Tonnes," I replied.

"Good," he said. "Next time I'm out here I'm gonna get me one of those."

## ⋮ The ABCs of *mpas*

by Keith Moore

We are surrounded by the ocean. All our lives are closely knit with the ocean and all of us understand that a healthy ocean is an integral part of our environment, our communities and our lives.

It is difficult for us to fully appreciate the ocean and the great diversity of plants and animals that live within it. The ocean is something we look at from the surface - and on the surface it appears the same whether it's healthy or not. Most of the life in the sea and the environmental processes which sustain that life are well hidden from us. The ocean is so vast that it seems impossible for human activities to alter it and deplete the creatures that live there. However, people around the world are now realizing that the ocean is showing the strains of human use and its negative impacts.

In recent years, marine protected areas have been established all over the world because they are recognized as vital to protecting marine biodiversity and addressing the problems in our oceans. They are a platform from which to begin the long journey to protecting the health of the ocean and its creatures for the future.



*Bull kelp (Nereocystis leutkana) forest at low tide • photo by Lynn Lee*

### ***What is a marine protected area?***

In the official terminology of the World Conservation Union (IUCN) a marine protected area is “any area of intertidal or subtidal terrain together with its overlying waters and associated fauna, flora and historical and cultural features which has been reserved by legislation to manage and protect part or all of the enclosed environment”.

In simple language, this means that a marine protected area (*mpa*) is an area with special, or different, status than areas around it. It means that the types of activities that are permitted in the water and on the sea bottom are different than the surrounding area.

There are now over 1300 *mpas* on every continent. Each was established for a different reason. They vary greatly in size and in the types of activities that are allowed within them. In total, they occupy less than 1% of the world's ocean.

### ***What is the point of a marine protected area?***

Marine protected areas conserve and protect species and habitats. They can help restore biological diversity and productivity. They are used to protect critical or threatened habitats, like sponge reefs or important areas for seabirds, whales, fish and shellfish. They provide refuge for fish stocks to rebuild by limiting fishing in some areas. They are like an insurance policy against the uncertainties of fisheries science and management. In some countries, oil exploration or other industrial and commercial developments are also prohibited within the boundaries of *mpas*.

### ***How big are they?***

Some marine protected areas are very large. The Great Barrier Reef Marine Park in Australia and the Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve in Hawaii are both about 340,000 km<sup>2</sup> (34 million hectares), almost one-third the land area of BC! The Macquarrie Island Marine Park, located halfway between Australia and South America is 162,000 km<sup>2</sup>.

Most marine protected areas are much smaller. In BC, there are 124 *mpas* mostly designated under provincial legislation. At 2250 km<sup>2</sup> (225,000 ha) they are about 3 times the size of Naikoon Park (it is 71,000 ha)

Most existing *mpas* are less than 1 km<sup>2</sup> (100 hectares) in size. In New Zealand, the average *mpa* area is 10.4 km<sup>2</sup> (1,040 hectares) with the largest one being 24.1 km<sup>2</sup>. The proposed Gwaii Haanas Marine Conservation Area is of moderate size at 3,457.7 km<sup>2</sup>.

### ***What is allowed in a marine protected area?***

There is no definitive answer to this simple question. Each *mpa* has been established for particular reasons and the uses which are permitted in the area reflect these reasons. Activities restricted within individual *mpas* take many different forms and every place has a different approach.

Some *mpas* are multiple use areas that are zoned to allow various uses around central core areas of unique, special and/or representative habitats. Within the core areas, many or all activities are restricted. In the Great Barrier Reef *mpa*, for example, large areas are zoned with very few restrictions. Fishing and most other activities are allowed. The large areas surround 26 individual core reserve zones where all extractive activities are prohibited. These core reserves account for about 4.6% of the total marine park area. Harmful activities such as oil exploration, mining, littering, spear fishing with scuba, and taking of large individuals of some species are

prohibited in all parts of the *mpa*.

Some *mpas* are strict reserves where no consumptive activities are permitted. In New Zealand, for example, marine protected areas are smaller reserves where all consumptive activities are banned, including commercial and recreational fishing. In the Channel Islands National Marine Sanctuary in California, it is proposed that up to 50% of the 4,294 km<sup>2</sup> area be included in reserves where no extractive use is allowed.

**Around the world, *mpas* involve a balance between management of human uses and protection of ecological health.** Presently in most countries, recreational and commercial fishing is allowed in most of the marine protected areas. Larger marine protected areas include a mix of core areas and multiple use zones.

In BC today, the majority of *mpas* allow most activities. Only 5 of the existing 124 *mpas* are reserves where no fishing is allowed. All of BC's *mpas* are very small and most are located near West Vancouver and Victoria. In total, they account for less than 1% of our coastal waters.

### **In Summary**

Marine protected areas are a way to protect the health of the ocean and the fish, mammals, birds, plants and other life forms that live there. They are an important part of protecting our lives, our livelihoods, our cultures and our environment.

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Canada has policies to establish marine protected areas. The "Oceans Strategy" recently announced by Fisheries and Oceans Canada (DFO) embraces the creation of Marine Protected Areas (MPA) using Canada's Oceans Act. The National Marine Conservation Areas (NMCA) Act, passed just this year, facilitates the creation of NMCAs. Here, we will have the opportunity to consider both kinds of marine protected areas in our waters: a NMCA surrounding Gwaii Haanas is proposed and the first steps have been taken to designate the Bowie Seamount a MPA.

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