

<i>Oceans Act</i>	http://laws.justice.gc.ca/en/F-15/	This <i>Act</i> outlines Canada's duties and responsibilities in its oceans territory and introduces a new oceans management model promoting sustainable development of Canada's oceans and their resources. The <i>Act</i> gives the Minister of Fisheries and Oceans Canada the legal authority to develop an ocean management strategy based on the principles of sustainable development,
<i>Fisheries Act</i>	http://laws.justice.gc.ca/en/O-2.4/	This <i>Act</i> provides the Minister of Fisheries and Oceans Canada with the authority to manage freshwater and marine fisheries, including providing for licensing, enforcement and provisions for closing areas to fishing, prohibiting the harmful alteration, disruption or destruction of fish habitat or the deposit of substances deleterious to fish. It is one of the strongest environmental laws in Canada.
<i>Coastal Fisheries Protection Act</i>	http://laws.justice.gc.ca/en/F-14/index.html	This <i>Act</i> is the legislative means for controlling foreign fishing vessel access to, and activities in, Canadian fisheries waters and ports. It sets out the Minister of Fisheries and Oceans Canada's responsibility for regulating foreign fishing in Canadian waters.
	http://laws.justice.gc.ca/en/C-33/index.html	

New Emerging Fisheries Policy	<p>This Policy applies to all new fisheries undertaken in marine or fresh water areas where Fisheries and Oceans Canada manages the fishery. It provides applicants with a transparent process to follow and it gives DFO managers a procedure that can be applied fairly and consistently. It outlines the requirements that must be met and the procedures to follow before a new fishery can be initiated. It includes also a provision for the establishment of a scientific base with which stock responses to new fishing pressures can be assessed. The objective of this policy is to diversify fisheries and increase economic returns while ensuring conservation of the stocks and realizing the sustainable use of fisheries resources. http://www.dfo-mpo.gc.ca/communic/fish_man/nefp_e.htm</p>
Policy for the Management of Fish Habitat	<p>This Policy provides a mix of regulatory and proactive strategies that together support the concepts of sustainable development and ecosystem approach. The overall objective of the Habitat Policy is to "increase the natural productive capacity of habitats for the nation's fisheries resources" through the conservation, restoration and development of fish habitat. http://www.dfo-mpo.gc.ca/canwaters-eauxcan/infocentre/legislation-lois/policies/fhm-policy/index_e.asp</p>
<i>Canada National Marine Conservation Areas Act</i>	<p>This <i>Act</i> provides the Minister of the Environment with the authority to establish National Marine Conservation Areas, with the objective of protecting and conserving marine areas that are representative of the country's oceans environments and Great Lakes, and to encourage public understanding, appreciation and enjoyment of this marine heritage. http://laws.justice.gc.ca/en/C-7.3/</p>
<i>Species at Risk Act</i>	<p>The <i>Act</i> provides the ministers of Environment, Fisheries and Oceans Canada and Parks Canada with the authority to protect nationally listed wildlife at risk from becoming extinct or lost from the wild, provides for the recovery of endangered and threatened species and encourages the management of other species to prevent them from becoming at risk. The <i>Act</i> also creates prohibitions to protect listed threatened and endangered species, their residences and their critical habitat. Conservation through stewardship and cooperation are at the foundation of the <i>Act</i>. http://laws.justice.gc.ca/en/S-15.3/</p>

Canada Shipping Act

This *Act* sets out Canada's rights and obligations as they pertain to shipping and recreational boating in Canadian waters. Stated objectives of the Act are to protect the marine environment from damage due to navigation and shipping activities, establish an effective inspection and enforcement program, and to ensure that Canada meets

mpo.gc.ca/oceans-habitat/oceans/ri-rs/cos-soc/index_e.asp

Canada's Oceans Action Plan

This Plan enables government-wide action to develop Canada's ocean resources for the benefit of coastal communities, while protecting fragile marine ecosystems. It is the framework to advance an integrated federal oceans agenda and is a key priority in the Department of Fisheries and Oceans Canada's strategic plan. The Oceans Action Plan is based on four interconnected pillars: International Leadership, Sovereignty and Security; Integrated Oceans Management for Sustainable Development; Health of the Oceans; and Ocean Science and Technology. To that end, Canada will continue to play a leadership role in international oceans management advancing within global fora concepts such as an ecosystem approach to management, integrated management planning and marine protected areas. http://www.dfo-mpo.gc.ca/oceans-habitat/oceans/oap-pao/index_e.asp

Canada's Policy to Manage the Impacts of Fishing on Sensitive Benthic Areas

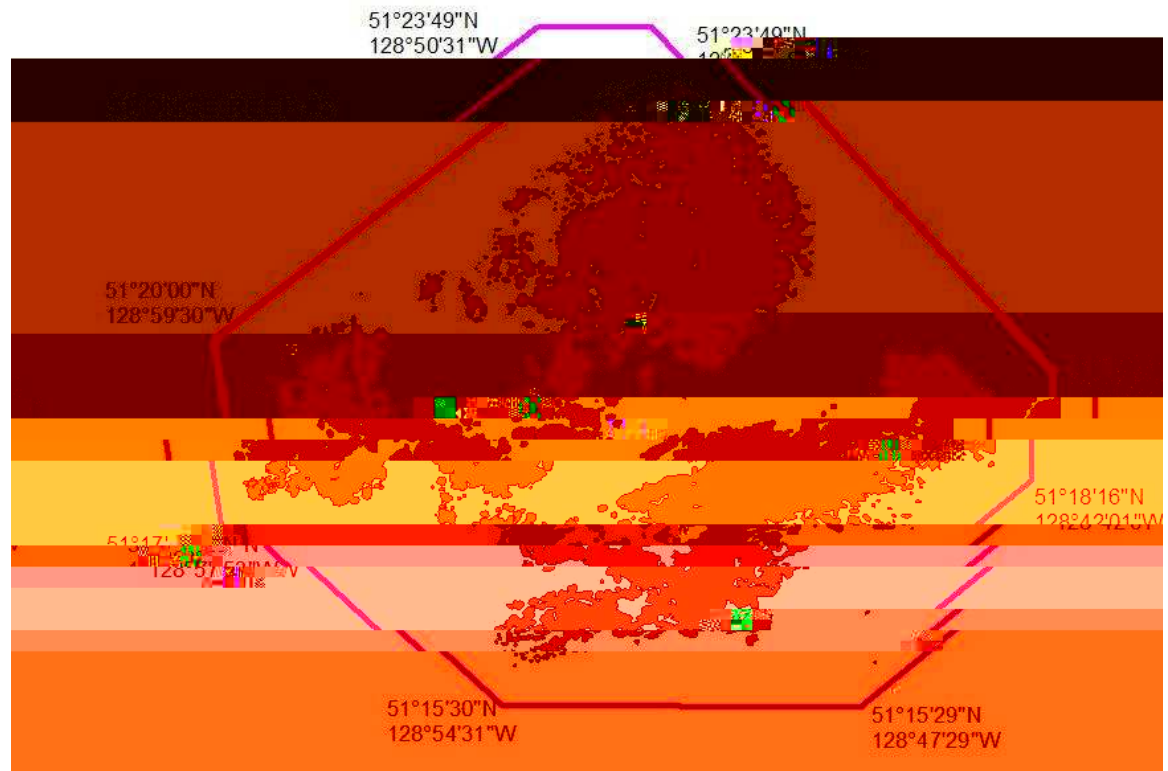
This policy provides a more systematic, transparent, and consistent approach to addressing the impacts of fishing on sensitive benthic areas that may cause serious or irreversible harm. It applies to all commercial, recreational, and Aboriginal marine fishing activities that are licensed and/or managed by the Department of Fisheries and Oceans Canada both within and outside Canada's 200-nautical mile exclusive economic zone. The policy outlines separate processes for historically fished and frontier areas, recognizing that there is a higher level of uncertainty about benthic habitats, communities and species in frontier areas. This policy requires greater precaution when fishing activities are being considered in frontier areas and special consideration to historically

Then to	52°08'03"N latitude	129°32'47"W longitude
Then to	51°54'43"N latitude	129°41'22"W longitude
Then to	51°52'42"N latitude	129°38'08"W longitude
Then to	51°56'05"N latitude	129°18'46"W longitude
Then to	51°59'41"N latitude	129°15'24"W longitude
Then to	52°05'36"N latitude	129°22'44"W longitude
Then to	52°19'53"N latitude	129°32'02"W longitude
Then to	52°27'26"N latitude	129°39'19"W longitude
Then to	52°31'07"N latitude	129°46'47"W longitude



The waters of Area 110 that lie inside a line that:

Begins at	51°23'49"N latitude	128°50'31"W longitude
Then southerly to	51°20'00"N latitude	128°59'30"W longitude
Then to	51°17'26"N latitude	128°57'53"W longitude
Then to	51°15'30"N latitude	128°54'31"W longitude
Then to	51°15'29"N latitude	128°47'29"W longitude
Then to	51°18'16"N latitude	128°42'01"W longitude
Then to	51°19'35"N latitude	128°42'01"W longitude
Then to	51°23'49"N latitude	128°48'14"W longitude
Then to the beginning point		



*

The waters of Area 110 that lie inside a line that:

Begins at	51°23'49"N latitude	128°50'31"W longitude
Then southerly to	51°20'00"N latitude	128°59'30"W longitude
Then to	51°17'26"N latitude	128°57'53"W longitude
Then to	51°15'30"N latitude	128°54'31"W longitude
Then to	51°15'29"N latitude	128°47'29"W longitude
Then to	51°18'16"N latitude	128°42'01"W longitude
Then to	51°19'35"N latitude	128°42'01"W longitude
Then to	51°23'49"N latitude	128°48'14"W longitude
Then to the beginning point		

Closed year-round to all trawling in Sub areas 24-1, 24-2, 24-4 to 24-12 and 24-14. The intent of this closure is to address shellfish interception and shallow water habitat concerns.

There are a number of Sub areas within the Johnstone, Georgia and Juan de Fuca Straits that are closed to both bottom and mid-water trawling. The closures have been implemented for reasons that include: herring spawn areas, salmon/herring holding areas, conflicts with crab gear, harbour congestion and reduction of harvesting pressure on localized groundfish stocks. However, the bottom trawling closures reduce the damage that may be caused by bottom gear to sensitive bottom habitats and species.

The closures described in the following paragraphs may change in-season. Current Fisheries Public Notices should be referred to prior to fishing.

Closed year round in that portion of Sub area 18-6 inside a line: that begins at 48 deg 41.46 min N. lat. 123 deg 29.48 min W. long. then to 48 deg 41.96 min N. lat. 123 deg 28.178 min W. long. then to 48 deg 42.82 min N. lat. 123 deg 28.92 min W. long. then to 48 deg 42.32 min N. lat. 123 deg 30.23 min W. long. Then to the beginning point. (B.C. Provincial Ecological Reserve Number 67.)

12-6	Those portions of Sub area 12-6 inside a line commencing at Red Point on the	All year

* Map not available

	north-western shore of Harbledown Island, thence north-westerly to 50°38'N and 126°45'W, thence true east to 50°38' N and 126°35'W, thence true south to Dead Point on the northern shore of Harbledown Island, thence westerly along the north shore of Harbledown Island to the point of commencement at Red Point on Harbledown Island.	
12-20	Entire Sub area	All year
12-29, 12-34 12-39	Entire Sub areas Those portions of Sub area 12-39 inside a line commencing at Slope Point on the southern shore of Gilford Island, thence north-westerly in a straight line to the navigational light on Duff Islet in low7Eqk'ty/z3kqk7z_H''gy'q3"L_L_'hyq3qE" _	February 16 to April 30

This period closure is identified each year within the appropriate Integrated Fisheries Management Plans for bottom contact fisheries. The following areas have period closures for all trawling in Sub area 130-2 and those portions of Areas 109 to 111 and Sub areas 108-2 and 130-1 west of a line: that begins at 51 deg 39.33 min N. lat. 130 deg 30.5 min W. long. then to 51 deg 48 min N. lat. 130 deg 00 min W. long. then to 51 deg 47 min N. lat. 129 deg 37 min W. long. then to 51 deg 28 min N. lat. 129 deg 48 min W. long. then to 51 deg 13 min N. lat. 129 deg 28 min W. long. then true south to 51 deg 04 min N. lat. 129 deg 28 min W. long. then to 50 deg 52 min N. lat. 129 deg 2 deg 5

In Areas 13 to 19 and 29: the mesh size in a bottom trawl net shall not be less than 108 mm (approximately 4.25 inches) in the final 50 meshes, including the cod-end. In all other parts of a bottom trawl net, the mesh size shall not be less than 76 mm (approximately three inches).

In Hecate Strait and Eastern Dixon Entrance: the mesh size in a bottom trawl net shall not be less than 140 mm (approximately 5.5 inches) in the last 100 meshes of the net, including the cod-end.

In all other parts of a bottom trawl net, the mesh size shall not be less than 76 mm (approximately three inches). This restriction applies to that area bounded on the south by 52°51'N in Hecate Strait, bounded on the north by the Canada/United States International boundary, bounded on the west by 132°00'W in Dixon Entrance, and bounded on the east by the mainland of British Columbia.

All bottom trawl nets and mid-water trawl nets, when used in fishing for pacific hake destined for delivery to a foreign fishing vessel |

Sub area 101-7, south of 54°11'N, and east of 132°43'W; those portions of Sub areas 101-10 and 104-4, south of 54°15'N; that portion of Sub area 102-2, that is both north of 53°00'N, and west of 131°10'W; that portion of Sub area 104-2, that is both south of 54°15'N, and west of 131°10'W; that portion of Sub area 104-3, that is west of 131°10'W; that portion of Sub area 105-1, that is west of 131°10'W; that portion of Sub area 105-2, west of 131°10'W. The intent of this closure is to protect crabs during the soft-shell period.

There are 164 Rockfish Conservation Areas (RCAs) in place within BC waters. The most recent additions were implemented February 1, 2007 in the Strait of Georgia Area. RCA's have been identified and are used as a measure to protect inshore rockfish populations from harvest. Fishing activity is restricted within all the RCA's. Both groundfish and shrimp trawling are restricted and not permitted in RCA's. A description of all RCAs and the permitted fishing activity can be found at:

http://www.pac.dfo-mpo.gc.ca/recfish/Restricted_Areas/rca_e.htm.

Since 1998, an area identified as a narwhal over-wintering area in Davis Strait has had a license restriction in place that limits the time spent by vessels fishing for turbot in this area. Using any gear type, the maximum allowable fishing period allowed in this area for each vessel is four days per year. More recently, deep sea, cold water corals have been identified within this same area. This area is defined as the area bounded in the south by latitude 67°15'N, in the north by 68°15'N, in the east by NAFO Division 0A boundary and in the west by longitude 60°30'W. Thus, both the narwhal over-wintering site and the deep sea corals are protected by the limited fishing. This area is identified and protected through the *Fishery Management Plan for NAFO Sub area 0 Greenland halibut* developed by Fisheries and Oceans Canada, together with stakeholders.

While restrictions to trawls which might prevent damage to corals, this could result in the increase use of other gears, and thereby increase narwhal entanglements in long lines or gill nets for example. Discussions are underway with stakeholders considering a new management plan for the northern part of Davis Strait turbot fishery. Stakeholders

are being asked to indicate how they believe the area might be better protected. It is possible that a further reduction in fishing period, gear restrictions or a complete exclusion from this area could be enacted. At present, the uses of long-lines are being encouraged in Division OA which would potentially decrease possible damage to deep sea corals. Some areas have been identified in the *Fishery Management Plan for NAFO Sub area 0 Greenland halibut* as off limits to mobile gear and the area of known hard corals could be included in the area banned to mobile gear during the management planning process.

Onboard observers are required to note by location any cetacean sightings or any time that corals are retrieved by fishing gear. Noting the retrieval of coral provides information as to how often fishing gear may be encountering coral areas and therefore provides some information as to the distribution of these corals.

As it is still uncertain exactly where and when spawning of turbot is taking place in Divisions OA and OB of Davis Strait, on board observers are being tasked with gathering more data from fish that are harvested in an attempt to determine when fish appear to be spawning and where this spawning may be occurring, with a view to consider future measures to protect such areas.

Under the *Fishery Management Plan for NAFO Sub area 0 Greenland halibut* there is a provision for using minimum gill net mesh sizes above or below a particular water depth as well as a maximum number and maximum length of gill nets that can be set. While the gill net mesh size was proposed primarily to limit the harvest of small turbot, it also provides additional protection to smaller species commonly harvested as bycatch. The limits as to the length of individual gill nets and the number that can be set at any given time was primarily designed to prevent the loss of nets due to ice movement. Under the plan, long line hooks are restricted to a minimum size to reduce capture of small fish and trawl mesh size is specified. All of the above limit the harvest of undersized turbot and assist in reducing bycatch.

A proposed change to the *Fishery Management Plan for NAFO Sub area 0 Greenland halibut* is to have a maximum gill net length and a maximum number of gill nets that can be in a gang and set at any time. Due to the possibility of ice moving into the area or fall storms limiting the ability of fishers to retrieve gear, limiting the amount of gear that can be fishing at any given time should mean that there will be sufficient time to pick up most if not all of the gear before boats are forced to move out of the area.

DFO Fisheries Management, in cooperation with the Nunavut Wildlife Management Board and the Baffin Fisheries Coalition, established a deadline for the removal of gill

miles from the coast. This restriction applies to offshore license holders even if the vessel put temporarily on the offshore license is less than 65 feet (vessels greater than 65 feet are offshore vessels). While this restriction was originally imposed for gear conflict reasons, the restriction on use of bottom mobile gear in sensitive coastal waters reduces the threat and potential damage occurring on the bottom habitats, communities and species.

A similar buffer zone exists along Québec's Northshore and the Northern side of Gaspésie since 1985, where no mobile gear (shrimp trawls) may be used within 12 miles from the shoreline.

Scallop bottom mapping has significantly reduced the bottom impact by reducing the number of hours towed of the offshore scallop fleet by 100,000.

In the Gulf of St. Lawrence, several closures, buffer zones and other measures (wheels raise towbar 50.8mm off the bottom) exist to reduce disruption and protect lobster habitat (larval settling areas) and marine plants. These include:

Closure of area West of Confederation Bridge – Scallop Fishery Area (SFA) 22	2005	No use of mobile gear within area	Scallop Drags.
Use of runners / wheels on towbar	2002	Less disruptive of habitat: wheels raise towbar 50.8mm off the bottom.	Scallop drags
Coastal buffer within SFA22	2005	Protect lobster habitat (larval settling areas) & marine plants.	Scallop drags
Coastal buffer within SFA21A			Scallop drags
Coastal buffer within SFA21B	1997-1998		Scallop drags
Coastal buffer within SFA24			Scallop drags

"Stone Fence" closure* – 12 sq. kilometres:

Point	North Latitude	West Longitude
1.	44° 29' 30"N	57° 12' 30"W
2.	44° 29' 30"N	57° 10' 00"W
3.	44°	

In 2002, a closed area to all groundfish fishing was established on the West Coast of Newfoundland and Labrador (Port au Port Bay) to protect cod spawners until June 24. As well, another closed area to the cod fishery from April 1 – June 24 was established to protect migrating cod into the Gulf of St. Lawrence.

There are established timeframes that are closed to protect cod spawning in NAFO subdivision 3Ps. In addition, the Burgeo Bank area is closed between November 15 – May 30 when the 2 cod populations of NAFO sub-division 4R3Pn and NAFO subdivision 3Ps interact and spawn.

Since the mid 1970s Herring Fishing Areas (HFAs) 12 and 13 have been closed to pelagic fixed gear along the Northern Peninsula of Newfoundland and Labrador from June 15 – July 31 in order to protect salmon. In 19

They include the requirement to report any lost groundfish gillnets within 24 hours, and the requirement for lobster traps to have untreated wooden laths or uncoated twine/wire to ensure that if lost, the traps will decay and will not continue to fish.

Each fleet in the groundfish fishery must provide annual Conservation Harvesting Plans which include among other things, limitations on bycatch. Fisheries and Oceans Canada has implemented small fish and bycatch protocols in the groundfish fishery that restrict the harvest of small fish and incidental harvests. If either the small fish limit (15 per cent for most species) or the incidental harvest reaches or exceeds the prescribed levels in the fleets Plan, fisheries are closed until a successful test fishery is undertaken and it is determined that this is no longer a problem.

Other noteworthy measures to avoid incidental catches include:

Expert Opinions (EO) are completed annually to examine ways to reduce bycatch of groundfish by scallop fleet on Georges Bank. Based on EO and industry consultations small seasonal closures have been implemented on Georges Bank for all scallop vessels designed to reduce the bycatch of groundfish (mostly Cod and Yellowtail flounder) at a time when fish are concentrated for spawning. The closure is for varying months during February to end of March for cod and in May for Yellowtail flounder.

Resulting from concerns about the level of by-catch of groundfish species by the small-meshed shrimp trawls and the effect on their populations, an exclusion device known as the Nordmore Grate was introduced in the Canadian Northern shrimp fishery in 1993. This requirement was expanded to all shrimp fisheries at all times. This device sorts out the larger fish, allowing them to escape through an opening in the top of the net, while allowing the smaller shrimp to pass through and be retained in the cod-end of the net. With extensive use of the grate in recent years, groundfish mortality in Canadian shrimp fisheries has been reduced markedly, and virtually eliminated in the sensitive groundfish NAFO areas of 2J and 3KL¹.

By-catch reductions are also achieved through use of the Nordmore Grate for the silver hake fishery. As well, there is ongoing research by scallop vessels to reduce by-catch of groundfish in both these trawl fisheries.

Vessels are restricted from fishing with small mesh in water less than 50 fathoms in depth and fishing for redfish, when using small mesh gear(130 mm) is also prohibited in the following areas:

¹ The northern prawn trawl fishery became the first Canadian fishery certified by the Marine Stewardship Council (MSC) and is the largest MSC certified shrimp fishery in the world. See DFO Press Release: <http://www.dfo-mpo.gc.ca/media/statement-declarations/2008/20080819-eng.htm>

- that portion of the Bay of Fundy north of 43°

areas/fisheries such as lobster, herring and other fisheries, where all by-catch is counted with a TAC. There are also by-catch quota caps on non quota stocks such as cusk and white hake.

Trap net leader restrictions in conditions of license for all small pelagics have been established to minimize the by-catch of salmon and cod.

Groundfish license conditions stipulate limits for incidental by-catch including (but not limited to) cod, american plaice, yellowtail flounder and redfish.

There are defined dates for the bait fishery for herring that have been established to minimize by-catch of salmon. Herring bait fishery is closed from July 1 – August 14 in

APPENDIX 3:

INTERNATIONAL GOVERNANCE STRATEGY: SCIENCE PROJECTS IN SUPPORT OF VMEs

<u>Priority Issue</u>	<u>Science Objective</u>	<u>Project title</u>
1. Identification, description, & mapping vulnerable marine ecosystems (VME)	i. Development of guidance and procedures for the identification of VMEs and mapping of VMEs.	CBD workshop logistics & contribution Workshop on EBSA/VME criteria in the

may have a significant adverse impact (SAI) on marine biodiversity.
3. Determine if fishing activities are likely to have a SAI on VME and biodiversity, particularly low-productivity fishery resources.

adverse impacts.

i. Science advice on methods to identify, describe and assess SAI and the recoverability.

ii. Understand impacts of various fishing gears, vessels, and practices on VME and biodiversity, and determine those which may have SAI.

Bottom impact comparisons using HD video.

Guidance on determining significant adverse impacts

National peer-review meeting on impacts of long lines and gill nets (including a contract to gather relevant information for discussion).

Assessment of

APPENDIX 4:

The implementation process will use adaptive management principles, whereby

APPENDIX 5:

INTEGRATED OCEANS MANAGEMENT IN CANADA

Historically, Canada has always placed an emphasis on the protection of our oceans. In 1996 Canada became the first nation in the world to enact a comprehensive piece of legislation regarding oceans, the *Oceans Act*. The Act is an enabling piece of legislation that allows for the establishment of integrated management processes which ensure that the appropriate management measures are applied for the long-term health of Canada's oceans ecosystems.

(b) the conservation and protection of endangered or threatened marine species, and their habitats;

(c) the conservation and protection of unique habitats;

(d) the conservation and protection of marine areas of high biodiversity or biological productivity; and

(e) the conservation and protection of any other marine resource or habitat as is necessary to fulfil the mandate of the Minister.

There are currently seven MPAs designated under the *Oceans Act*:

- The Endeavor Hydrothermal Vents, British Columbia
- The Gully, Nova Scotia
- Basin Head, Prince Edward Island
- Gilbert Bay, Labrador
- Eastport, Newfoundland
- The Musquash Estuary, New Brunswick
- The Bowie Seamount, British Columbia

Since 2006, two additional *Oceans Act*

destruction or removal of any living organism or habitat within the Estuary.

the seamounts and their ecosystem. The MPA Regulations prohibit the removal, disturbance, damage and destruction of any living marine organism or any part of its habitat, including the seabed, within the MPA.

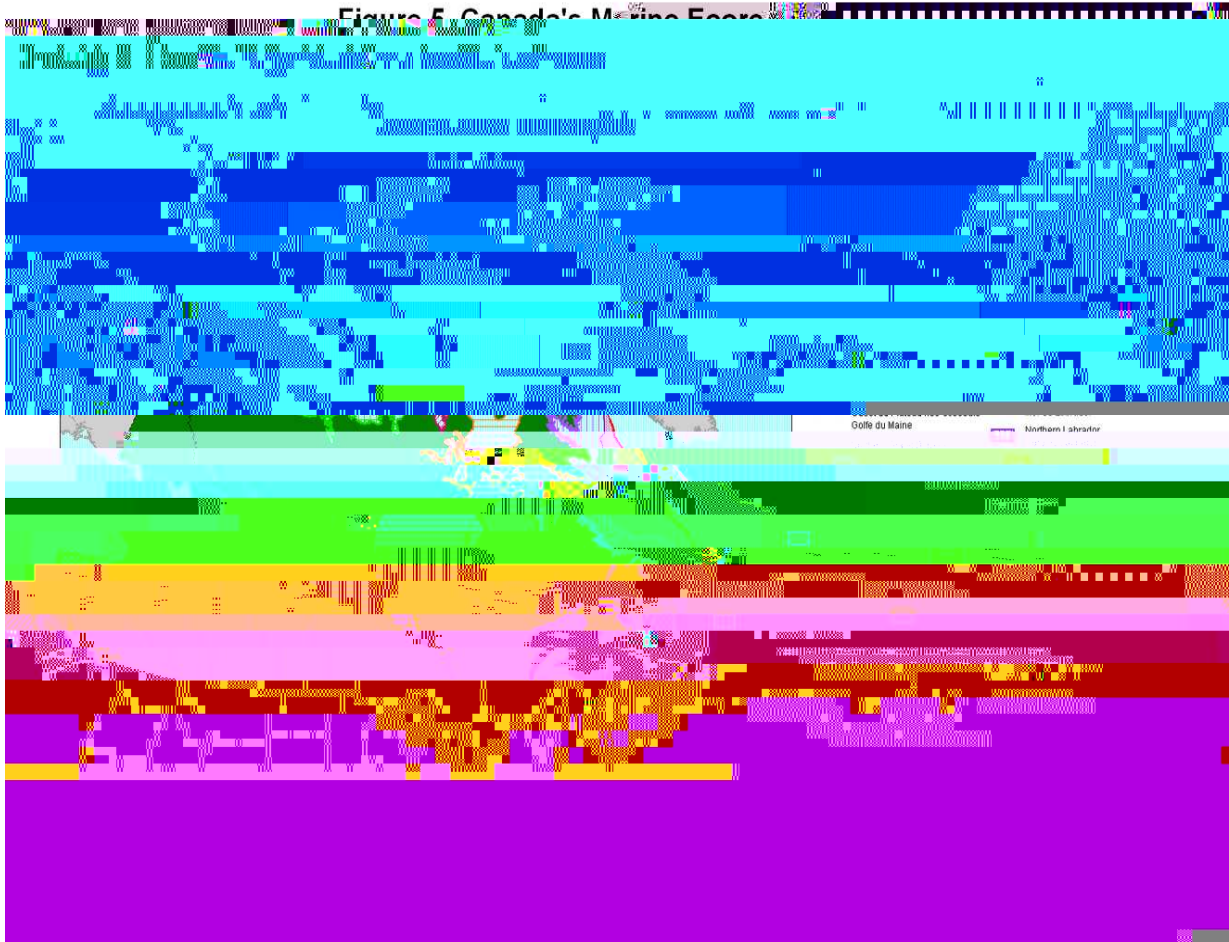
Preliminary oceanographic studies and underwater photography have shown that the Bowie Seamount is a biologically rich area, with a dynamic and productive ecosystem. Many VMEs have been recorded in high densities and require protection as a vast number of fish and marine mammal species are dependent on the seamount for their health and survival.

In addition to the seven designated MPAs, DFO has also compiled a list of current Areas of Interest which need to be examined further to determine whether an MPA designation is appropriate:

Area of interest	Conservation Objective
Manicouagan, Quebec	To protect and conserve the high diversity and productivity of the Manicouagan Peninsula's marine ecosystem, including several species at risk.
Tarium Nirjutait, Beaufort, NWT	To conserve and protect beluga whales and the supporting ecosystem; to maintain a thriving population of beluga whales for optimum sustainable culturally important subsistence harvest by Inuvialuit.
St. Lawrence Estuary, Quebec	To conserve and protect cetaceans and harbour seals and their habitats and food resources.
Race Rock. B.C.	To conserve and protect a biologically diverse and highly productive ecosystem.
New Areas of Interest	6 new Areas of Interest are t

APPENDIX 7:

CANADA'S MARINE ECOREGIONS



Powles, H., Vendette, V., Siron, R., and O'Boyle, R. 2004. Proceedings of the Canadian Marine Ecoregions Workshop. Canadian Science Advisory Secretariat Proceedings Series 2004/016. Department of Fisheries and Oceans, Ottawa, Canada. 47 p. Available online: http://www.dfo-mpo.gc.ca/csas/Csas/Proceedings/2004/PRO2004_016_B.pdf

