



A Preliminary Assessment of  
Canada's Oceans Act Marine Protected Areas against the  
International Union for the Conservation of Nature (IUCN)  
Protected Area Management Categories

Presented to the National Advisory Panel on Marine Protected  
Area Standards  
July 2018



# Outline

- Overview of the development of *Oceans Act* Marine Protected Area Regulations
- Methods & Analysis
- Case Study
- Results
- Conclusions





# Process to Establish *Oceans Act* MPAs

*Oceans Act*  
Marine  
Protected  
Areas



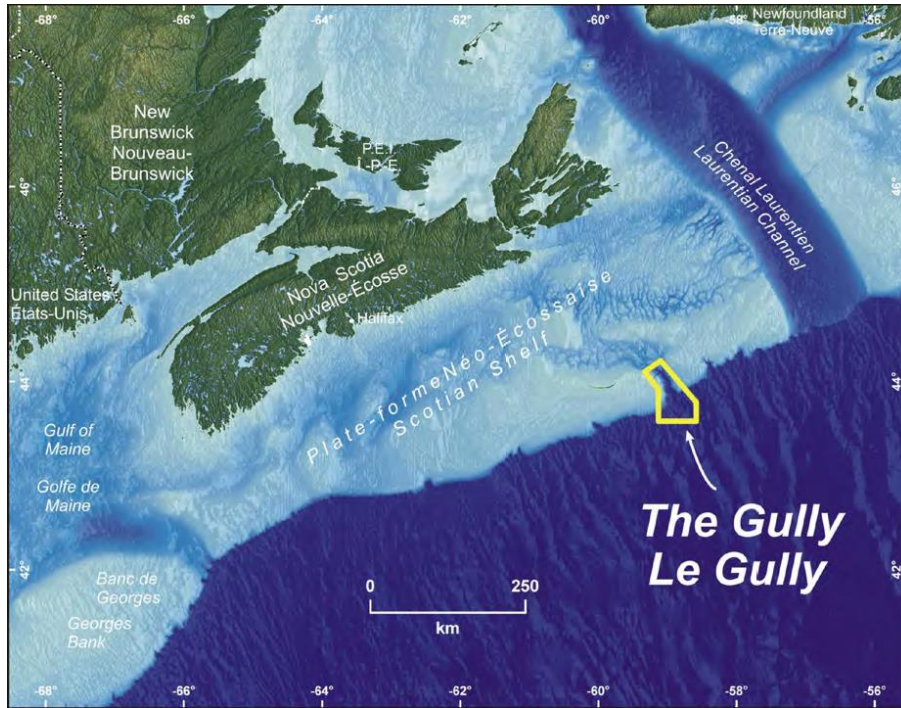


## Methods for assigning IUCN Categories to OA MPAs

1. Match the MPA Conservation Objectives to the Primary Objective of the corresponding IUCN management category
2. Assess whether activities allowed in the MPA are consistent with the IUCN guidance on activities compatible with each IUCN management category



# The Gully Marine Protected Area – A Case Study



- Established under Canada's *Oceans Act* in 2004
- Located approximately 200 km off Nova Scotia
- The largest submarine canyon in the Northwest Atlantic
- Home to the Scotian Shelf population of Northern bottlenose whale (Endangered – SARA)





# The Gully Conservation Objectives

- To protect the health and integrity of the Gully ecosystem:
  - Protect the natural biodiversity of the Gully
  - Protect the physical structure of the Gully and its physical and chemical properties
  - Maintain the productivity of the Gully ecosystem

IUCN Category	Definition	Primary Objective
Ia	Category Ia are strictly protected areas set aside to protect biodiversity and also possibly geological/geomorphological features, where human visitation, use and impacts are strictly controlled and limited to ensure protection of the conservation values. Such protected areas can serve as indispensable reference areas for scientific research and monitoring.	To conserve regionally, nationally, or globally outstanding ecosystems, species (occurrences or aggregations) and/ or geodiversity features: these attributes will have been formed mostly or entirely by non-human forces and will be degraded or destroyed to all but very light human impact.



# Preliminary Activities Analysis

Activities	Ia	Ib	II	III	IV	V	VI
Research non-extractive	Y*	Y	Y	Y	Y	Y	Y
Non-extractive traditional use	Y*	Y	Y	Y	Y	Y	Y
Restoration/enhancement for conservation (e.g. invasive species control, coral reintroduction)	Y*	*	Y	Y	Y	Y	Y
Traditional fishing/collection in accordance with cultural tradition and use	N	Y*	Y	Y	Y	Y	Y
Non-extractive recreation (e.g. diving)	N	*	Y	Y	Y	Y	Y
Large scale low intensity tourism	N	N	Y	Y	Y	Y	Y
Shipping (except as may be unavoidable under international maritime law)	N	N	Y*	Y*	Y	Y	Y
Problem wildlife management (e.g. shark control programmes)	N	N	Y*	Y*	Y	Y	Y
Research: extractive	N*	N*	N*	N*	Y	Y	Y
Renewable energy generation	N	N	N	N	Y	Y	Y
Restoration/enhancement for other reasons (beach replenishment, fish aggregation, artificial reefs)	N	N	N*	N*	Y	Y	Y
Fishing/collection: recreational	N	N	N	N	*	Y	Y
Fishing/collection: long term and sustainable local fishing practices	N	N	N	N	*	Y	Y
Aquaculture	N	N	N	N	*	Y	Y
Works (e.g. harbours, ports, dredging)	N	N	N	N	*	Y	Y
Untreated waste discharge	N	N	N	N	N	Y	Y
Mining (seafloor as well as sub-seafloor)	N	N	N	N	N	Y*	Y*
Habitation	N	N*	N*	N*	N*	Y	N*

Key:

No	N
Generally no, unless special circumstances apply	N*
Yes	Y
Yes because no alternative exists, but special approval is essential	Y*
*Variable; depends on whether this activity can be managed in such a way that is compatible with the MPA's objectives	*



# Preliminary Activities Analysis

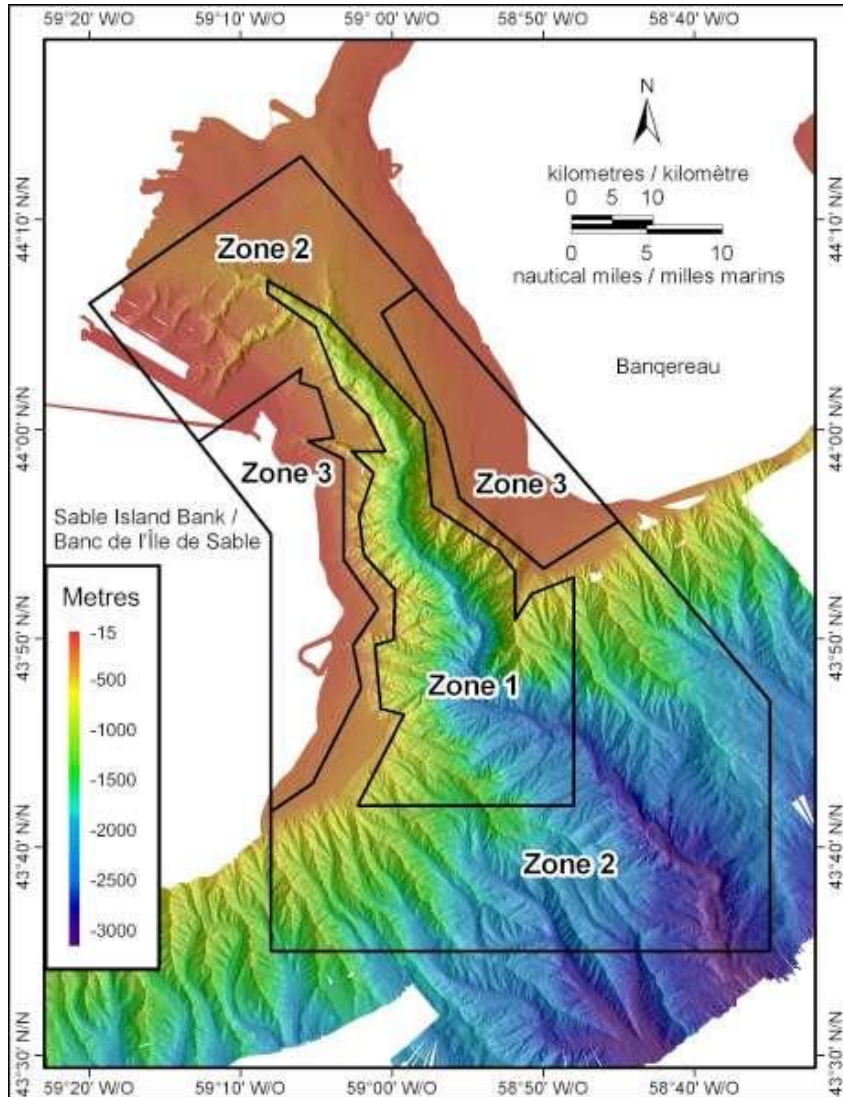
Activities	Ia	Ib	II	III	IV	V	VI
Research non-extractive	Y*	Y	Y	Y	Y	Y	Y
Non-extractive traditional use	Y*	Y	Y	Y	Y	Y	Y
Restoration/enhancement for conservation (e.g. invasive species control, coral reintroduction)	Y*	*	Y	Y	Y	Y	Y
Traditional fishing/collection in accordance with cultural tradition and use	N	Y*	Y	Y	Y	Y	Y
Non-extractive recreation (e.g. diving)	N	*	Y	Y	Y	Y	Y
Large scale low intensity tourism	N	N	Y	Y	Y	Y	Y
Shipping (except as may be unavoidable under international maritime law)	N	N	Y*	Y*	Y	Y	Y
Problem wildlife management (e.g. shark control programmes)	N	N	Y*	Y*	Y	Y	Y
Research: extractive	N*	N*	N*	N*	Y	Y	Y
Renewable energy generation	N	N	N	N	Y	Y	Y
Restoration/enhancement for other reasons (beach replenishment, fish aggregation, artificial reefs)	N	N	N*	N*	Y	Y	Y
Fishing/collection: recreational	N	N	N	N	*	Y	Y
Fishing/collection: long term and sustainable local fishing practices	N	N	N	N	*	Y	Y
Aquaculture	N	N	N	N	*	Y	Y
Works (e.g. harbours, ports, dredging)	N	N	N	N	*	Y	Y
Untreated waste discharge	N	N	N	N	N	Y	Y
Mining (seafloor as well as sub-seafloor)	N	N	N	N	N	Y*	Y*
Habitation	N	N*	N*	N*	N*	Y	N*

- A preliminary activities analysis shows some activities are occurring that are not compatible with the IUCN guidance for a category Ia
- Fishing, Shipping, Tourism, and Research are allowed to occur in the Gully MPA





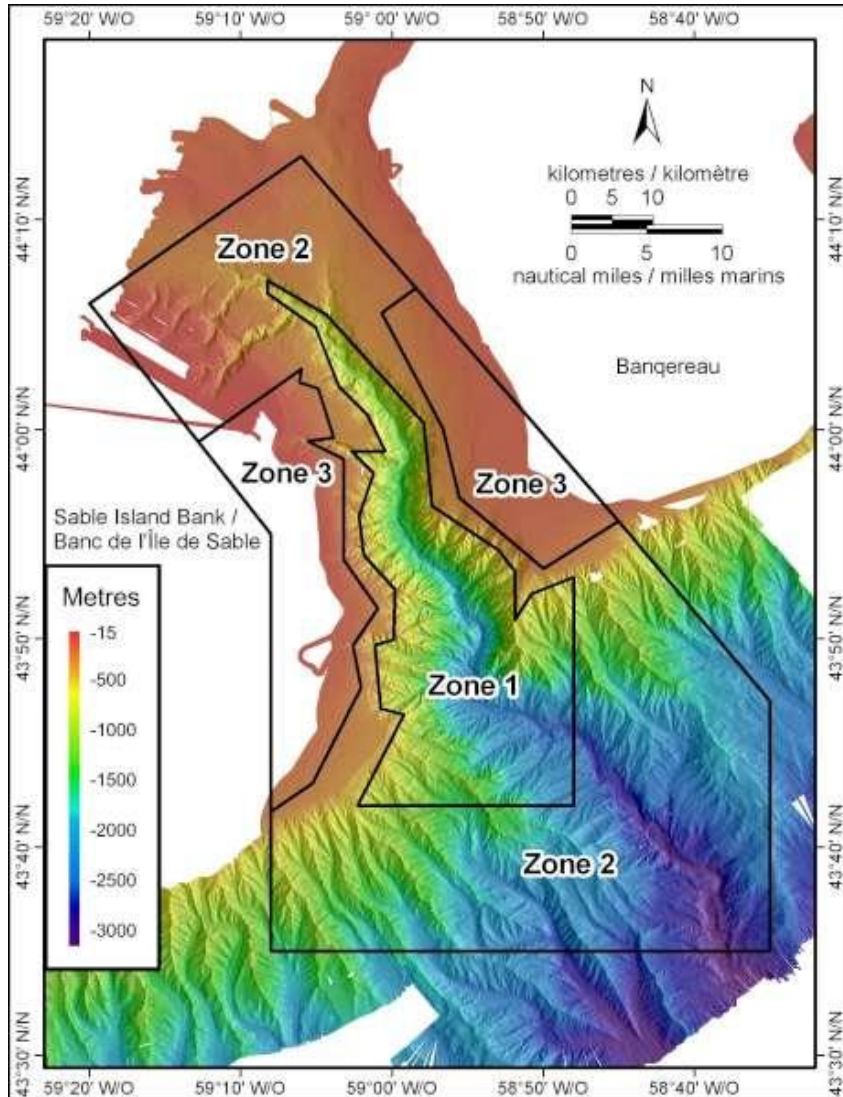
# The Gully MPA Regulations



- Allowed activities vary by zone based on the ecology and the presence of ecological components of interest
- Zone 1, which encompasses the deep canyon environment which is important habitat for cold-water corals, dolphins, and whales, is the most strictly protected
- Zone 2 includes the canyon head and sides and the continental slope. With a high diversity of marine life, zone 2 allows limited activities
- Zone 3, the banks adjacent to the canyon is prone to regular natural disturbance. The natural variability of this zone allows for more flexibility in permitted activities



# The Gully MPA Regulations



- Safety, enforcement, security, & emergency: All Zones
- Scientific research and monitoring with approved activity plan: All Zones
- Vessel travel: All Zones
- Fishing for swordfish, tuna, shark, or halibut with valid license: Zones 2 and 3
- Other activities as approved by the Minister (i.e. tourism): Zones 2 and 3



# Zoned Activities Analysis in the Gully MPA

Activities	Zone 1	Zone 2	Zone 3
Research non-extractive	✓	✓	✓
Non-extractive traditional use			
Restoration/enhancement for conservation (e.g. invasive species control, coral reintroduction)			
Traditional fishing/collection in accordance with cultural tradition and use	X	✓	✓
Non-extractive recreation (e.g. diving)	X	✓	✓
Large scale low intensity tourism	X	✓	✓
Shipping (except as may be unavoidable under international maritime law)	✓	✓	✓
Problem wildlife management (e.g. shark control programmes)			
Research: extractive	✓	✓	✓
Renewable energy generation	X	X	X
Restoration/enhancement for other reasons (beach replenishment, fish aggregation, artificial reefs)			

## Key:

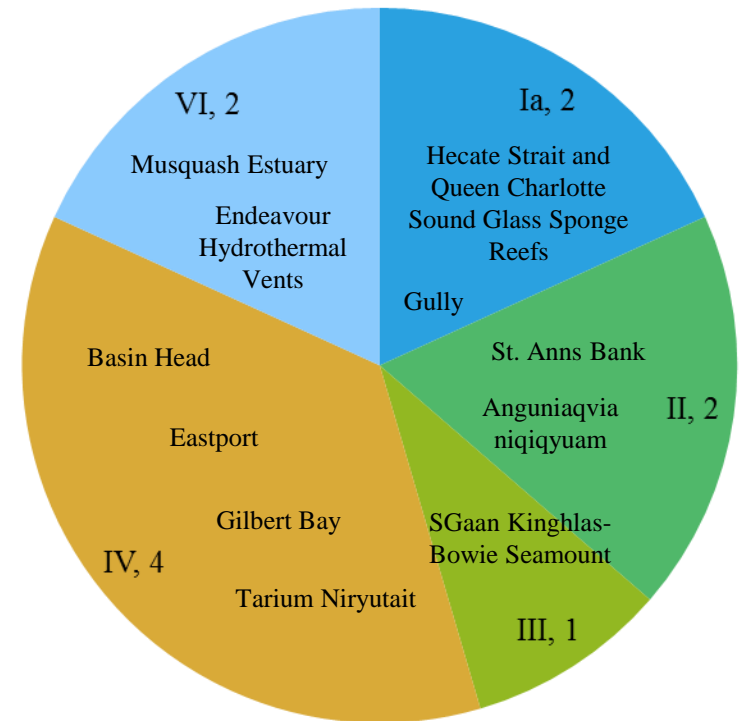
Allowed	✓
Not allowed	X
Allowed under special circumstances (e.g., gear/species limits; subject to Ministerial Approval)	✓
Denied by effective means (e.g., policy decisions that restrict activity)	X
Activity not applicable to this zone	



## Conclusions

- MPAs under Canada's *Oceans Act* are designed based on the ecological components of interest and associated conservation objectives
- The science-based risk approach for OA MPA design enables transparency, ensures conservation, and minimizes economic impacts
- Each MPA is unique, with characteristics and features that may not be captured when assigning an IUCN management category to the MPA

Preliminary Assessment of IUCN Management Categories for *Oceans Act* MPAs





## Questions?



## Appendix 1- IUCN Categories

	Definition	Primary Objective
<b>Ia</b>	Category Ia are strictly protected areas set aside to protect biodiversity and also possibly geological/geomorphological features, where human visitation, use and impacts are strictly controlled and limited to ensure protection of the conservation values. Such protected areas can serve as indispensable reference areas for scientific research and monitoring.	To conserve regionally, nationally or globally outstanding ecosystems, species (occurrences or aggregations) and/ or geodiversity features: these attributes will have been formed mostly or entirely by non-human forces and will be degraded or destroyed when subjected to all but very light human impact.
<b>Ib</b>	Category Ib protected areas are usually large unmodified or slightly modified areas, retaining their natural character and influence, without permanent or significant human habitation, which are protected and managed so as to preserve their natural condition.	To protect the long-term ecological integrity of natural areas that are undisturbed by significant human activity, free of modern infrastructure and where natural forces and processes predominate, so that current and future generations have the opportunity to experience such areas.
<b>II</b>	Category II protected areas are large natural or near natural areas set aside to protect large-scale ecological processes, along with the complement of species and ecosystems characteristic of the area, which also provide a foundation for environmentally and culturally compatible spiritual, scientific, educational, recreational and visitor opportunities.	To protect natural biodiversity along with its underlying ecological structure and supporting environmental processes, and to promote education and recreation



## Appendix 1- IUCN Categories

	Definition	Primary Objective
III	Category III protected areas are set aside to protect a specific natural monument, which can be a landform, sea mount, submarine caverns, geological feature such as a caves or even a living feature such as an ancient grove. They are generally quite small protected areas and often have high visitor value.	To protect specific outstanding natural features and their associated biodiversity and habitats
IV	Category IV protected areas aim to protect particular species or habitats and management reflects this priority. Many category IV protected areas will need regular, active interventions to address the requirements of particular species or to maintain habitats, but this is not a requirement of the category.	To maintain, conserve and restore species and habitats.
V	Category V protected areas are where the interaction of people and nature over time has produced an area of 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.	To protect and sustain important landscapes/ seascapes and the associated nature conservation and other values created by interactions with humans through traditional management practices.
VI	Category VI protected areas conserve ecosystems and habitats together with associated cultural values and traditional natural resource management systems. They are generally large, with most of the area in natural condition, where a proportion is under sustainable natural resource management and where low-level non industrial use of natural resources compatible with nature conservation is seen as one of the main aims of the area.	To protect natural ecosystems and use natural resources sustainably, when conservation and sustainable use can be mutually beneficial.



## Appendix 2 – Preliminary assessment of OA MPAs

<i>Oceans Act</i> MPA	IUCN Category by Conservation Objective	Lowest possible category based on activities allowed as per the <i>Oceans Act</i> Regulations	Zone	% of MPA	Lowest possible category based on activities allowed as per the <i>Oceans Act</i> Regulations
Anguniaqvia niqiqyuam	II	V	1	98.37%	V
			2	1.63%	V
Basin Head	IV	V	1	2.60%	V
			2	3.79%	V
			3	93.61%	V
Eastport	IV	V	N/A – no zones in Eastport		
Endeavour Hydrothermal Vents	VI	V	N/A – no zones in Endeavour Hydrothermal Vents		
Gilbert Bay	IV	V	Zones 1a and 1b	39.92%	V
			Zone 2	26.64%	V
			Zone 3	31.44%	V
Gully	Ia	V	Zone 1	20.12%	Ia*
			Zone 2	60.54%	IV
			Zone 3	19.34%	V





<i>Oceans Act</i> MPA	IUCN Category by Conservation Objective	Lowest possible category based on activities allowed as per the <i>Oceans Act</i> Regulations	Zone	% of MPA	Lowest possible category based on activities allowed as per the <i>Oceans Act</i> Regulations
Hecate Strait and Queen Charlotte Sound Glass Sponge Reefs	Ia	V	Core Protection Zone	62.34%	Ia*
			Vertical Adaptive Management Zone		V
			Adaptive Management Zone	37.66%	V
Musquash Estuary	VI	V	Zone 1	20.62%	V
			Zones 2a and 2b	66.58%	V
			Zone 3	12.80%	V
S <u>G</u> aan <u>K</u> inghla <u>s</u> -Bowie Seamount MPA	III	V	N/A – no zones in S <u>G</u> aan <u>K</u> inghla <u>s</u> -Bowie Seamount		
St. Anns Bank	II	V	Zone 1	75.83%	V
			Zone 2	16.49%	V
			Zone 3	2.59%	V
			Zone 4	5.09%	V
Tarium Niryutait	IV	V	Kittigaryuit	13.90%	V
			Niaqunnaq		V
			Okeevik Special Management Zone 1	59.55%	V
			Okeevik Special Management Zone 2	26.55%	V