# DARE TO BE DEEP

## EXECUTIVE SUMMARY

## SeaStates Report on North America's Marine Protected Areas (MPAs)





#### Report prepared by:

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## 1.0 EXECUTIVE SUMMARY

The key question we address in this report is "how well are Canada, Mexico and the USA doing individually and collectively in protecting ocean ecosystems in North America by establishing effective marine protected areas (MPAs)?"

Based on our analysis, our overall conclusion is that there remains a long way to go in reaching national and international targets to protect at least 10% of the ocean estate in North American countries. Overall, less than 1% of continental\* North America's ocean estate is protected and only 0.04% is in fully protected areas that scientists say offer the best hope to protect ocean ecosystems for the long term.

The ocean estate of continental North America (slightly over 15 million km<sup>2</sup>) is characterized by an incredible variety of ecosystems ranging from the ice covered regions of the high Arctic Ocean, to the rich temperate waters of the Atlantic and Pacific Oceans, to the tropical coral reefs of the Caribbean Sea. The diversity of marine life ranges from the smallest plankton to the largest whales, and includes seabirds, turtles, fishes and many more species. From the endangered Vaquita in the Gulf of California to the globally unique glass sponge reefs on Canada's Pacific coast, many species require urgent protection from a variety of human related threats.

While reaching the 10% marine protected area coverage target is an important next step, recent scientific evidence indicates that we need to go much further if we are to restore the health

\* Continental waters, those immediately adjacent to the North American continent, were used in this study as neither Canada or Mexico has offshore territories. of the ocean—at least 30% needs to be placed within fully protected areas where industrial uses, including commercial fishing are precluded. In light of the biodiversity crisis on Earth, some scientists have highlighted the need to establish interconnected networks of protected areas that leaves at least half of the earth for nature to thrive for generations to come, and in doing so ensuring that our needs are met too. Opposite: Sea urchin. Photo: Shutterstock

Whale shark, Yum Balam Flora and Fauna Protection Area, Quintana Roo, Mexico. Photo: Brian Skerry





A giant anemone (Condylactis gigantea) at the Flower Garden Banks, Gulf of Mexico, USA. Photo: NOAA

Opposite: Rays of sun filtering through a kelp forest. Photo: Joe Platko Marine protected areas are a tried and tested conservation strategy. Much like parks on land, MPAs serve as refuges for marine animals and ecosystems, by preventing destructive human activities. They also offer the opportunity to humans to experience nature at its healthiest.

Fully protected areas provide species and ecosystems with the space and resources that they need to recover from exploitation. In doing so, they also provide long-term economic benefits by supporting healthy, sustainable fisheries, ecotourism and recreation activities, and ecosystem services like carbon storage and shoreline protection. The ecosystem services that the ocean provides have an estimated worth of \$24 trillion globally and many cannot be replaced by human technology.

MPAs can only be effective if they have clear conservation objectives and are designed

using sound science and local knowledge. The most effective MPAs result from large size, full protection and good management, sufficient isolation to prohibit encroachment from surrounding human activities, and have been established for long enough to allow populations to recover. To effectively protect our oceans we need MPA networks that represent the full variety and diversity of ecosystems and species within our ocean and that support ecological connections as species interact with each other, move and migrate.

While we are encouraged by recent political pronouncements by each of the political leaders in North America regarding their intention to meet or exceed international and national MPA targets, all three countries will need to make a significant effort to get there.

#### **OUR KEY FINDINGS:**

We reviewed data on existing MPAs provided by the governments of Canada, Mexico, and the USA. Each site was evaluated to ensure that it met the following international criteria: legally designated; permanent; have an administrative structure; and have a management plan. Sites that met all four criteria were considered "implemented". Any sites that lacked an administrative structure or management plan were considered only "partially implemented" and therefore were excluded from the analysis.

**NORTH AMERICA** – According to our analysis, only 0.89% of the North American continental ocean estate is currently in "implemented" MPAs and only 0.04% is fully protected. Of the 23 marine ecoregions\* across continental North America, 18 contain marine protected areas but only 9 have more than one percent contained within an MPA.

**CANADA** is furthest behind in protecting its ocean estate with only 0.11% protected. Of this 0.03% is in the Arctic, 0.00% in the Pacific\*\* and 0.08% in the Atlantic. 14 proposed MPAs, if completed, would contribute another 2–3% to Canada's MPA targets. Partially implemented MPAs could add an additional 0.78% to Canada's total, but only if they had management plans and legislated regulation of marine activities like fishing. At the moment, just 0.01% is in fully protected MPAs, the rest is still open to commercial fishing, shipping, and industrial activities.

**MEXICO** has 43 MPAs covering a total of 50,873 km<sup>2</sup>, protecting only 1.62% of its ocean territory, with 0.11% fully protected. Out of this total, 0.66 % is located in the Pacific Ocean, 0.46% in the Gulf of California, 0.33% in the Gulf of Mexico, and 0.17% in the Caribbean Sea. Out of Mexico's 43 MPAs, 34 have been implemented and 9 are considered to be partially implemented. If completed, partially implemented MPAs would add only an additional 0.08% coverage. There are currently five proposed MPAs under consideration that, if completed, would contribute another 19.8% to Mexico's marine conservation efforts.

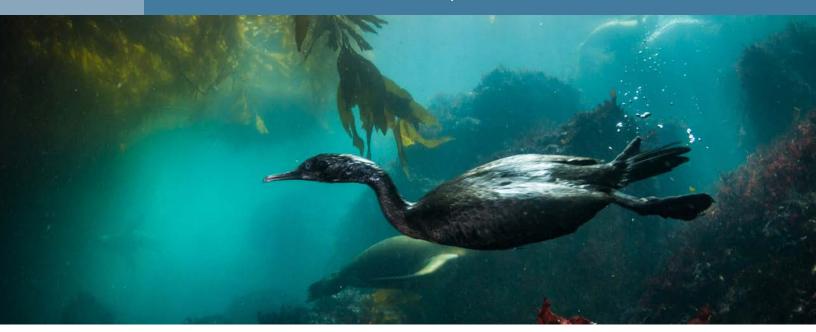
The **USA** has protected large areas of its vast overseas territories in the central Pacific ocean, but only 1.29% of its continental, ocean estate (this number excludes Hawai'i, Pacific Islands, and other offshore territories). Of this 0.00% is in the Arctic, 0.73% in the Pacific and 0.57% in the Atlantic/ Gulf. A rigorous, quantitative account of fully protected areas in the waters of coastal states indicates the best–protected ones (excluding Hawai'i) are California, Oregon, and Florida. The majority of states still lack fully protected areas in their coastal waters. Only 0.03% of total US continental ocean estate is in fully protected areas; the rest is still open to commercial fishing, or other extractive and industrial activities.

\* The Commission on Environmental Cooperation (CEC) defines ecoregions as"areas of general similarity" in terms of physical, geographic, oceanographic, and biological characteristics.

\*\* Gwaii Haanas National Marine Conservation Area Reserve and Bowie Seamount MPA both lack full management plans and so are classed as "partially implemented" and Endeavour Hydrothermal Vents is too small to register in terms of percentage of the total area of Canada's Pacific ocean estate.



#### OUR RECOMMENDATIONS TO CANADA, MEXICO AND THE USA



#### Diving cormorant. Photo: Joe Platko

All three North American countries need to significantly increase the amount of their ocean estate that is protected. They also need to ensure that their MPAs have strong legislation and management plans in place that will effectively conserve marine biodiversity. Simply naming a place as a MPA is not enough.

Each country should move forward urgently in developing national representative networks of MPAs with an interim target of fully protecting at least 10% by 2020, and 30% or more by 2030 in order to help in the recovery of depleted species and ecosystems, and to protect the diversity of life in the ocean. MPA networks in North America need to include a substantial portion in fully protected areas that cover at least 30% of each marine bioregion.\*

Whale tail, British Columbia, Canada. Photo: A.S. Wright



**Designate all currently proposed sites and upgrade all partially implemented MPAs.** This would bring Canada, Mexico, and the USA much closer to their MPA goals\*\* and international commitments. In some cases, a legislative framework is already in place and the sites simply need a full management plan for the marine component.

**Strict interim protection measures** should be put in place for all proposed MPAs so that all potentially harmful activities within the boundary are stopped until it is determined that they do not impact the ecological and cultural values of the area.

**Plan networks of MPAs.** The existing site-bysite approach to MPA identification, design, and designation is ineffective. Science and real-world experiences demonstrate that **MPA network planning is a more effective and efficient approach to MPA establishment**, with greater conservation benefits.

We recommend securing **full**, **permanent protection for at least 30% of each marine ecoregion**. Canada, Mexico, and the United States need more areas that are completely free from fishing and other extractive uses, in order to achieve the full benefits of a national network of MPAs. Harmful fishing activities should be prohibited throughout the entire MPA.

Most of North America's MPAs are small. Welldesigned, large MPAs or networks of MPAs could significantly help safeguard marine life and meet international marine protection targets in domestic waters for all three countries.

There is an urgent need for **sufficient and consistent funding** for MPA establishment and management across North America. Adequate funding ensures sufficient human and logistical resources are available to effectively protect and manage MPAs. While the federal governments of Canada, Mexico, and the USA should be the principal source of MPA funding for basic operational needs, other financial arrangements can support MPA establishment and management, such as the public–private partnerships recently used in California and British Columbia.

Nations must take immediate steps to overcome jurisdictional complications and simplify MPA legislation to streamline the process. Where MPA legislation requires corroborating fisheries legislation to prohibit fishing activities, the MPA legislation should be revised to allow for the management of all marine activities and to improve coordination across federal departments. Better coordination between the federal governments of all three countries and their respective provincial/state and municipal governments for MPA management is also needed.

Governments in North America should **create** opportunities for stakeholder collaboration and consensus building to help reduce opposition to MPAs. One mechanism is marine spatial planning such as the recent effort in Canada's Great Bear Sea. Marine spatial planning brings stakeholders together to identify shared interests and conflicting uses, and develop plans to ensure sustainable use of marine resources, including MPA networks, while maintaining conservation as a primary goal. Canada and the USA have an immediate and urgent opportunity to collaborate on a network of MPAs in the Arctic, including transboundary MPAs that would provide protection at the scale required by species and ecosystems. Such a step would demonstrate international leadership and is consistent with recent statements by Prime Minister Trudeau and President Obama. A binational (or multinational) protected area in the Arctic offers a critical tool in maintaining political stability and reducing conflict while protecting rapidly changing and vulnerable ecosystems and species.



All three countries should explore opportunities for **transboundary MPAs** in the following marine regions:

- Between Mexico and the USA in the northern Gulf of Mexico and the Southern Californian Pacific ecoregions;
- Between Canada and the USA in the Arctic between Alaska and Yukon; on the east coast between the Gulf of Maine and the Bay of Fundy; and on the West Coast between Alaska and the north coast of British Columbia in Dixon Entrance and at the southern tip of British Columbia and Washington around the Strait of Juan de Fuca.

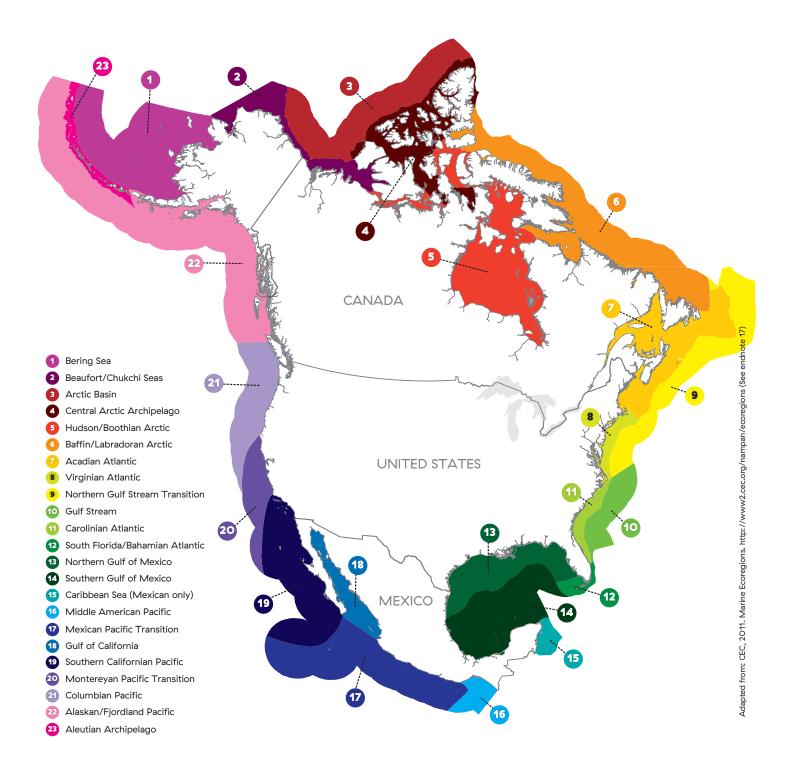
### Additional specific recommendations for each country are included in the report.

\* Like ecoregions, bioregions are a spatial unit defined by their biological, physical and oceanographic similarities. Bioregional analyses have been conducted by the governments of Canada, Mexico, and the USA for their respective ocean estates.

\*\* The USA is not a signatory to the CBD or other agreements to establish MPAs. The Office of National Marine Sanctuaries does not have a stated national target for MPA coverage.

School of fish in the Cozumel Reefs National Park, Quintana Roo, Mexico. Photo: Claire Fackler, NOAA National Marine Sanctuaries

#### FIG.1: NORTH AMERICAN OCEAN ESTATE ECOREGION MPA BREAKDOWN



**DARE TO BE DEEP:** SeaStates Report on North America's Marine Protected Areas (MPAs)

1. Bering Sea	2. Beaufort/Chukchi Seas	3. Arctic Basin			
<b>0.01 &lt;.01</b> Region % MPA Region FP %	<b>0.35 &lt;.01</b> Region % MPA Region FP %	<b>&lt;.01 &lt;.01</b> Region % MPA Region FP %			
4. Central Arctic Archipelago	5. Hudson/Boothian Arctic	6. Baffin/Labradoran Arctic			
<b>&lt;.01 &lt;.01</b> Region % MPA Region FP %	<b>&lt;.01 &lt;.01</b> Region % MPA Region FP %	O O Region % MPA Region FP %			
7. Acadian Atlantic	8. Virginian Atlantic	9. N. Gulf Stream Transition			
O.79 O Region % MPA Region FP %	2.32 <.01 Region % MPA Region FP %	0.34 0.06 Region % MPA Region FP %			
10. Gulf Stream	11. Carolinian Atlantic	12. South Florida/Bahamian Atlantic			
<b>&lt;.01 &lt;.01</b> Region % MPA Region FP %	<b>0.87 &lt;.01</b> Region % MPA Region FP %	<b>15.54 &lt;.01</b> Region % MPA Region FP %			
13. Northern Gulf of Mexico	14. Southern Gulf of Mexico	15. Caribbean Sea (Mexican portion only)			
13. Northern Gulf of Mexico 1.85 <.01 Region % MPA Region FP %	14. Southern Gulf of Mexico 1.15 O Region % MPA Region FP %				
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#### HOW MPAS IN CANADA MEASURED UP

Designation/ Site	Legislation	Management Program/Site Regulations	Administrative Structure	Implementation	
Saguenay – St. Lawrence	Federal	Y	Y	Implemented	
Tarium Niryutait	Federal	Y	Y	Implemented	
Endeavour Hydrothermal Vents	Federal	Y	Y	Implemented	
Musquash Estuary	Federal	Y	Y	Implemented	
Gully	Federal	Y	Y	Implemented	
Basin Head	Federal	Y	Y	Implemented	
Gilbert Bay	Federal	Y	Y	Implemented	
Eastport	Federal	Y	Y	Implemented	
Gwaii Haanas National Marine Conservation Area Reserve and Haida Heritage Site	Federal	N*	Y	Partial	
Bowie Seamount	Federal	N Y		Partial	
National Parks of Canada (12)	Federal	Ν	Y	Partial	
National Wildlife Areas (14)	Federal	N	Y	Partial	
Migratory Bird Sanctuaries (52)	Federal	Ν	N Y		
Provincial Sites BC, QC, NL (2O2) **	Provincial	N	Y	Partial	
Other Provincial Sites (69)***	Provincial	Ν	Y	Partial	

\* Interim management plan, and only 3 % of the site is managed differently from external waters

\*\* Includes Provincial Parks, Conservancies, Ecological Reserves, Wildlife Management Areas, and Aquatic and Biodiversity Reserves

\*\*\* Includes Wildlife Management Areas, Natural Areas, and Quebec's National Parks

Note: All sites listed are considered to be under permanent protection

#### HOW MPAS IN MEXICO MEASURED UP

Site	Legislation	Management Prog. /Site Regulations Administrative Structure		Implementation	
Alto Golfo de California y Delta del Río Colorado	Federal	Y	Y	Implemented	
Archipíelago de Revillagigedo	Federal	Y	Y	Implemented	
Arrecife Alacranes	Federal	Y	Y	Implemented	
Arrecife de Puerto Morelos	Federal	Y	Y	Implemented	
Arrecifes de Cozumel	Federal	Y	Y	Implemented	
Arrecifes de Sian Ka'an	Federal	Y	Y	Implemented	
Arrecifes de Xcalak	Federal	Y	Y	Implemented	
Bahía de Loreto	Federal	Y	Y	Implemented	
Bahía de los Angeles, Canales de Ballenas y de Salsipuedes	Federal	Y	Y	Implemented	
Balandra	Federal	Y	Y	Implemented	
Banco Chinchorro	Federal	Y	Y	Implemented	
Cabo Pulmo	Federal	Y	Y	Implemented	
Cabo San Lucas	Federal	*	Y	Implemented	
Costa Occidental de Isla Mujeres, Punta Cancun y Punta Nizuc	Federal	Y	Y	Implemented	
El Vizcaíno	Federal	Y	Y	Implemented	
Huatulco	Federal	Y	Y	Implemented	
Isla Contoy	Federal	Y	Y	Implemented	
Isla Guadalupe	Federal	Y	Y	Implemented	
Isla San Pedro Mártir	Federal	Y	Y	Implemented	
Islas Marías	Federal	Y	Y	Implemented	
Islas Marietas	Federal	Y	Y	Implemented	
La Encrucijada	Federal	Y	Y	Implemented	
Laguna de Terminos	Federal	Y	Y	Implemented	
Los Petenes	Federal	Y	Y	Implemented	
Porción norte y la franja costera oriental, terrestres y marinas de la Isla de Cozumel	Federal	Y	Y	Implemented	
Ría Celestún	Federal	Y	Y	Implemented	
Sian Ka'an	Federal Y Y Im		Implemented		

Site	Legislation	Management Prog. /Site Regulations		Implementation
Sistema Arrecifal Lobos Tuxpan	Federal	*	Y	Implemented
Sistema Arrecifal Veracruzano	Federal	Y	Y	Implemented
Tiburón Ballena	Federal	Y	Y	Implemented
Ventilas Hidrotermales de la Cuenca de Guaymas y de la Dorsal del Pacífico Oriental	Federal	Y	Y	Implemented
Yum Balam	Federal	*	Y	Implemented
Zona Marina del Archipiéago de Espíritu Santo	Federal	Y	Y	Implemented
Zona Marina del Archipiélago de San Lorenzo	Federal	Y	Y	Implemented
Islas La Pajarera, Cocinas, Mamut, Colorada, San Pedro, San Agustín, San Andrés y Negrita y los Islotes Los Anegados, Novillas, Mosca y Submarino.	Federal	Y	Y	Partial
Santuario de la Tortuga Marina X'cacel – X'cacelito	State+	Y	Y	Partial
Santuario del Manati Bahia de Chetumal	State+	Y	Y	Partial
El Cabildo Amatal	State+	Y	Ν	Partial
El Gancho Murillo	State+	Y	Ν	Partial
Reserva de Dzilam	State+	Y	N	Partial
Reserva El Palmar	State+	Y	Ν	Partial
La Encrucijada	State+	N	N	Partial
Los Petenes	State+	Ν	Ν	Partial

\* Interim management plan

+ Established state MPAs, but currently lacking jurisdiction over marine waters.

#### MPA STATISTICS FOR NORTH AMERICA

Country	Total ocean estate (km²)	Total Area in MPAs counted by countries	All M cour b coun	nted Y	Implemented		Partially Implemented		Fully Protected				
			#	%	#	km²	%	#	km²	%	#	km²	%
Canada	5,746,694	49,848	315	0.87	9	6,101	0.11	306	43,748	0.76	1-full, 2-part	477	0.01
Mexico	3,274,495	50,873	43	1.62	34	48,475	1.54	9	2,398	0.08	13-part	3,439	0.11
USA*	6,165,586	79,825	736	1.29	736	79 <i>,</i> 825	1.29	0	0	0	91	1,744	0.03
North America	15,186,775	180,546	1094	1.19	779	134,401	O.88	315	46,146	0.30	92– full, 15–part	6,221	0.04

 $^{\ast}$  Including Hawai'i and remote territories the total coverage of MPAs in the USA is 17.74%



Sea lion surfacing, British Columbia, Canada. Photo: Jackie Hildering





For further information, contact:



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marine-conservation.org

Front and back cover photo: Joe Platko