Sea Change Canada

MARINE PROTECTED AREAS (MPAs) IN CANADA

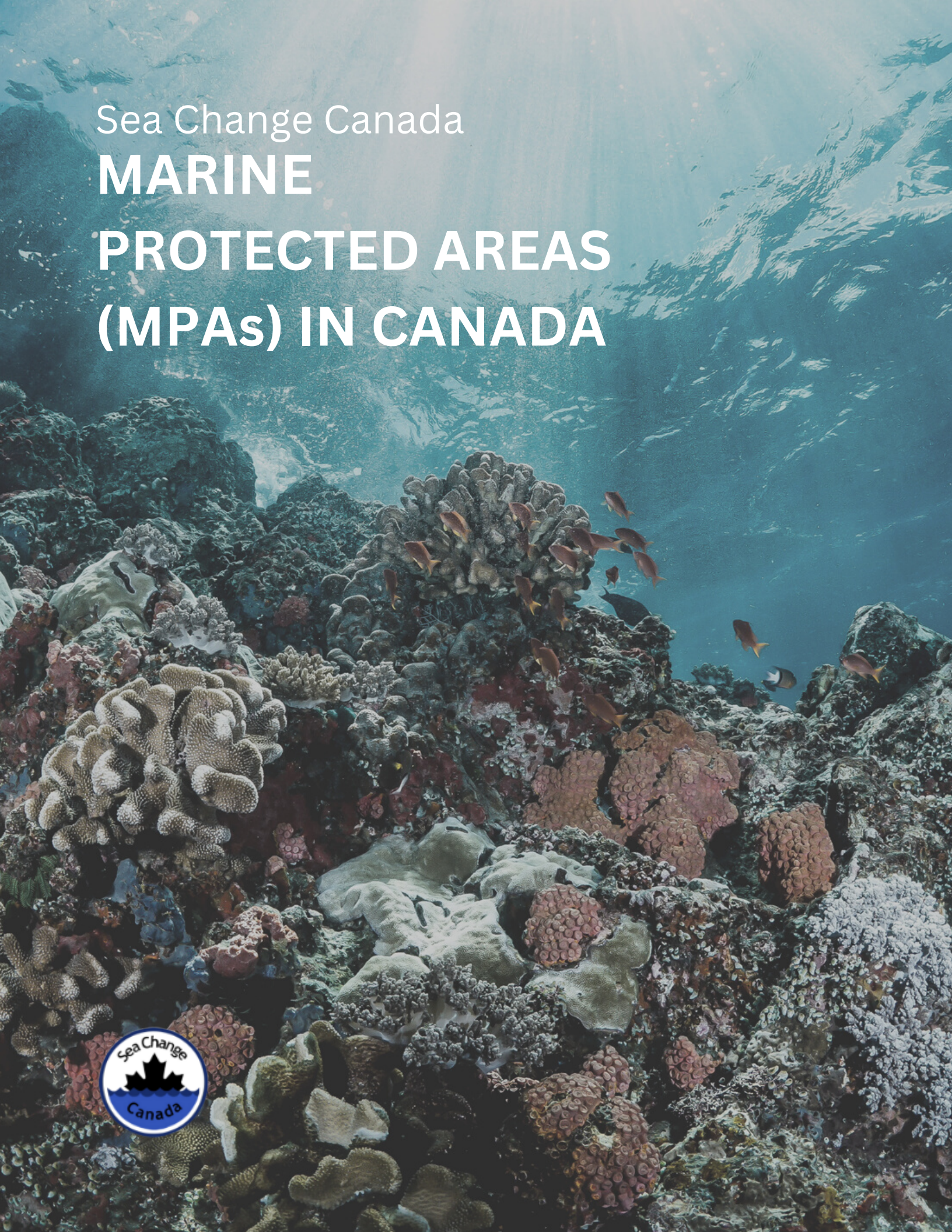
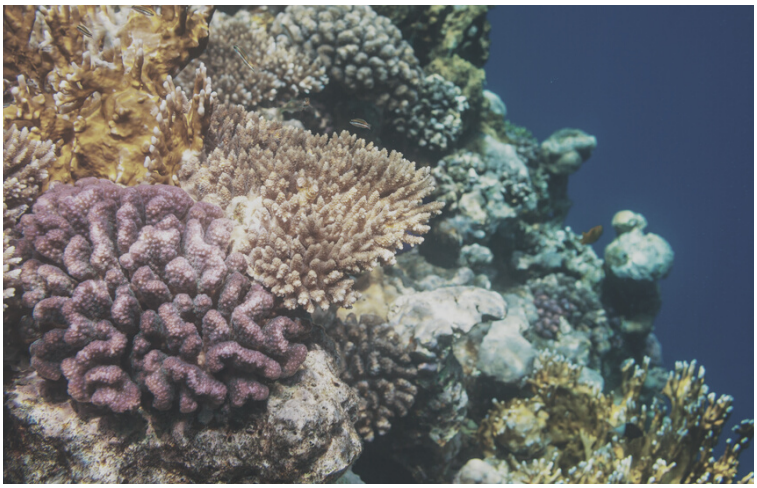


Table of contents

Last Updated: 10/27/2022

"Marine Protected Areas (MPAs) in Canada may not be as protected as we think."

Brackley (2022)



INTRODUCTION

In 2020, the Canadian federal government committed to protecting thirty percent of its' oceans by 2030 (Brackley, 2022). The preferred conservation method for achieving this goal has been to establish Marine Protected Areas (MPAs). MPAs are typically defined by the International Union for the Conservation of Nature (IUCN) as, “a clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values" (DFO, 2017). If implemented effectively, the establishment of MPAs can be a useful conservation technique.

In Canada, there are multiple legislative pathways to developing MPAs, including the Oceans Act, National Marine Conservation Areas Act, Canada Wildlife Act, and the Fisheries Act (Brackley, 2022). Currently, areas protected under these legislations account for 14% of Canada’s Oceans (DFO, 2020). For MPAs to be effective, they must have sufficient regulatory backing, effective management, compliance, funding, and more (Dehens & Fanning, 2018).

Managing MPAs is complicated since there are multiple partners and stakeholder organizations involved in the same ocean space (Brackley, 2022). Many MPAs currently established in Canada are not effective at reducing the impacts of climate change and other external drivers (Brackley, 2022). The current state of Canada's MPAs are concerning - especially since the focus of the Canadian government has been to expand and create new MPAs without improving the current state of ineffective MPAs in Canada.

The following sections of this report will further explain the importance of establishing effective MPAs with proper management and governance - and how the implementation of MPAs has both ecological and social impacts in Canada. The report will end with recommendations for future steps, as well as concluding ideas on MPAs in Canada.

BACKGROUND

MPAs can be excellent tools to achieve the goal of 30-by-30. However, MPAs throughout Canada have had inconsistent results due to several factors such as shortfalls in understanding the level of power stakeholders have in managing MPAs (Dehens & Fanning, 2018). As already discussed, an MPA can be created through several channels of legislation in Canada. The federal government gave different regulatory bodies the power to implement MPAs to increase the percentage of protected oceans, but some of these MPAs are more effective than others (Barron & Groulx, 2021). Currently, fourteen MPAs are implemented under the Oceans Act, where the goal of conservation extends to the entire ecosystem and involves a five-stage implementation process that can span 5-10 years (DFO, 2020).

There are different types of MPAs with differing regulations and levels of protection in Canada (Figure 1). Some MPAs in Canada are fully marine while others are marine components of terrestrial protected areas such as coastlines, estuaries, inter-tidal areas, and more (DFO, 2017). With so many different types of MPAs covering various habitats, it is hard to manage and protect them all effectively.

Figure 1. Different protection levels of MPAs in Canada. The level of protection clarifies how well an MPA is protected from seven main types of extractive or destructive human activities. The four levels of protection are based on the intensity, scale, duration, frequency, and overall impact of the seven types of human activities. (The MPA Guide, 2021)

In their 2021 Oceans Reports, the Canadian Parks and Wilderness Society expressed their concern that this race to achieve the thirty percent by 2030 goal is prioritizing quantity over quality and creating ineffective MPAs (Barron & Groulx, 2021). The findings of this report were concerning: seven MPAs were strongly protected, eight were weakly protected, and two were incompatible with biodiversity conservation (Brackley, 2022).

MPAs can fall into one of five categories, according to the MPA Guide, the protection level is determined based on several questions (Figure 1). Although there is a clear definition for each designation, the actual levels of protection vary throughout the areas of the MPA.

Historically, differing types of MPAs have been controversial because some still allow for oil extraction, harmful fisheries practices like bottom trawling, and other destructive human activities (Brackley, 2022). Since MPAs which allow for harmful human activities to continue in their borders contribute to Canada's ocean protection goals, this brings to question the prioritization of quantity over quality regarding Canadian MPAs.

ECOLOGICAL IMPACTS

MPAs are used worldwide to conserve marine species and habitats (Dehens & Fanning, 2018). MPAs can contribute to healthy marine environments and provide nature-based solutions to address the impacts of climate change (DFO, 2020). However, as previously discussed, different MPAs have different levels of protection from human activities - directly impacting the MPAs ability to contribute to healthy marine ecosystems. A truly protected area can foster resistance and recovery against the impacts of climate change by aiding in the recovery of food webs and habitats, as well as increasing the diversity of oceanic communities and populations within the MPA (Bates et al. 2019). The need for increased protection of our oceans and marine species has become a priority in the face of growing marine biodiversity loss (Dehens & Fanning, 2018).

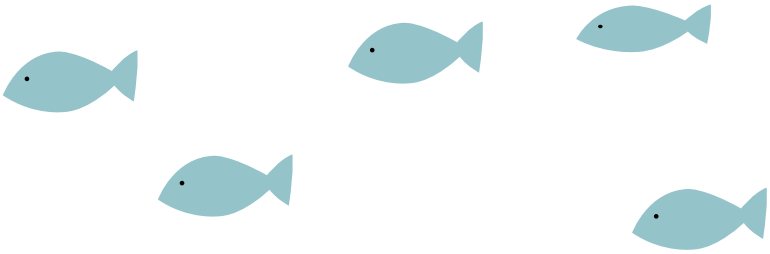
It is important that Canada and other global powers take progressive action to help aid the recovery of populations and protect threatened species by establishing effective and truly protected MPAs. For instance, the Laurentian Channel MPA on the East Coast of Canada protects one of only two known mating grounds for porbeagle sharks (*Lamna nasus*) and is also a vital feeding ground for other oceanic species. It is important to enforce limiting anthropogenic activity in feeding and mating ground areas. By decreasing the stressors wildlife are exposed to within MPAs, they may allow for better population recovery (Dehens & Fanning, 2018). Therefore, we must limit the occurrence of harmful human activities within MPAs in Canada as much as possible.

However, some human activities which occur in MPAs may be extremely important for local communities. In coastal areas, the success of MPAs and the achievement of sustainable fishery production, requires a combination of effective management and governance - maintaining fishery livelihoods and allowing for effective participation of coastal communities and fishers in considering, designing, and implementing MPAs in Canada (Charles et al. 2016).

SOCIAL IMPACTS

Although it is important to protect oceanic species and environments, we need to remember the local communities who depend on these aquatic ecosystems for their own survival. Social-ecological perspectives on establishing MPAs are vital - especially since ecological, socio-cultural, and sustainable use considerations are all interconnected in oceans management (DFO, 2017). MPAs need the support of the local people. Without direct collaboration and involvement of local communities in the implementation of MPAs, they will not be sustainable for the long-term.

The Canadian Arctic is particularly in need of effective MPAs, as species density in the Arctic is very low in comparison to other coasts (Vincent, 2019). Therefore, the loss of just a few Arctic species can dramatically impact the entire ecosystem (Parks and Conservation Areas (PCA), 2021). The Northern Coast of Canada is experiencing mass biodiversity loss from the combined effects of climate change and other human activities (Carroll, Nielsen, & Stralberg, 2020). The implementation of MPAs which limit anthropogenic activities is extremely important, prohibiting new or additional human activities for up to five years (Vincent, 2019). However, local communities must be consulted on whether or not they can survive without being able to fish in the area for up to five years. If locals support this type of MPA, it could last for the long-term and allow for Arctic species to adapt and encourage them to return to their normal migratory patterns, contributing to increased food security for Indigenous populations (Carroll, Nielsen, & Stralberg, 2020).



CONCLUSION

MPAs can be an effective tool in climate change mitigation and marine conservation if implemented properly. Public advocacy and direct local community involvement is needed to ensure MPAs are implemented well and managed properly for the long-term. There are local, national, and international non-profit organizations doing public outreach to educate and advocate for more effective MPAs in Canada. The focus must be on creating better MPA governance - allowing for fluid knowledge sharing, direct collaborations with all stakeholders, as well as transparency on the progress of MPAs.

Knowledge sharing should be fluid between all stakeholders on the progress and state of MPAs including: local communities (both Indigenous and non-Indigenous), fishers, local governments, federal governments, policy-makers, non-profits, and researchers. We all want MPAs to succeed in protecting our oceans - and we can learn a lot from one another.

Many Canadians have a profound love of marine creatures and ecosystems yet are unaware of MPAs or of how ineffective many currently are. Transparency on the state of MPAs and their effectiveness must be established between all stakeholders. It is vital that all stakeholders, especially local communities, have accurate information to educate each other on the status of MPAs in Canada.

Public participation impacts policy, so it is vital that we as individuals and organizations are taking action and voicing our concerns about ineffective MPAs in Canada that do not take into consideration local communities and their needs. MPAs in Canada must embrace social-ecological perspectives on oceanic issues - finding a balance between protecting nature and human livelihoods.

REFERENCES

Baker, R. (2021). Oceans will determine if we sink or swim when it comes to achieving our climate goals. Retrieved from, Canada's National Observer at, https://www.nationalobserver.com/2021/11/08/news/oceans-will-determine-if-we-sink-or-swim-when-it-comes-achieving-our-climate-goals

Bates, A. E., Cooke, R. S. C., Duncan, M. I., et al. (2019). Climate resilience in marine protected areas and the 'Protection Paradox'. Biological Conservation, 236:305-314.

Barron, A., & Groulx, N. (2021). MPA Monitor: Assessing Canada's Marine Protected Areas. CPAWS. https://cpaws.org/wp-content/uploads/2018/02/CPAWS-MPA-Monitor-2021-EN-for-publication.pdf

Brackley, C. (2022). Marine protected areas in Canada may not be as protected as we think. Canadian Geographic. Retrieved from: https://canadiangeographic.ca/articles/marine-protected-areas-in-canada-may-not-be-as-protected-as-we-think/

Carroll, C., Nielsen, S.E., & Stralberg, D. (2020). Toward a climate-informed North American protected areas network: Incorporating climate-change refugia and corridors in conservation planning. Retrieved from Wiley Online Library at, https://conbio.onlinelibrary.wiley.com/ doi/10.1111/conl.12712

Charles, A., Westlund, L., Bartley, D. M., et al. (2016). Fishing livelihoods as key to marine protected areas: insights from the World Parks Congress. Aquatic Conservation: Marine and Freshwater Ecosystems, 26(2):165-184.

Dehens, L.A., & Fanning, L.M. (2018). What counts in making marine protected areas (MPAs) Count? The role of legitimacy in MPA success in Canada. Retrieved from ScienceDirect at, https://www.sciencedirect.com/ science/article/pii/S1470160X17308075

Department of Fisheries and Oceans Canada. (2020). Marine Protected Areas across Canada. Retrieved from: https://www.dfo-mpo.gc.ca/oceans/mpa-zpm/index-eng.html

Department of Fisheries and Oceans Canada. (2017). Spotlight on Marine Protected Areas in Canada. Retrieved from: https://www.dfo-mpo.gc.ca/oceans/publications/mpaspotlight-pleinsfeuxzpm/index-eng.html

Parks and Conservation Areas. (2021). Qikiqtani Inuit Association. https://www.qia.ca/what-we-do/parks-and-conservation-areas/

Report on the designation of the Tuvaijuittuq Marine Protected Area. (2021). https://www.dfo-mpo.gc.ca/oceans/publications/tuvaijuittuq/designation/index-eng.html

The MPA Guide. (2021). The Protected Planet. https://mpa-guide.protectedplanet.net/

Vincent, W.F. (2019). Arctic Climate Change: Local Impacts, Global Consequences, and Policy Implications. Retrieved from SpringerLink at, https://link.springer.com/chapter/10.1007/978-3-030-20557-7_31