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BACKGROUND

Canada is a maritime nation, with the world's longest coastline and approximately 5.7 million square kilometres of marine ecosystems. However, many of these ecosystems are in danger due to human activities such as fishing and oil and gas drilling.

In 2015, Canada adopted national biodiversity targets as part of the 2020 Aichi Targets. Target one of the national targets requires Canada to ensure that 10% of Canada's marine area are protected through conservation measures. Since 2015, Canada had achieved 7.9% coverage; however there are questions surrounding baseline definitions of MPAs that make MPA functionality questionable.

MPAs are created through either the Oceans Act, the Fisheries Act, or the Canada National Parks Act. Additionally, various jurisdictions oversee the implementation and management of MPAs across Canada (Figure 1). Depending on the legislation and jurisdiction, there may be varying levels of protection against fishing practices in MPAs. These fishing practices can be destructive to both the fish stocks and the habitats.

THE PROBLEM

1. The definition of protected area under IUCN is vague and can be left up for interpretation.

"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." - IUCN

2. Fishing practices still legally occur in many MPAs

There is no baseline definition of a protected area in terms of fishing rights, and in many MPAs, commercial fishing still occurs regularly, defeating the purpose of a MPA. Restrictions on research in MPAs are often more strict than fishing restrictions.

RECOMMENDATIONS

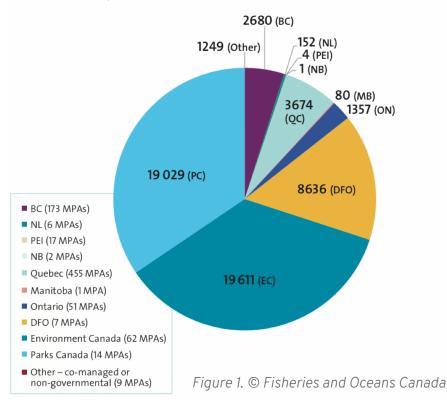
1. Create a better definition of protected area.

2. Make all current MPAs no-take and ensure all new MPAs are no-take.

3. Evaluate the effects of MPAs on coastal First Nations communities.

How Much Marine Area (in km²) is Protected by Each Jurisdiction?

*The governments of Nova Scotia, Northwest Territories, Nunavut, and Yukon do not currently have established marine protected areas



CASE STUDIES

Primeiras and Segundas, Mozambique

Established two no take zones and after 5 years saw biodiversity increases of 3 to 4 fold. Communities outside the MPA also saw bigger and more abundant fish populations

Medes Islands MPA, Spain

Series of small no-take MPAs, and local fishers and divers noticed spillover effects from these MPAs with increased fish stocks. These stakeholders contribute significantly to the local economy RECOMMENDATIONS

1. Create a better definition of protected area

The current definition of a protected area is vague. Updating the definition of a protected area to define baseline criteria that need to be met by MPAs would help maximize the effects of MPAs. Additionally, implement this definition across all legislation responsible for MPAs.

2. Establish no-take zones in current MPAs and ensure all future MPAs are no-take

Some form of fishing is still legal in a majority of Canada's MPA's. Many studies have shown that implementing no-take zones in MPAs increases biodiversity and fish stocks, as well as having spill-over effects to surrounding communities.

3. Evaluate the effects of MPAs on coastal First Nations communities

Creating legislation that allows for implementation of Indigenous Protected Areas, ensuring that traditional knowledge is used and incorporated into the planning, management, and decision-making in that protected area.

REFERENCES

Biodiversity Canada. 2017. 2020 Biodiversity Goals and Targets for Canada. Lake, H. 2018. Ban oil, gas, bottom trawling in marine protected areas, panel urges. iPolitics. Fisheries and Oceans Canada. 2010. Spotlight on Marine Protected Areas in Canada. World Wildlife Fund. 2019. Canada's marine refuges need an upgrade, says new SeaBlue Canada report World Wildlife Fund. n.d. Marine Protected Areas.

"There is strong scientific evidence that full protection works much, much better than partial protection in achieving conservation goals." - Anna Metaxas, Dalhousie University

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