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Panel Secretariat
National Advisory Panel on Marine Protected Area Standards

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Re: Minimum protection standards in Canada's marine protected areas

The Ecology Action Centre welcomes this expert review to determine best practices for marine protected areas (MPAs) in Canada, and we thank you for the invitation to participate in the process. The Ecology Action Centre is Atlantic Canada's oldest and largest environmental charity. We work locally, nationally, and internationally towards conserving and protecting the marine ecosystem and maintaining sustainable fisheries and vibrant coastal communities. We have over 6,000 members across Canada whose voices we represent as we engage in public policy development. We view this submission as an opportunity to recommend best practices in ecosystem-based marine management in the long-term interest of marine species and coastal communities in the Maritimes and beyond. We are especially encouraged to see that the National Standards Advisory Panel is interested in consulting on the use of International Union for the Conservation of Nature (IUCN) Guidelines. Like many organizations within the ocean conservation community, we model much of our MPA-related work around the standards presented by IUCN.

Recently, Canada has made impressive strides in improving protection in the marine environment, advancing from less than one percent protection only a few years back, to more than seven percent protection, by some measures, today. With the longest coastline in the world, and a wondrous suite of biodiversity[1] accompanying unique habitats found in Canadian waters, we have an opportunity to provide conservation leadership on a global stage. It is important to develop strong, smart standards for protection in the sea, to ensure a clear path toward sustainable ocean use and healthy marine ecosystems.

As the Canadian Government moves forward to meet our international obligations of 10% marine protection by 2020, it is critical to recognize that not all protective designations in Canada have been created equal. We must ensure national standards mandated to meet conservation goals are main priority when designing our MPAs. Please find the Ecology Action Centre's recommendations for the implementation of national standards for marine protected areas in Canada below:

[1]Archambault, Philippe, Paul V. R. Snelgrove, Jonathan A. D. Fisher, Jean-Marc Gagnon, David J. Garbary, Michel Harvey, Ellen L. Kenchington, et al. "From Sea to Sea: Canada's Three Oceans of Biodiversity." Edited by Tamara Natasha Romanuk. *PLoS ONE* 5, no. 8 (August 31, 2010): e12182. https://doi.org/10.1371/journal.pone.0012182.

1. Practical recommendations for creating national standards for marine protected areas in Canada

1.1 National MPA standards protective scope: Keep ecologically harmful, unsustainable industrial activities out of *Oceans Act* MPAs

For the effective protection of Canadian marine ecosystems, we are calling on the Panel to recommend that the following activities be prohibited within *Oceans Act* MPAs:

- **Oil and gas extraction, seabed mining, seismic exploration, and industrial energy developments**

  The exploration and extraction of fossil fuels and mineral resources in the marine environment pose a myriad of threats to marine species via habitat loss, discharge of toxic substances, accidental spill risk, excess noise, and cumulative impacts across time and space[2]. No extractive energy activity should be allowed in MPAs, including exploration, seismic testing, test drilling, or licensing for future use. Offshore wind or tidal power projects with the potential to harm sensitive benthic ecosystems should also be excluded.

- **Open net-pen finfish aquaculture**

  Research efforts in Nova Scotia and elsewhere have alluded to the potential for harm to marine environments staging open net-pen finfish aquaculture. Impacts to date include deleterious effects on sensitive native fish populations, benthic invertebrates, and lobster catch rates[3] [4]. We recommend that all open-pen finfish farming be excluded from Canadian MPAs.

- **All forms of bottom-trawl fishing**

  We suggest that the Panel recommend the exclusion of all bottom trawl and dredge fisheries from Canadian MPAs. Theses measures would help to significantly reduce bycatch, preserve benthic habitat, and allow the proliferation of vibrant, biodiverse communities in protected marine spaces[5].

- **Dumping or spillage of waste, bilge, or toxic substances**

  Reroute large vessels carrying toxic substances away from MPAs to minimize regular discharge and reduce the likelihood of accidental spill scenarios capable of damaging the marine environment[6] [7].

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[2] Carroll, A.G., R. Przeslawski, A. Duncan, M. Gunning, and B. Bruce. "A Critical Review of the Potential Impacts of Marine Seismic Surveys on Fish & Invertebrates." *Marine Pollution Bulletin* 114, no. 1 (January 2017): 9–24. https://doi.org/10.1016/j.marpolbul.2016.11.038.

[3] Lalonde, Benoit A., Christine Garron, and Vincent Mercier. "Analysis of Benthic Invertebrate Communities Downstream of Land-Based Aquaculture Facilities in Nova Scotia, Canada." Edited by Carla Aparecida Ng. *Cogent Environmental Science* 2, no. 1 (February 19, 2016). https://doi.org/10.1080/23311843.2015.1136099.

[4] Milewski, I, Rh Loucks, B Fisher, Re Smith, Jsp McCain, and Hk Lotze. "Sea-Cage Aquaculture Impacts Market and Berried Lobster (Homarus Americanus) Catches." *Marine Ecology Progress Series* 598 (June 28, 2018): 85–97. https://doi.org/10.3354/meps12623.

[5] Fuller, Susanna D. *How We Fish Matters: Addressing the Ecological Impacts of Canadian Fishing Gear*. Halifax, NS: Ecology Action Centre, 2008.

[6] Council of Canadian Academies. *Commercial Marine Shipping Accidents: Understanding the Risks in Canada: Workshop Report.*, 2016. http://deslibris.ca/ID/10061016.

[7] Buskey, Edward J., Helen K. White, and Andrew J. Esbaugh. "Impact of Oil Spills on Marine Life in the Gulf of Mexico." *Oceanography* 29, no. 3 (2016): 174-81. http://www.jstor.org/stable/24862719.

- **Unregulated commercial transport speed**

  Implement a speed restriction of 10 knots or less for large vessels (20 metres and longer) travelling through MPAs to reduce anthropogenic noise in the marine environment[8] and reduce the likelihood of fatal collisions with marine mammals[9].

1.2 Guidance on regulatory design from other jurisdictions

- The *Canada National Marine Conservation Areas Act* prohibits the exploitation of hydrocarbons, minerals, aggregates or any other inorganic matter within a marine conservation area. These regulations ensure that the structure and function of the water column and seafloor of National Marine Conservation Areas are not compromised.
- The *Canada National Parks Act* requires defining and maintaining ecological integrity in all national parks. A 2015 report from the Parliamentary Committee on Environment and Sustainable Development recommended a similar requirement be adding to the *Oceans Act* and other federal protected area laws.
- In the United States, the *National Marine Sanctuaries Act* allows a unique regulatory regime for each sanctuary space. However, all National Marine Sanctuaries come with a standardized set of prohibitions:
  - *Discharging material or other matter into the sanctuary;*
  - *Disturbance of, construction on or alteration of the seabed;*
  - *Disturbance of cultural resources; and*
  - *Exploring for, developing or producing oil, gas or minerals (with a grandfather clause for pre-existing operations).*

1.3 Increase protective standards and broaden conservation goals for all Marine Refuges and other effective area-based conservation measures (OECMs) to meet IUCN Guidelines

In Canada, we use a wide range of legislative tools to protect and preserve ecosystems and ocean resources. But as we move towards 10% protection in Canadian waters, less than half of the total marine area directed towards this target falls under *Oceans Act* legislation. Many of the areas included in the 7.75% of "protected" Canadian waters are *Fisheries Act* closures (OECMs), in some cases meant to protect just a single species.

For instance, DFO's Scallop Buffer Zone, located along the Northumberland Strait, protects only against scallop dragging, stating, "No other human activities that take place in this area are incompatible with the conservation of the ecological components of interest." Single species criterion is not enough to meet IUCN standards for protection as it does not follow best available science on holistic, ecosystem-based approaches to marine management[10], and does not make any provisions for protection against future developments in the area. We recommend that DFO

[8] Weilgart, L.S. "The Impacts of Anthropogenic Ocean Noise on Cetaceans and Implications for Management." *Canadian Journal of Zoology* 85, no. 11 (November 2007): 1091–1116. https://doi.org/10.1139/Z07-101.

[9] Conn, P. B., and G. K. Silber. "Vessel Speed Restrictions Reduce Risk of Collision-Related Mortality for North Atlantic Right Whales." *Ecosphere* 4, no. 4 (April 2013): art43. https://doi.org/10.1890/ES13-00004.1.

[10] Long, Rachel D., Anthony Charles, and Robert L. Stephenson. "Key Principles of Marine Ecosystem-Based Management." *Marine Policy* 57 (July 2015): 53–60. https://doi.org/10.1016/j.marpol.2015.01.013.

expand the conservation mandate of these OECMs in alignment with best practices in spatial habitat connectivity[11] and ecosystem-based governance.

Furthermore, in Atlantic Canada, we now see industry favouritism, enabled by lacking national standards, challenging the legitimacy of contemporary *Oceans Act* MPA development processes. At the Ecology Action Centre, we have observed a declining measure of trust between the federal government and fisheries partners, as Canadian fish harvesters have been asked to bring their practice to a halt within *Fisheries Act* closure areas, while international oil and gas companies have been allowed to continue exploration in conservation zones. These discrepancies undermine the capacity for collaborative and mutually endorsed conservation projects requiring the support of fishing communities. As such, we are calling for strong national standards that keep *all* commercially extractive industries out of MPAs and OECMs, respecting the right of all ocean users to healthy marine ecosystems.

1.4 Develop well-funded management and monitoring plans for all protected marine areas in Canada, community-led to the greatest extent possible

Here we suggest the development of management and monitoring plans for all Canadian MPAs and OECMs to capture baseline data and gauge the effectiveness of protective measures versus desired conservation outcomes. In 2015, the Standing Committee on Environment and Sustainable Development recommended "that the Government of Canada develop, implement and sufficiently fund effective monitoring programs in order to measure the successful achievement of ecological integrity of protected areas." Community-led MPAs and subsequent monitoring efforts have proven to be the most effective means of ensuring the long-term health of biodiversity in protected areas[12] [13], most effective when social capital and participatory capacity is high[14]. We suggest that the federal government work with communities, rights-holders and stakeholders to build capacity in communities close to coastal MPAs and OECMs, and conduct further research on best practices and cost effective measures for the monitoring of large offshore areas.

1.5 Build standardized, inclusive, and transparent practices for meaningful community engagement at all stages of the MPA design and development process

The *Oceans Act* recognizes the "three oceans" as the "common heritage of all Canadians." No one marine industry or ocean user is the "owner" of ocean space or Canadian ocean resources. The ocean is a commons that belongs to all of us, and with that comes an important duty to steward and protect the marine environments that we rely heavily upon for many aspects of cultural identity, social interaction and livelihood across the country. However, despite continued calls by the

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[11] Carr, Mark H., Sarah P. Robinson, Charles Wahle, Gary Davis, Stephen Kroll, Samantha Murray, Ervin Joe Schumacker, and Margaret Williams. "The Central Importance of Ecological Spatial Connectivity to Effective Coastal Marine Protected Areas and to Meeting the Challenges of Climate Change in the Marine Environment." *Aquatic Conservation: Marine and Freshwater Ecosystems* 27 (September 2017): 6–29. https://doi.org/10.1002/aqc.2800.

[12] Chirico, Angelica A. D., Timothy R. McClanahan, and Johan S. Eklöf. "Community- and Government-Managed Marine Protected Areas Increase Fish Size, Biomass and Potential Value." Edited by Giacomo Bernardi. *PLOS ONE* 12, no. 8 (August 14, 2017): e0182342. https://doi.org/10.1371/journal.pone.0182342.

[13] Ferse, Sebastian C.A., Costa, Kathleen Schwerdtner M.E., Dedi S. Adhuri, and Marion Glaser. "Allies, Not Aliens: Increasing the Role of Local Communities in Marine Protected Area Implementation." *Environmental Conservation* 37, no. 01 (March 2010): 23–34. https://doi.org/10.1017/S0376892910000172.

[14] Diedrich, Amy, Natalie Stoeckl, Georgina G. Gurney, Michelle Esparon, and Richard Pollnac. "Social Capital as a Key Determinant of Perceived Benefits of Community-Based Marine Protected Areas: Social Capital and MPAs." *Conservation Biology* 31, no. 2 (April 2017): 311–21. https://doi.org/10.1111/cobi.12808.

scientific community for the incorporation of public stewardship principles in marine conservation planning[15] [16], no formal processes for involving communities in the formulation and establishment of MPAs has yet been put forth. Public engagement and stakeholder participation has been proven as a key factor in the success of MPA outcomes[17] [18]. Contemporary science suggests that the most effective MPAs, and those with the greatest measure of public support, are those that involve communities at each phase of progression, from site identification through implementation, management and monitoring[19]. We urge the Panel to recommend DFO commit to the design of standardized, inclusive, and transparent methods of meaningful community engagement at all stages of the MPA design and development process.

2. On reconciliation: UNDRIP and the right to self-determination

This section briefly addresses the Panel's prompt regarding Indigenous "approaches" in marine conservation and reconciliation in Canada. The Ecology Action Centre supports Indigenous rights-holders in their right to exercise sovereignty over traditional and treaty territories on land and at sea. Ultimately, it is the purview of Indigenous communities in Canada to advise on how respective ontologies and approaches should be involved or not into national considerations surrounding MPA standards. We hope to see the National Standards Advisory Panel upholding and implementing principles put forth in the United Nations Declaration on the Rights of Indigenous Peoples during these deliberative processes.

The Panel has already identified The Indigenous Circle of Experts (ICE) "Report and Recommendations" for the creation of Indigenous Protected and Conserved Areas in Canada as a guiding document. We would like to see the incorporation of recommendations provided by ICE in the Panel's final report, as we strive to build long-lasting partnerships benefitting the marine ecosystems and affirming Indigenous rights to self-determination.

3. On IUCN Guidelines

An international effort to adhere to IUCN Guidelines on ocean conservation allows assurance at the national level that no individual country faces any undue regulatory burden in shared-ocean contexts. The IUCN's evidence-based mechanism allows coastal nations to hold their neighbours to account, and ensures that protective measures implemented in widely varied jurisdictional regimes act in the interest of globally connected ocean ecosystems and the collective preservation of marine resources.

EAC recognizes the complex and idiosyncratic nature of each socioecological context in which

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[15] Gray, Noella J., Nathan J. Bennett, Jon C. Day, Rebecca L. Gruby, T. 'Aulani Wilhelm, and Patrick Christie. "Human Dimensions of Large-Scale Marine Protected Areas: Advancing Research and Practice." *Coastal Management* 45, no. 6 (November 2, 2017): 407–15. https://doi.org/10.1080/08920753.2017.1373448.

[16] Charles, A., and L. Wilson. "Human Dimensions of Marine Protected Areas." *ICES Journal of Marine Science* 66, no. 1 (September 14, 2008): 6–15. https://doi.org/10.1093/icesjms/fsn182.

[17] Dehens, Lauren Ashley, and Lucia M. Fanning. "What Counts in Making Marine Protected Areas (MPAs) Count? The Role of Legitimacy in MPA Success in Canada." *Ecological Indicators* 86 (March 2018): 45–57. https://doi.org/10.1016/j.ecolind.2017.12.026.

[18] Bennett, Nathan James, and Philip Dearden. "From Measuring Outcomes to Providing Inputs: Governance, Management, and Local Development for More Effective Marine Protected Areas." *Marine Policy* 50 (December 2014): 96–110. https://doi.org/10.1016/j.marpol.2014.05.005.

[19] White, Alan T., Catherine A. Courtney, and Albert Salamanca. "Experience with Marine Protected Area Planning and Management in the Philippines." *Coastal Management* 30, no. 1 (January 2002): 1–26. https://doi.org/10.1080/08920750252692599.

MPAs exists. IUCN Guidelines provide a robust framework for the development of protected areas that incorporate major conservation principles, while also leaving room for case-by-case analysis of "on the ground" realities relevant for consideration prior to implementation. Resilient, well-protected MPAs offer an international ecological insurance policy against anthropogenic pressures and changing marine environments impacting the well-being of all marine ecosystems on Earth. Canada has three adjacent oceans and the longest coastline of any nation. With strong MPA standards based on IUCN guidance from sea-to-sea-to-sea, Canada can play a leading role in marine conservation by supporting the development of world-class marine protected areas. **We urge the Panel to implement IUCN Guidelines as a best practices standard for the development of Canadian MPAs and OECMs.**

In conclusion, we once again thank the Panel members for their work, and for this opportunity to submit comment and advocate for strong, conservation- and community-minded marine protected areas in Canada. The Ecology Action Centre looks forward to the Panel's finalized report and subsequent engagement with the recommendations provided. If any questions or concerns related to this submission arise, please do not hesitate to contact us. In the meantime, we wish the Panel well in deliberation.

Long Live the Whale,

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