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July 31, 2018

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National Advisory Panel on Marine Protected Area Standards
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To the National Advisory Panel on Marine Protected Area Standards,

As recommended by Marc Léger, I am submitting a written brief to provide input for consideration in creating protection standards in Canadian marine protected areas (MPAs). Please see the recommendations and points for consideration that follow.

My input is largely based on the findings of my Master's research entitled "[Implications of Marine Protected Areas on Social-Ecological Wellbeing in the Bay of Fundy, Canada](#)" and I have attached a brief summary of my research findings to this submission. However, I have also drawn from relevant literature and professional experience working on marine conservation issues in Atlantic Canada.

Thank you for your time and commitment to collecting broad input from stakeholders on this important issue.

Best regards,



Irene Brueckner-Irwin

Protection and Process Standards for Canadian MPAs

Globally, many social and ecological successes and benefits of MPAs have been reported.¹ Through the National Advisory Panel on MPA Standards, Canada now has an important opportunity to implement MPA protection and process standards to improve the ecological and social outcomes of our marine conservation efforts. Rather than listing all rationale for establishing MPA standards in Canada, many of which have already been covered by other submissions and presentations to the Panel, this submission focuses on two systemic considerations which are related to one another, and require more attention in current MPA decision-making in Canada: (1) equity and power, and (2) the broader ecological and social contexts of MPAs.

(1) Equity and Power

Recommendations:

- Apply MPA standards with explicit attention to equity and the distribution of benefits and costs across stakeholders.
- Define “effectively and equitably managed” MPAs in relation to Aichi Target 11 and MPA standards, and in alignment with principles of good governance.
- Apply MPA standards fairly to the activities of different resource sectors, based on the environmental risks of those activities (not on existing power structures), to ensure effective ocean protection and enhance equity across stakeholders.

Establishing protection standards that prohibit certain activities across all MPAs will invariably be associated with socioeconomic benefits and costs. While long-term benefits are anticipated from MPAs, certain stakeholders (especially on the individual level) will experience more immediate costs than others. For example, certain resource users may be displaced from areas of traditional use,² and communities may need to express concerns and provide advice in MPA planning that could be divisive within communities.

Equity – both in terms of the distribution of benefits and costs, as well as who is able to participate in decision-making – is critical to MPA processes because:

- We have an ethical and inherent responsibility to foster the best possible outcomes for coastal communities,³ and social equity and good governance are guiding principles of protected area legislation⁴
- Aichi Target 11 requires that protected areas are “equitably managed”⁵

¹ Angulo-Valdés & Hatcher, 2018; Edgar et al., 2014; Giakoumi et al., 2018

² Charles & Wilson, 2008

³ Woodhouse et al., 2015

⁴ Lausche, 2011

⁵ CBD, 2010

- Practical MPA experience in Canada and case studies in the literature have demonstrated that perceptions of unfairness can undermine long-term support and compliance with MPAs⁶

As such, MPA standards should be applied with explicit attention, and an aim to enhance, equity across stakeholders. It is critical that prohibitions are applied fairly to the activities of different resource sectors based on the environmental risks of those activities. Explicit attention should also be given to equity in MPA designation processes through process standards that align with principles of good governance.⁷

Certain stakeholders also have more power and a greater capacity to organize than others, and it is critical that the extent of this power does not influence decisions about MPA standards and prohibitions. As stated above, MPA standards must be equitably based on the environmental risks of the activities in question. Despite the best intentions of any individual or department, and recognizing the significant efforts that have gone into using the best available evidence and extensive consultation with stakeholders, a common perception is that certain industries have enough power and/or government support to be 'exempt' from MPA prohibitions despite posing significant environmental threats (e.g., chemical use,⁸ histories of spills).

Whether this perception holds true remains to be seen as more MPAs are designated, however a confusing precedent has been set in recent cases where oil and gas activities have been planned within Oceans Act MPAs⁹ and marine refuges.¹⁰ It is indeed concerning when several fishing activities are being mitigated by MPAs, while oil and gas bids are being opened within marine refuges – especially after a recent drilling mud spill.¹¹ If such cases continue to arise, feelings of inequity and concerns that certain stakeholders are being disadvantaged in MPA processes will persist.

(2) Broader ecological and social contexts

Recommendations:

- When creating MPA standards, recognize that MPAs do not occur in isolation of other marine uses and management measures.
- Establish methods for assessing broader ecological and social effects of MPAs (e.g., marine spatial planning, ecosystem-based management, integrated management) to better prepare for system-wide outcomes.

As recognized above, the activities of certain stakeholders will be impacted by the creation and ongoing management of MPAs. Some stakeholders will adapt by changing how they conduct

⁶ Halpern et al., 2013

⁷ Lockwood, 2010

⁸ CBC, 2013; CBC, 2018b

⁹ CBC, 2017

¹⁰ CNLOPB, 2018

¹¹ CBC, 2018a

their activities, either within or outside MPA boundaries. While MPA management aims to protect ecosystems within MPAs, adapting to new management measures can have other ecological and social effects. For example, cases have been reported where the re-distribution of fishing effort (as a result of fishery closures) has resulted in increased pressure on fish stocks outside MPA boundaries.¹² As such, the effects of network-level MPA standards for activities *within* MPAs should be considered in areas *outside* of MPAs to avoid unintended consequences.

In social terms, it is important to recognize that Canada's MPA network is being developed alongside decreasing trends in coastal community access to marine and coastal areas.¹³ For fishers in particular, the effects of MPAs can be similar to those of traditional fisheries management measures,¹⁴ which can influence how MPAs are perceived and experienced when considered in the broader context of cumulative management measures.¹⁵ As such, it is important that MPAs are considered as part of larger systems beyond MPA boundaries, alongside other resource uses and management measures.

¹² Abbott & Haynie, 2012; Suuronen et al., 2010

¹³ Barnett, 2018; Bennett et al., 2018; Knott & Neis, 2017

¹⁴ McNeill et al., 2018

¹⁵ Barnett, 2018

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Appendix: Summary of Findings

Implications of Marine Protected Areas on Social-Ecological Wellbeing in the Bay of Fundy, Canada

Irene Brueckner-Irwin, 2018

KEY MESSAGE:

How and with whom marine protected areas (MPAs) are designed is important to the inshore fishing community in Southwest New Brunswick. Greater emphasis should be placed on governance processes, and the component of Aichi Target 11 that prioritizes the need for 'effectively and equitably managed' MPAs.

Why study the social dynamics of MPAs?

MPAs are a core conservation strategy in Canada's efforts to protect 10% of our marine and coastal areas by 2020, but their effectiveness is less certain. The social acceptance and implications of MPAs for coastal communities has a bearing on the ability to plan and implement effective MPAs.

RESEARCH DESIGN

Purpose: to (i) examine perceptions of how MPAs influence wellbeing in an inshore fishing community in coastal Southwest New Brunswick and (ii) generate governance insights for MPAs

Methods: 49 interviews and 4 focus groups with relevant stakeholders (fishers in addition to representatives from industry associations, government, ENGOs, First Nations), in addition to literature review and observations

Location: Musquash Estuary MPA (designated in 2006) and the 'Head Harbour, West Isles, and the Passages' Ecologically and Biologically Significant Area (candidate location for future MPA)

RESULTS

How are MPAs perceived to influence wellbeing in the inshore fishing community?

Despite recognizing some benefits of MPAs (e.g., potential to limit disturbances to the ecosystem, such as industrial activities) and a relatively positive experience with the Musquash MPA, participants had real concerns about the costs of future MPAs on material (e.g., access to

the fishery), relational (e.g., collaborative decision-making), subjective (e.g., equity), and ecological (e.g., scale of protection) dimensions of wellbeing (see Table 1).

What insights emerge for designing and managing MPAs?

1. Effective collaboration is critical for community support, and must address perceived lack of clarity and unfairness in MPA design.

Fishers want greater input in decision-making related to marine conservation initiatives. They have experienced a lack of clarity surrounding what will (not) be allowed within the boundaries of MPAs, which is causing uncertainty and apprehension. Participants also expressed that the distribution of benefits and costs of MPAs is unfair. Participants expected fishers to lose access to certain fishing grounds as a result of MPAs, but anticipated that other more powerful industries such as aquaculture would lobby the government to avoid MPA-related regulations. This was perceived to perpetuate inconsistent environmental protections.

2. Displacement has multi-dimensional implications.

Decision-makers must address displacement in more holistic and systemic terms, and recognize the multi-dimensional implications of being physically displaced from an area. Moving to new areas could lead to more concentrated fishing effort in those areas, crowding, gear conflict, overfishing, re-learning how to fish in different conditions, and a loss of place-identity. These implications are much broader than typically assumed by non-fishers.

3. MPAs do not fit existing social and ecological conditions of the system.

MPAs are perceived not to fit the underlying social and ecological dynamics in Southwest New Brunswick. In social terms, decision-making to-date has been perceived as top-down rather than collaborative. In ecological terms, MPAs are perceived as static and inflexible tools in a dynamic environment that may not be able to address significant threats to the ecosystem under conditions of change, or in cases where certain damaging industrial activities are allowed within MPAs.

Full thesis: Brueckner-Irwin, I. (2018). *Implications of marine protected areas on social-ecological wellbeing in the Bay of Fundy, Canada* (Master's thesis, University of Waterloo). Retrieved from UWSpace at <https://uwspace.uwaterloo.ca/handle/10012/12802>

Table 1: Perceptions of benefits and costs of MPAs across dimensions of wellbeing: benefit (+), cost (-), mixed (\pm), uncertain (?), not identified (n/a).

Dimension	Attribute	Fishing community perspective			
		Musquash		Head Harbour, West Isles, Passages	
Material	Fishery resources	?	Uncertain as to influence on commercial fish stocks	?	Uncertain potential to enhance commercial fish stocks
	Fishery access	+	Fishery access maintained and likelihood of gear conflict reduced	-	Anticipated access loss and associated implications on other wellbeing attributes
	Income		n/a	-	Anticipated loss of income due to access loss, and consequences for fishery-dependent local economy
	Additional resources	+	MPA-related research and monitoring dedicated to estuary region	+	Potential to draw in additional funding and monitoring resources
Relational	Collaborative decision-making	+	Opportunities for community participation in decision-making from the outset	-	Doubts about transparency, trust, and future opportunities for participation
	Community relations	+	Enhanced land-based community relations due to adjacent land donations and cooperation	-	Anticipated conflict due to displacement and consequent encroachment, and potential for MPAs to become a polarizing community issue
	Enforcement		n/a	?	Questions about how an MPA would be enforced given existing enforcement challenges
	Learning		n/a	-	De-valued existing knowledge and anticipated re-learning required
	Markets	+	Potential for third party sustainability certifications	\pm	Potential for third party sustainability certifications, but may come with strings attached
Subjective	Place-identity	+	Increased sense of pride for land-based community	-	Loss of cultural and familial heritage if displaced
	Equity	+	Win-win MPA among community stakeholders	-	Inshore fishers expected to bear highest burden of costs
	Adaptability	-	Ability to access emerging fisheries has been restricted	-	Future fishing options will be restricted with permanent regulations
Ecological	Natural capital	+	Protects naturalness and intactness of ecosystem	+	Ability to protect naturalness, biodiversity, and productivity
	Disturbances	+	Keeps out heavy industry	\pm	Potential to restrict heavy industry, but also for adjacent overfishing due to re-allocation of fishing effort
	Scale	+	Adjacent land conservation prompted by MPA is beneficial for protection	-	Static MPA reduces ability to react to changing environment