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The importance of beliefs in predicting support for a South Coast National Marine Conservation Area in Newfoundland and Labrador, Canada

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ABSTRACT

Marine Protected Areas (MPAs) frequently fall short of their stated goals as marine conservation tools due to various regulatory, physical, sociocultural, and economic reasons. MPA designation, however, continues to be used for perceived conservation and socioeconomic benefits for adjacent communities. Local beliefs regarding ecological and socio-economic outcomes often influence the public support for MPAs and ultimately their effectiveness. This paper focuses on understanding local residents' beliefs regarding a potential South Coast National Marine Conservation Area (NMCA) in Newfoundland and Labrador and how those beliefs influence resident support for the NMCA. Data were collected from 180 Burgeo residents through a household survey. While 33% supported the designation of a South Coast NMCA, 43% opposed it and 26% were unsure. A principal component analysis (PCA) extracted five belief constructs. A regression model was used to examine relationships between these constructs and support for a South Coast NMCA. The results indicate that perceived economic development and marine conservation were the best predictors of support for NMCA establishment. Qualitative data analysis supported these findings and was used to better understand these relationships, with a minority of respondents seeing economic opportunities and protection and conservation as causes for support of the proposal. Qualitative responses also revealed strong concerns about the loss of traditional and current means of livelihood. If a South Coast NMCA is to be considered feasible it will require greater support and a shift in resident beliefs. This will require effective stakeholder engagement and increased educational and information campaigns.

1. Introduction

Marine protected areas (MPAs) can refer to a variety of spatial management strategies with different levels of regulatory strictness. Throughout this paper we refer to MPAs in a general sense or as the IUCN defines them: "Any area of intertidal or subtidal terrain, together with its overlying water and associated flora, fauna, historical and cultural features, which has been reserved by law or other effective means to protect part, or all, of the enclosed environment" (Kelleher and Kenchington, 1992 p.98). Canada is home to 797 Marine Protected Areas (MPAs). Reasons for protecting marine areas in Canada include, mainly, protection of ecological and socio-cultural values, as well as opportunities for sustainable harvesting (Government of Canada, 2010). Ecological, cultural and socioeconomic management objectives of MPAs vary for each sociocultural and environmental setting (Agardy et al., 2003; Dahl-Tacconi, 2005; Heck and Dearden, 2012). Parks

Canada is responsible for National Marine Conservation Areas (NMCAs), a type of MPA through which marine areas are managed for sustainable use with smaller zones of high protection (Parks Canada, 2010). NMCAs "encourage public understanding, appreciation and enjoyment" (Dearden and Rollins, 2009 p. 407); this differs from stricter no-take MPAs, implemented by Fisheries and Oceans Canada (DFO) or Environment Canada. While clear differences between NMCAs and MPAs exist, it is unknown whether these differences are understood by the public.

1.1. Background

Similar to the terrestrial program of protected areas and ecoregions, Parks Canada has an objective to represent each marine region in Canada with an NMCA. Currently, Parks Canada has established only four NMCAs out of the possible 29 identified marine regions in its

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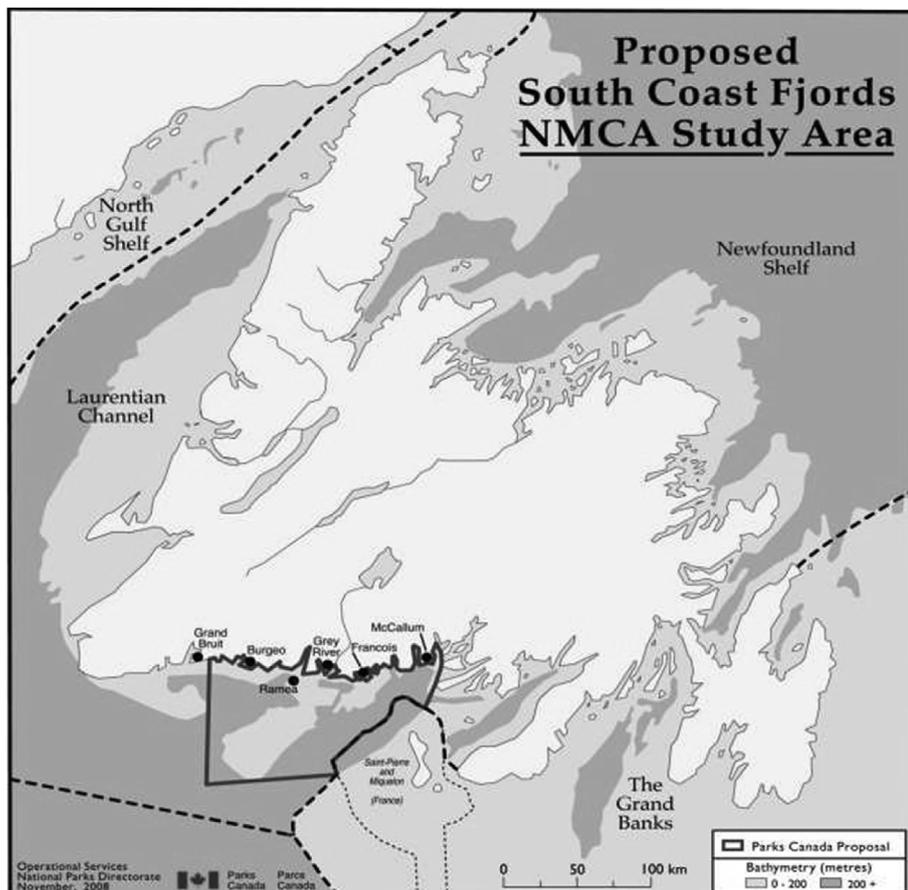


Fig. 1. Parks Canada's proposed South Coast Fjords NMCA study area.

NMCA program (Parks Canada, 2008, 2014). A South Coast NMCA in Newfoundland and Labrador (NL) would allow Parks Canada to represent the identified Laurentian Channel Region. The southwest fjords of Newfoundland are marked by low sandy beaches in the west to large granite cliffs and deep fjords in the east. The marine environment is considered to be ecologically rich, providing habitat for several species of whales (humpback, minke, orca and the globally rare and endangered blue whale). Endangered leatherback turtles and piping plover also frequent the area. The region boasts a diversity of migrant land and shorebirds and a productive spawning, nursery, rearing, and feeding area for lobster (CPAWS, 2011).

The potential for a South Coast NMCA has captured the interest of several groups, including: residents of Burgeo and other South Coast communities, Parks Canada and the NL chapter of the Canadian Parks and Wilderness Society (CPAWS). In February 2012, however, the Government of NL turned down Parks Canada's request to complete a South Coast NMCA feasibility study to advance the establishment of a potential fifth NMCA (Ballam, 2013), citing concerns about restrictions on aquaculture development, subsea oil and mineral exploration (Ballam, 2013; McLeod, 2013).

1.2. Research context

Successful establishment and management of conservation regimes often rely on public consultation and participation. Stakeholder engagement is presently seen as crucial to the education and understanding of benefits generated from MPAs and is regarded as a necessary condition for success (Charles and Wilson, 2009; Dearden and Rollins, 2009; Fiske, 1992; Kelleher, 1999; Kenchington and Kelleher, 1995; Walley, 2010). Benefits of early involvement include negotiation and mitigation of adverse effects, as well as avoiding consequence of late stage conflicts (Cocklin et al., 1998; Kenchington and Kelleher,

1995; Smith, 1982). Few studies exist that examine the direct relationship between beliefs and support for marine conservation initiatives. Those that have been conducted, however, gauge public knowledge and perceptions more broadly and demonstrate that understanding knowledge and perceptions can help resolve tensions between socioeconomic development and protection of marine environments (Wolfenden et al., 1994), thus reinforcing the need for baseline studies assessing levels of local support for the establishment of NMCAs and other forms of MPAs.

Perceptions of socioeconomic and ecological outcomes may ultimately determine the potential support for and success of a South Coast NMCA (Agardy et al., 2003; Bennett and Dearden, 2014; Christie et al., 2003; Heck et al., 2012). The benefit of gauging perceptions of local stakeholders (e.g. fishers) and encouraging participation in the planning processes of MPAs, range from increasing support to decreasing alienation (Suman et al., 1999; Gleason et al., 2010). Our research focuses specifically on understanding levels of resident support (or opposition) and how public beliefs influence support for designation of a South Coast NMCA. Although perceptions have been used as a broader term to encompass both beliefs and attitudes in the marine literature we have narrowed our focus on beliefs from a human dimensions perspective. Beliefs are judgements about what is true or false – judgements about what attributes are linked to a given object (Rokeach, 1973; Allen et al., 2009). An understanding of beliefs is valuable towards predicting behavioral intention to support conservation initiatives (Vaske and Donnelly, 1999). Understanding the public's level of knowledge along with their beliefs toward an MPA can also prove beneficial toward successful implementation of MPAs (Charles and Wilson, 2009; Davis, 2002). These social factors fall within the realm of 'step-zero' of MPA establishment: ensuring the conditions, drivers, and processes are acceptable prior to MPA planning and establishment (Chuenpagdee et al., 2013).

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