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Using Environmental Information to Engage Public Participation in Decision Making in Coastal Policy Development

Abstract: This paper presents findings of a study of the awareness and use of *The 2009 State of Nova Scotia's Coast Report* by specific stakeholder groups and the general public. Communication of the *Report* to wider audiences was identified as a main issue in increasing public participation in the development of provincial coastal policy.

Résumé: Cet article présente les résultats d'une étude sur le niveau de connaissance et l'utilisation du *2009 State of Nova Scotia's Coast Report* par des groupes d'intervenants précis ainsi que par le grand public. On a identifié la communication du rapport à un vaste auditoire comme étant le principal moyen pour augmenter la participation publique dans le développement d'une politique côtière provinciale.

1. Introduction

Coastal zones worldwide are under serious stress today due to climate change, impacts of introduced species, increasing contamination and pollution, and uncontrolled resource extraction and coastal development, among other forces. In Canada and globally, these stresses are resulting in significant loss of biodiversity and habitat with inherent adverse impacts on coastal communities (Coastal Zone Canada Association 2010; MEA 2005). These alarming conditions have been the focus of extensive and ongoing study over the past few decades. In response to these threats, governmental, intergovernmental and non-governmental organizations have turned out large numbers of technical reports and other publications on subjects related to the health of marine environments from both scientific and public policy perspectives (e.g., Holmes and Clark 2008, and Irvine 2009). Many governments rely on this grey literature to reach stakeholders during policy development, but in general they have not undertaken an analysis of the use and influence of their publications (MacDonald, Cordes and Wells 2004; Wells 2003).

The stresses and impacts on coastal zones are significant to the province of Nova Scotia where effects of ocean activity on the economy exceed \$4 billion. The coastline of the province extends to more than 7,400 km, and almost half of the land area is wholly or partially within two kilometers of the coast (Province of Nova Scotia 2009a). Most Nova Scotian communities developed from original settlements established along the coastline, and substantial portions of that coastline are working waterfronts which provide physical access to the ocean for recreation and business.

Given the significance of the coastal areas and resources, “the provincial government recognized it needed a way to focus efforts to tackle complex ... issues that threaten the sustainability” of the coasts (Province of Nova Scotia 2009b, 3). In December 2009, the province released *The 2009 State of Nova Scotia’s Coast Report*, an important source of information for understanding coastal issues, designed to promote coastal management policy. The Report was published as a detailed technical document, a multi-page summary, and six, four-page fact sheets in print and Web-based formats. The summary and fact sheets were produced in English and French versions. Since its release, the government has sought public input in the development of a provincial coastal strategy by actively promoting public awareness of and access to the Report.

2. Methodology

The aim of this study is to develop a comprehensive understanding of the awareness and use of *The 2009 State of Nova Scotia’s Coast Report* through a variety of research methodologies. The main research question asked how information produced by a government can be disseminated and used effectively in decision making processes about coastal and marine environments. Mixed methodologies, including a suite of qualitative and quantitative methods developed by the *Environmental Information: Use and Influence* (EI:UI) research initiative, were used (Cossarini 2010; Hutton 2009, 2010; MacDonald, et al. 2010; Soomai, Wells and MacDonald 2011).

This paper will focus on an analysis of selected government-led techniques to promote awareness of the *Report* in the province, including: (1) public open houses, (2) a multi-stakeholder meeting and (3) web-based publications. Research instruments were designed to measure awareness, actual or potential use of the *Report* documentation, and indicators of its influence. Surveys (questionnaires and interviews) and participant observation were used in this study.

In May 2010, the provincial government hosted open houses at eight different locations in the province to provide an opportunity to inform the general public about the *Report* and to receive input on priority coastal issues. The research team administered a survey questionnaire and conducted direct observations at the open houses. Of the 350 people in attendance at the open houses, 256 responded to the survey.

In June 2010, the government hosted an invitation-only multi-stakeholder meeting of a range of coastal stakeholders, to gather input on the goals, objectives, and broad-level actions to include in the coastal strategy to be developed by 2011. The research team administered a questionnaire, with a response rate of 85.7%, and conducted direct observations at this event. In addition, 13 individuals who attended the meeting were randomly selected for interviews to obtain more in-depth data on the awareness, use and influence of the *Report*. The interviews, which were approximately 30 minutes in length, were conducted in person or by telephone and were digitally recorded and later transcribed.

Statistical data showing activity at the government Web site containing the *Report* documentation, for the period December 2009 to September 2010, was obtained for analysis. Data from the questionnaires were coded and analyzed using Excel. Interview

data were coded and analyzed with the aid of Excel and NVivo8 software, and Web statistics were analyzed using Excel.

3. Results

Responses to questionnaires administered at the open houses were obtained from the general public and five stakeholder groups: industry, government, non-governmental organizations (NGOs), academic organizations, and First Nation groups. Forty-six percent of the attendees at the open houses represented the general public. Stakeholders became aware of the Report mainly through electronic means, with 45% of all stakeholders stating they received an email message through the government notification system or through a NGO email network. These respondents noted that the less technical versions of the Report were useful in reaching a range of audiences.

Attendees at the multi-stakeholder meeting consisted of representatives of government (25%), non-government organizations (25%), academic institutions (25%), and a lower representation from industry and First Nation groups. Approximately 75% of the stakeholders who were interviewed indicated they were fully aware of the Report since they had been involved in its production, either in terms of being consulted for input or to peer-review the Report. The remaining 25% became aware of the Report after receiving the email notification.

The general public and the other five stakeholder groups identified education and awareness building, monitoring of government and advocacy, and public participation as the primary uses of the Report. Preferences for the different versions of the Report and priorities in uses of the Report varied among the stakeholder groups. Web-tracking statistics showed that visits to and downloads from the Web site were highest when the Report was launched and during the public consultations.

Stakeholder responses indicated that indirect benefits occurred, such as increased collaboration and networking among and within government and other stakeholder groups during the preparation of the Report. The stakeholders also drew attention to the influence of the Report in terms of its ability to increase the awareness of numerous stakeholders regarding coastal issues, in the short term, which in turn will influence future public participation in the development of the coastal management policy.

4. Conclusions

The government-led suite of methods for promoting awareness and use of the Report was aimed at reaching all audiences in the province to encourage public participation in the development of a strategy for sustainable coasts of Nova Scotia. These methods were more effective in reaching some audiences than others. Email social networks played a key role in promoting awareness of the Report among established groups of people who historically/traditionally respond to government surveys and interviews.

In a scenario where a government deliberately sought wide stakeholder involvement in a timely manner, and given the prominence of the coasts to the livelihood of all Nova Scotians, it was important that information about the Report reach all sections of the

public. The results of this study show that employing additional methods to reach target audiences outside of established networks may be needed. Participants in the study confirmed, nonetheless, that information about place, i.e., the coasts, is very important for their own understanding of coastal matters, and for informing public policy development.

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