

Communicating about Coastal Erosion with Northumberland Strait Property Owners

Executive Summary

Prepared by Jennifer Graham, Coastal Coordinator, September 2011

This research focuses on a small study area; the Amherst Shore to Malagash portion of the Northumberland Strait in Nova Scotia. The purpose of the research is to explore how to communicate most effectively about coastal erosion with coastal property owners in Nova Scotia, in order to increase Nova Scotia's capacity to adapt to climate change.

The bulk of the project assesses the current understanding, erosion management strategies, and information needs of Northumberland Strait property owners through interviews and a focus group discussion. The output of this research is recommendations toward a communication strategy about coastal erosion. The strategy includes recommendations defining the main messages, proposed targets and approaches for community and government.

The research was carried out by the Ecology Action Centre between October 2010 and March 2011 through funding from the Nova Scotia Environment Climate Change Directorate through its Climate Change Adaptation Fund.

The Executive Summary highlights key messages and findings from each section of the report, with more emphasis on the results and analysis section. The complete report can be downloaded at www.ecologyaction.ca/content/coastal or http://climatechange.gov.ns.ca/content/adaptation_home. The Executive Summary does not present information in the exact order in which it is presented in the full report.

Introduction

Main Messages

1. Coastal erosion is a natural process through which land and geological features are built up, removed, and frequently transported and reformed elsewhere (GSC, 2011). Erosion is necessary for the formation of the beaches, salt marshes, and other coastal features that we all enjoy. There is a strong public sentiment that the loss of land to erosion is something to be dreaded and fought against. Unfortunately, people's efforts to protect property and infrastructure from erosion often lead to unintended effects like beach narrowing or accelerated erosion on adjacent properties
2. The effects of climate change, particularly higher sea levels, more intense storms, and reduced winter ice cover due to warmer ocean temperatures, are expected to lead to accelerated rates of erosion. This in turn may encourage coastal residents to rethink their relationship with the coast.
3. Many jurisdictions recognize the potential consequences of erosion control measures, and have regulations, policies, and programs to (1) Avoid risk; (2)

restrict or regulate erosion control structures; and (3) educate landowners about best practices.

Results and Analysis

- Thirty (30) Northumberland Strait coastal property owners were interviewed for this study. Most respondents own cottages as secondary residences or income properties, however, there are significant numbers of full-time year-round residents, and a potential increase in retirees moving permanently to their cottages. This has implications for land use planning, emergency services, and coastal erosion communication and outreach.
- There is a strong attachment to cottage properties. Twenty (20) respondents owned their coastal property for over twenty years. Six (6) had cottages in the family for over 60 years.
- Erosion is clearly a significant issue for waterfront property owners along the Northumberland Strait. Of thirty (30) people interviewed, only two (2) people said erosion was not affecting their property.
- A key reason erosion is a significant issue in the study area is proximity to the water. Sixteen (16) respondents have residences or cottages less than 50 feet from the edge of the water at high tide.
- The typical pattern of erosion along Northumberland Strait cliffs is that fall storm waves hit the bottom of the cliff causing unstable overhangs. In the spring, rain pushes slick and muddy mud down the banks taking the unstable “overhanging lip” with it.
- Respondents also mentioned the dramatic erosion caused by storms and storm surges such as the December 2010 storm surges.
- Twenty-seven (27) respondents said they are carrying out activities to manage erosion on their property. Twenty four (24) are using some type of shoreline hardening method.

Table I Most common methods of dealing with erosion

<i>System</i>	Method	Number of respondents
<i>Hard</i>	Dumping Boulders	12
	Boulders dug and placed	5
	Armouring	7
	Seawall ties/wood	2
<i>Soft</i>	Boulders plus vegetation	7
	Planting vegetation; no boulders	5
	Vegetated buffer zone	5
<i>Other</i>	Setback from water	3
	Restricting access	8
	French Drains	2
	Brush and clippings	5

	over bank	
	Total responses	61

- Most respondents are receiving information about coastal erosion from their neighbours (27 respondents) or from contractors (17 respondents).
- Respondents consider the negative consequence of rock walls to be: less natural looking shoreline; loss of access. Other changes observed along beaches, such as loss of sand or beach narrowing are not generally perceived as a consequence of shoreline armouring.
- The natural setting of coastal properties is valued most highly (19 respondents). People also place a lot of value on the view, followed by their access to the water.
- For the majority of property owners, relocation is not an option (although many would if they considered it a realistic choice).
- The majority of property owners are open to the use of vegetation to manage erosion – while being quite skeptical about its effectiveness. Whether as one part of their erosion management efforts or on its own, a significant number of respondents are interested in learning more about how to use vegetation, what species work best, how and when to plant, and where to obtain the plants.
- Almost all respondents consider working with neighbours to be an important strategy in managing erosion, and in many cases, neighbours are already working together to address erosion.
- There is strong agreement (14 people) and some agreement (13 people) that there should be land use measures that prevent new cottages from being built in areas prone to erosion and storm surge damage.

Needs Assessment

There are gaps in people’s understanding of the coast as a natural interconnected system. As well, there is a lack of locally appropriate and relevant information materials. There is very little information about how plants and vegetation could be used to slow erosion, and even less information about alternative approaches to shoreline hardening. The various levels of governments do not have a clear message about coastal erosion, especially in the context of climate change adaptation. Most coastal property owners are not accessing information from government about erosion in any case. Contractors are an important resource for property owners trying to deal with erosion, and most do not have any particular training and certification on how to manage erosion.

Communication Strategy Recommendations

The heart of the communication strategy rests in empowering coastal property owners and communities to educate themselves and each other, make decisions about how to manage erosion in their communities, and implement their plans. This communication strategy will be most effective at a community level rather than as

a top-down communication from the provincial or municipal government. It should rely on locally applicable examples, techniques, images and resources. Information should be distributed through community networks, local papers, and in public places like the grocery store that everybody visits.

Government needs to play a significant role in making sure that the right information is available to community groups and coastal property owners so they can educate themselves, identify options, and make wise decisions. Furthermore, provincial and municipal governments need to clarify their messages around coastal erosion in the context of climate change adaptation so that there is a common frame within which everyone is trying to communicate about and manage erosion messages.

The key messages need to be:

- What is coastal erosion
- Living on the Coast
- Coping with erosion and coastal change
- How to (pros, cons, and "how tos" of various approaches)

There is no "one size fits all" approach to communicating about erosion. Different users will need different materials and will access them in different ways. Starting with existing communication networks, including cottage associations, neighborhoods, and working with contractors and real estate agents will be important elements of a communications strategy. A coastal erosion symposium is recommended as a means to bring together relevant stakeholders to share information and expertise, build capacity, and develop new approaches to managing erosion.

For Further Information, Jennifer Graham, Coastal Coordinator,
coastal@ecologyaction.ca