

Atlantic Region Coastal Erosion - Scientific Literature, Reports and Resource Materials

N°	Reference	Description	Province	Jurisdiction	Location	Notes
4	R.W. Shaw. 2001. Coastal Impacts of Climate Change and Sea-Level Rise on Prince Edward Island, Climate Change Action Fund project CCAF A041	In relation to coastal erosion, the study's preliminary findings estimate that : At double the present erosion rate, almost 10% of the present area of coastal properties in the study area will be lost within the next 20 years, and almost one-half in the next 100 years. In addition to its tourism value, it would appear that the very presence of the sand dune system on the North Shore is the most important land-conservation tool currently available in nature. The absence of the dune system could lead to accelerated rates of erosion in vulnerable areas.	Prince Edward Island	Prince Edward Island	http://adaptation.nrcan.gc.ca/app/figurespository/EFB5207E9FD44C289429AE00A29BFEE2.pdf	
14	Forbes,D., Parkes, G.S & al. 2004. Storms and shoreline retreat in the southern Gulf of St-Lawrence. Marine Geology, vol 210. p. 169-204	Documentation of coastal impacts from 3 storms of great severity in January and October 2000. Digital photogrammetry (1935-1990) and shore zone surveys (1989-2001) show large spatial and temporal variance in coastal recession rates, weakly correlated with the storm record, in part because of wave suppression or coastal protection by sea ice.	Prince Edward Island	Chalottetown	Marine Geology, vol 210. p. 169-204	
20	Jolicoeur, S.; O'Carroll, S.; et Cormier, M. 2005. Dynamisme des cotes sableuses, changement climatique et protection des infrastructures, îles-de-la-Madeleine, Québec. Proceedings of the 12th Canadian Coastal Conference. Dartmouth, Nova Scotia. November 6-9, 2005.	Defense structures have been erected at a few sites faced with coastal erosion, . The evolution of the coastal zone of two sites between 1950 and 2001 has been studied using CARIS GIS. The shoreline, coastline and habitats of were mapped to show the conditions of the sites before and after the the construction of defence structures.	Québec	Magdalen Islands	abstract available at : http://cgrg.geog.uvic.ca/abstracts/JolicoeurDynamismeThe.html	Article is currently under press.

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<p>21 Geo Littoral Consultants. 2004. Impacts of sea-level rise and climate change on the coastal zone of southeast New-Brunswick: Coastal Erosion sub-project. Report on Mapping the 1944 Coastal Habitats (SHEMOGUE, N.B). Department of Natural Resources, Geological Survey of Canada. 61p.</p>	<p>The coastal erosion component of this project wants to predict the areas's response to accelerated sea-level rise and new regime of storm surge by determining the physical impacts of this rise on the stability and position of shoreline. The Shemogue (southeast New-Brunswick was the site of study.</p>	<p>New Brunswick</p>	<p>Southeast New Brunswick</p>	<p>Department of Natural Resources, Geological Survey of Canada. Bedford Institute of Oceanography 1 Challenger Drive PO Box 1006 Dartmouth, Nova Scotia Canada B2Y 4A2</p>	
<p>22 Bérubé, D. and Thibault, J.J. (1998)-E. Coastal Geomorphology of Northumberland Strait, southeast New Brunswick. New Brunswick Department of Natural Resources and Energy, Minerals and Energy Division. Geoscience Report 96-2, 86 pages.</p>	<p>Between 1990 and 1995, the New-Brunswick Department of Natural Resources and Energy produced a series of 23 maps at a scale of 1: 10 000 describing the coastal geomorphology of Northumberland Strait. This report provides users with information on the history of the mapping project and the methodology used to produce the maps. Moreover, it summarizes the morphological characteristics of the coastal zone and the dynamics that affect it.</p>	<p>New Brunswick</p>	<p>Southeast New Brunswick</p>	<p>DNR Minerals Office - Bathurst 495 Riverside Drive Bathurst, NB E2A 2M4 Canada ISSN 1204-5276</p>	<p>Important</p>
<p>23 Hunter and Associates, 1982. Fundy Coastal Zone Study. Department of Natural Resources, Minerals division, New-Brunswick. General Report. 290p. Complementary report and Atlas.</p>	<p>The results of the report are contained within five topic areas: coastal process, marine and terrestrial resources, coastal land use, beach quarry activities and coastal zone management. Contained within the topic of coastal process is information on physical oceanography, coastal morphology, coastal erosion and recession, and the sediment system.</p>	<p>New Brunswick; Nova Scotia</p>	<p>Bay of Fundy Coastal Zone</p>	<p>available at the DNR Minerals Office - Bathurst 495 Riverside Drive Bathurst, NB E2A 2M4 or at the Gulf of Maine Library Collection: contact name e-mail :David.Keeley@state.me.us</p>	<p>IMPORTANT</p>

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<p>29 Chouinard, O., Desjardins, P.-M. Forgues, É. 2000. Vers une gestion intégrée du bassin versant de la baie de Caraquet. Rapport manuscrit canadien des sciences halieutiques et aquatiques 2532. Pêches et Océans, Canada. 131p.</p>	<p>Un plan de communication environnementale, conçu afin de sensibiliser les gens aux avantages d'une gestion intégrée du bassin versant, y est défini. Ce plan servira à diffuser les résultats de la recherche à tous les groupes du bassin versant et à les sensibiliser au potentiel socio-économique existant lorsqu'on envisage le développement de façon intégrée.</p>	<p>New-Brunswick</p>	<p>Caraquet</p>	<p>On line : http://www.baiedecaraquet.com/manusc.pdf</p>	
<p>30 Delusca, K., Chouinard, O., & Trambly, M. 2004. Changements climatiques et l'érosion côtière. Effets des ondes de tempêtes sur l'érosion des côtes Sud-Est du Nouveau-Brunswick. Annual Meeting of the Canadian Association of Geographers, 2004. Moncton, New Brunswick</p>	<p>Les principales conclusions sont que les opinions sont partagées entre ceux qui croient que les conditions que nous vivons est un phénomène naturel et ceux qui pensent que le phénomène de marées de tempêtes ainsi que l'accélération de l'érosion sont provoqués par les changements climatiques. En reliant les informations des savoirs locaux aux données biophysiques nous pouvons proposer des scénarios préliminaires sur les territoires plus à risques.</p>	<p>New Brunswick</p>	<p>South East New Brunswick</p>	<p>Contact author</p>	
<p>31 Delusca, K., Chouinard, O., & Trambly, M. 2005. Toward a Sustainable Local Governance Approach to Face the Effects of Sea Level Rise in the South-eastern Part of New Brunswick.</p>	<p>Involvement of communities in coastal resources management is a pre-requisite to adaptation strategies identification and implementation. The objective was to collect perception and representation of sea level rise caused by the impact of climate changes in south-east of New-Brunswick. The implication and communities engagement represent a local governance point starting. Instead of governmental and technical decisions, governance implies a far broader social act that calls on a variety of agents and values to deal with the fierce demands of global interdependence.</p>	<p>New Brunswick</p>	<p>South East New Brunswick</p>	<p>On line: http://www.sfu.ca/coastalstudies/liking/pdf/Project%2020-%20Toward_final.pdf</p>	

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<p>32 Airphoto Analysis Associates Consultants Limited (Hunter, G. T.), 1975. Beach Resources, Eastern New Brunswick. New Brunswick Department of Natural Resources and Energy, Mineral Resources Branch, miscellaneous report, 215p.</p>	<p>The study objectives include an inventory of coastal features, processes as well as an inventory of land use and its influence on coastal process. There is also a review of beach quarry activities, an analysis of beach quarry impact, an analysis of alternate sources of fine aggregate supply and finally the preparation of coastal zone concepts.</p>	<p>New Brunswick</p>	<p>Eastern New Brunswick</p>	<p>Bibliothèque Champlain library, University of Moncton, Moncton, N.B N.-B. NR 1037</p>	<p>Important</p>
<p>38 Catto, N.R., Scruton, D.A., Ollerhead, L.M.N. 2003. The coastline of Eastern Newfoundland. Can. Tech. Rept. Fish. Aquat. Sci. 2495: vii +241 p.</p>	<p>The geomorphologic scheme considers sediment texture, coastal morphology (width and slope), and the nature of the substrate. Local circumstances, including aspect, sediment type and flux, offshore bathymetry and onshore physiography, energy levels, and anthropogenic influences combine to produce numerous distinctive coastal geomorphic assemblages. In addition, the coastline has been classified and mapped in terms of the vulnerability to coastal erosion of individual segments.</p>	<p>Newfoundland and Labrador</p>	<p>Eastern Newfoundland</p>	<p>Science, Oceans and Environment Branch. Department of Fisheries and Oceans. P.O. Box 5667. St. John's NL. Canada. A1C 5X1</p>	
<p>40 Forbes, D.L., Taylor, R.B. and Shaw, J., 1989. Shorelines and rising sea levels in Eastern Canada. Episodes. 12(1) 23-27</p>	<p>This article summarizes recent work along Canada's low-lying eastern coast and its more rugged western one, which provides part of the scientific background required in order to understand and cope with changes in the coastal zone. The authors show the importance of variations, not only in sea level, but also in conditions of sediment supply.</p>	<p>Nova Scotia, New Brunswick, Prince Edward Island, Newfoundland and Labrador</p>	<p>Eastern Canada</p>	<p>Episodes. 12(1) 23-27</p>	

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<p>43 Shaw, J., Taylor, R.B., Forbes, D.L., Ruz, M.-H. and Solomon, S., 1998. Sensitivity of the coasts of Canada to sea-level rise. Geological Survey of Canada Bulletin 505. Natural Resources Canada. 79 pages.</p>	<p>An objective method is used to evaluate the sensitivity of Canadian coasts to a rise in sea level of 0.65 m by the end of next century. Based on the assumption that the intensity of impact is related to seven quantifiable variables - relief, geology, coastal landform, coastal retreat rate, sea-level trend, wave energy, and tidal range - a dimensionless index is determined for each of 2899 NTS map sheets (1:50 000 scale) that include parts of Canada's coast.</p>	<p>British Columbia; Yukon Territory; Northwest Territories; Manitoba; Ontario; Quebec; Prince Edward Island; New Brunswick; Nova Scotia; Nunavut; Newfoundland & Labrador</p>	<p>Coastal Canada</p>	<p>Bedford Institute of Oceanography, P.O. Box 1006, Dartmouth, Nova Scotia, B2Y 4A2; Ph. 902-426-3410; Fax. 902-426-4465 Jennifer.Bates@nrcan.gc.ca</p>	<p>can be ordered on line: http://geoscan.ess.nrcan.gc.ca/cgi-bin/starfinder/17583/geoscan_e.txt</p>
<p>49 Forbes, D.L., 1984. Coastal geomorphology and sediments of Newfoundland. Current Research, Part B. Geological Survey of Canada, Paper 84-1B. 11-24.</p>	<p>surficial geology/geomorphology; glacial erosion; sediment distribution; coastal studies; depositional environment; Cenozoic</p>	<p>Newfoundland & Labrador</p>	<p>Appalachians</p>	<p>Bedford Institute of Oceanography, P.O. Box 1006, Dartmouth, Nova Scotia, B2Y 4A2; Ph. 902-426-3410; Fax. 902-426-4465</p>	<p>http://geoscan.ess.nrcan.gc.ca/cgi-bin/starfinder/17583/geoscan_e.txt</p>
<p>51 Taylor, R.B. and Frobel, D., 1999. Barrier beaches and washover features Martinique Beach, Nova Scotia. Geological Survey of Canada, GSC Open File 3823. 19 pages.</p>	<p>sedimentology; surficial geology/geomorphology; beaches; barrier beaches; beach profiles; erosion; sedimentation; channel deposits; shore features; landforms; Quaternary</p>	<p>Nova-Scotia</p>	<p>Martinique Beach</p>	<p>Geological Survey of Canada (Atlantic) Bedford Institute of Oceanography, P.O. Box 1006, Dartmouth, Nova Scotia, B2Y 4A2; Ph. 902-426-3410; Fax. 902-426-4465</p>	<p>http://geoscan.ess.nrcan.gc.ca/cgi-bin/starfinder/16458/geoscan_e.txt</p>
<p>53 Forbes, D.L., Parkes, G.S., Manson, G.K. et Ketch, L.A., 2004. Storms and shoreline retreat in the southern Gulf of St. Lawrence. Marine Geology, 210 : 169-204</p>	<p>With evidence from the storms of 2000–2001, the importance of storm clustering on scales of weeks to years in determining erosion vulnerability, as well as the need for a long-term, large-scale perspective in assessing coastal stability is put in evidence. The expected acceleration in relative sea-level rise, together with projections of increasing storm intensity and greatly diminished winter ice cover in the southern GSL, implies a significant increase in coastal erosion hazards in future.</p>	<p>Prince Edward Island, New Brunswick, Lower St-Lawrence, Québec, Nova Scotia</p>	<p>Southeastern Canada</p>	<p>Marine Geology, 210 (1-4). 169-204</p>	

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<p>55 Taylor, R B; Shaw, J; Forbes, D L; Frobels, D L; Frobels, D. 1996. Eastern shore of Nova Scotia: coastal response to sea-level rise and human interference. Geological Survey of Canada, Open File 3244, 1996; 46 pages</p>	<p>sedimentology; environmental geology; surficial geology/geomorphology; coastal studies; erosion; sea level changes; coastal environment; coastal erosion; coastal management; radiocarbon dates; radiometric dates; Holocene; tides; beach deposits; drumlins; transgressions; glacial deposits; environmental impacts; anthropogenic impacts; Quaternary</p>	<p>Nova Scotia</p>	<p>Eastern shore of Nova-Scotia</p>	<p>Geological Survey of Canada (Atlantic) Bedford Institute of Oceanography, P.O. Box 1006, Dartmouth, Nova Scotia, B2Y 4A2; Ph. 902-426-3410; Fax. 902-426-4465</p>	<p>http://geoscan.ess.nrcan.gc.ca/cgi-bin/starfinder/16458/geoscan_e.txt</p>
<p>56 Taylor, R B; Frobels, D. 2001. Aerial video surveys, the coastline of Nova Scotia, part 3: Atlantic Coast (Halifax to Cape North); Geological Survey of Canada, Open File 4020, 133 pages</p>	<p>surficial geology/geomorphology; depositional environment; coastal environment; coastal studies; coastal erosion; airphoto interpretation; shore features; shorelines; shoreline changes; landforms; Quaternary</p>	<p>Nova Scotia</p>	<p>Halifax to Cap Breton</p>	<p>Geological Survey of Canada (Atlantic) Bedford Institute of Oceanography, P.O. Box 1006, Dartmouth, Nova Scotia, B2Y 4A2; Ph. 902-426-3410; Fax. 902-426-4465</p>	<p>To order online:http://geoscan.ess.nrcan.gc.ca/cgi-bin/starfinder/16458/geoscan_e.txt</p>
<p>57 Taylor, R B; Frobels, D; Sherin, A G. 2002. Aerial video surveys, Pictou County coastline of Nova Scotia. Geological Survey of Canada, Open File 4428, 2002; 73 pages</p>	<p>Marine geology; surficial geology/geomorphology; coastal studies; coastline density; coastal management; coastal erosion; shorelines; shoreline changes</p>	<p>Nova Scotia</p>	<p>Pictou County</p>	<p>Geological Survey of Canada (Atlantic) Bedford Institute of Oceanography, P.O. Box 1006, Dartmouth, Nova Scotia, B2Y 4A2; Ph. 902-426-3410; Fax. 902-426-4465</p>	<p>To order online:http://geoscan.ess.nrcan.gc.ca/cgi-bin/starfinder/16458/geoscan_e.txt</p>
<p>59 J. Shaw, R.B. Taylor, D.L. Forbes, M.-H. Ruz, and S. Solomon, 1998. Sensitivity of the Coasts of Canada to Sea-level Rise. Geological Survey of Canada Bulletin 505. Ottawa.</p>	<p>Two major regions of high sensitivity are identified: Atlantic Canada and parts of the Beaufort Sea coast. Also shown on this map are the expansions of the submerging areas in Canada's coasts.</p>	<p>Nova-Scotia, New-Brunswick, PEI, Newfoundland</p>	<p>Atlantic Canada</p>	<p>Geological Survey of Canada Bulletin 505. Ottawa.</p>	

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60	Martha McCulloch, Maritimes Weather Centre (902) 4. 2000. Sea Level Rise and Climate Change: Impacts and Adaptation Needs Prince Edward Island: A Case Study.	The impacts of rising sea levels can include more frequent and expanded flooding during severe storms and high tides, accelerated coastal erosion, more frequent breaching of coastal barriers and damage to coastal infrastructure. This study will focus on the climatology of storm surges and sea ice in the southwestern Gulf of St. Lawrence, determine the longer term possible impacts of climate change on ice cover, define vulnerability and hazard zones, develop models of extreme sea level and storm surge scenarios under warmer climate conditions, examine economic costs and develop adaptation strategies	Prince Edward Island	Prince Edward Island	on line	
61	Paone, L., 2003. Hazard sensitivity in Newfoundland coastal communities - Impacts and adaptations to climate change: A case Study of Conception Bay South and Holyrood, Newfoundland. Master's of science thesis. Memorial University of Newfoundland. 164p.	A coastal hazard vulnerability assessment was conducted for the communities of Conception Bay South and Holyrood, in order to determine their present sensitivity to the impacts of natural coastal phenomena. A primary product of this analysis was the construction of a detailed GIS-based hazard assessment map, quantifying the vulnerability of each point in the coastal zone.	Newfoundland	Conception Bay South-Holyrood	Memorial University of Newfoundland	
62	Rapport d'analyse environnementale: Projets de protection des berges en Gaspésie le long de la route 132 sur le territoire de la Municipalité de Maria, de la Paroisse de Saint-Siméon et de la Ville de Bonaventure. Dossier 3211-02-169	Le rapport justifie les mesures d'adaptation qui ont été choisies par le département des transports du Québec pour la protection de l'autoroute 132 contre l'érosion côtière. L'analyse porte sur 3 municipalités qui longent le golfe du St-Laurent: Maria, Saint-Siméon et Bonaventure.	Québec	Municipalité de Maria, baie de Cascapédia, saint siméon et Bonaventure	gouvernement du Québec, ministère des Transports du Québec.http://www.mddep.gouv.qc.ca/evaluations/decree/2005/956-2005.pdf	
63	Boczar-Karakiewicz, B., Drapeau, G., Long, B. 1984. Modélisation des barres sableuses littorales de la partie nord des îles-de-la-Madeleine. Sciences et techniques de l'eau. Vol 17 (1).	This model explains the mechanism of bar formation by a process of interaction between progressive and non-linear surface waves and a movable bed. Model results indicate the number, position and crest to crest distances in a multiple bar system depending on incident wave parameters and mean bed slope gradients.	Québec	Northern Magdalen Islands	INRS-Océanologie, 310 av. des Ursulines, Rimouski (Québec) G5L 3A1	

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64	O'Carroll, S. 1996. Sensibilité du littoral du Nouveau-Brunswick au recul du trait de côte. Rapport dans le cadre de l'activité du stage en milieu de travail, maîtrise en sciences de l'environnement, Université du Québec à Montréal. 45p	In this report, a map (1:500 000) shows vulnerable regions of new-Brunswick to coastal erosion. The local variabilities are put into light and show that the coastal littoral of New-Brunswick does not respond homogeneously to factors who influence sensitivity to coastal retreat.	New Brunswick	New-Brunswick	Department of natural resources and energy, Bathurst, N.B.	
65	O'Carroll, S., Jolicoeur, S. 2001. Caoudeyres et évolution géomorphologique des dunes littorales: le cas de la dune active du secteur des Sillons (Dunes du Sud, Iles-de-la-Madeleine, Québec Z.Géomorph. N.F., 45(3). 373-384.	The 1963-1995 evolution of active dunes of the Sillons sector was studied. Two types of successions were identified during this period: (1) the development of individual and then coalescent blowouts in the second and third active dune ridges, followed by the erosion and breaching of the foredune, or (2) the development of individual and then coalescent frontal blowouts, leading to the general retreat of a dune cliff and to the development of residual landforms.	Québec	Southern Magdalen Islands	Not available on line. Contact Authors or journal	
66	Bruce, J. 2002 Consequence Analysis of Storm Surge in the Charlottetown, Prince Edward Island Area	The result of the CATS modelling indicates that a high diurnal tide and a predicted surge level of one metre, similar to that forecasted for the winter storm of 1998, is the most probable event that is likely to impact on Charlottetown. precautionary and protective measures were developed and tabulated in the form of a response guide for use in emergency operations centres	Prince-Edward-Island	Charlottetown	http://ww3.psepc.gc.ca/research/resactivites/natHaz/SAIC_2001D005_f.pdf	
67	Webster, T., Forbes, D., Dickie, S., Shreenan, R. 2004. Using topographic lidar to map flood risk from storm-surge events for Charlottetown, Prince Edward Island, Canada. Can. J. Remote Sensing, Vol. 30, No. 1, pp. 64-76, 2004.	Vectors depicting the storm-surge water lines for the three flood scenarios were implemented on the geographic information system (GIS) in the city planning department and overlain on property boundary and assessment layers. This study demonstrated that validated DEMs derived from airborne lidar data are efficient and adequate tools for mapping flood risk hazard zones in coastal communities.	Prince Edward-Island	Charlottetown	online: http://agrg.cogs	

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<p>68 Giangioppi, M. (2004)-F; supervised by S. Jolicoeur and D. Bérubé. <i>Variation du trait de côte et impact géomorphologique des tempêtes dans la cellule sédimentaire de la Flèche de Bouctouche, sur le littoral sud-est du Nouveau-Brunswick, entre 1945 et 2001</i>. University of Moncton (Moncton Campus), Environmental Studies. Master Thesis, 123 pages.</p>	<p>A study of Geomorphological changes of the Bouctouche spit during storms. The results show that the proximal and median dune front as well as the beginning of the distal area is retreating whereas it is moving forward in the south region of the distal part. No changes have been reported on the side of the lagoon since 1945.</p>	<p>New Brunswick</p>	<p>Bouctouche spit</p>	<p>University of Moncton library</p>	
<p>69 Giles, P. T., 2002. <i>Historical Coastline Adjustment at MacVanes Pond Inlet, Eastern Prince Edward Island</i>. The Canadian Geographer, v. 46, no. 1, pp. 6-16.</p>	<p>MacVanes Pond is located between Basin Head Harbour and South Lake, all three of which were once lagoons connected to the same tidal circulation system. Sand barrier retreat has closed the connection to Basin Head Harbour and it is now a separate body of water. Meanwhile, the location of a tidal inlet at MacVanes Pond has been strongly influenced by longshore drift and the inlet has closed, re-opened to the northeast, and subsequently shifted to the southwest. Human activities in the area have previously been, and will continue to be, affected by sea level rise and transgression</p>	<p>Prince-Edward-Island</p>	<p>MacVanes Pond, located between Basin Head Harbour and South Lake</p>	<p>The Canadian Geographer. 46(1) p. 6-16.</p>	
<p>70 Giles, P. T and S.B. McCann, 1997. <i>Foredune development on Iles de la Madeleine (Quebec)</i>, Atlantic Canada. Canadian Journal of Earth Sciences, v. 34, no. 11, pp. 1467-1476.</p>	<p>Foredune erosion and retreat is occurring at an average rate of 0.8 m a-1. The marked differences in dune character between the west and east coasts of the islands are related to differences in wave energy and shoreline dissipativeness. The higher energy west coast exhibits more dynamic dunes with more frequent blowouts, which may develop into parabolic forms.</p>	<p>Québec</p>	<p>Magdalen Islands</p>	<p>Canadian Journal of Earth Sciences, v.34, no. 11, pp. 1467-1476.</p>	

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<p>71 Giles, P. T. and M.C. King, 2001. Les Sillons: A relict foredune plain. The Canadian Geographer, v. 45, no. 3, pp. 437-441. (Canadian Landform Example 42)</p>	<p>This article explains the sedimentary features of Les Sillons, Magdalen Islands. It shows that sand from eroded ridges is now being piled on adjacent relict foredune ridges further inland. At the landward side of the plain, rising sea level has submerged the lower ridges, leaving only the higher crests above water, and created bogs that become wider and deeper closer to the lagoon edge marking the western limit of the complex. Not only does the morphology of Les Sillons indicate previous conditions of progradation and moderate to high sediment supply, it also appears to have preserved a record of rising sea level.</p>	<p>Québec</p>	<p>Magdalen Islands</p>	<p>The Canadian Geographer, v. 45, no. 3, pp. 437-441. (Canadian Landform Example 42)</p>	
<p>72 Berube, D.; and McLean, B. 2004. Implication of coastal processes in recent archaeological discoveries at Youghall Beach Park, on the northeast coast of New Brunswick. 2004 Annual Meeting of the Canadian Association of Geographers. Tuesday, May 25 – Saturday, May 29, 2004. Jointly organised by Université de Moncton and Mount Allison University. Moncton, New Brunswick.</p>	<p>The analysis of old coastal maps has confirmed that, despite the rapid sea-level rise in the region (20-40 cm/century), this spit has been stable over the past two centuries. On the other hand, our analysis of recent aerial photos has showed that a portion of the spit, located on the down drift side of a groin field, has been greatly affected by coastal erosion processes over the past three decades. The recent discovery of a large number of artifacts by beach combers has been directly associated with this phase of rapid coastline retreat.</p>	<p>New-Brunswick</p>	<p>Youghall Beach, Bathurst</p>		
<p>73 Chiasson, M. 2000. Développement d'un plan de suivi environnemental pour la flèche littorale de Bouctouche (Nouveau-Brunswick). Masters thesis. Environmental studies. Université de Moncton, Moncton (N.-B.), 221 p.</p>	<p>L'objectif de cette recherche est de développer un plan de suivi environnemental qui permettra aux travailleurs de l'éco-centre Irving de reconnaître des changements sur la flèche de bouctouche qui découleraient des activités touristiques, des activités d'entretien et de recherche. Les types d'indicateurs qui ont été choisis sont des facteurs biologiques, abiotiques et provenant d'influences extérieures.</p>	<p>New Brunswick</p>	<p>Bouctouche</p>	<p>Université de Moncton Library /bibliothèque Champlain QH 541.5 S26 C35 2000.</p>	

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<p>74 Bérubé, D., Olsen, L. 1998. Geomorphological Evolution of Grande Plaine, Miscou Island, Northeast Coast of New-Brunswick. Department of Natural Resources and Energy. Proceedings of the 2001 Canadian Coastal Conference. May 16-19, Université Laval, Québec.</p>	<p>Surveying works have shown that the position of the upper limit of the back beaches (altitude of 0,5 m) implies that the mean sea level in the region has risen at least 1M since 2000 BP. These new data on the geomorphological evolution of the plain are essential to guide future tourism development and ensure that geological integrity of this site will be preserved.</p>	<p>New Brunswick</p>	<p>Miscou Island</p>	<p>DNR Minerals Office - Bathurst 495 Riverside Drive Bathurst, NB E2A 2M4 Canada</p>	
<p>75 O'carroll, S., Bérubé, D. 1997. Options de restauration de la dune de LeGoulet, Nouveau-Brunswick: une étude géomorphologique. Ministère des ressources naturelles et de l'énergie du Nouveau-Brunswick, division des ressources minières et énergie. Dossier public 97-9. 43 p.</p>	<p>In 1996, the geomorphology of LeGoulet dune was mapped in order to establish restoration options. 23 major erosional forms have been identified on the dune (12 notches, 7 breaches, 4 blowout). The authors recommend LeGoulet's village council to restore the antropogenic forms of erosion first. This can be performed by using snow fences as sand traps.</p>	<p>New Brunswick</p>	<p>LeGoulet</p>	<p>DNR Minerals Office - Bathurst 495 Riverside Drive Bathurst, NB E2A 2M4 Canada</p>	
<p>76 O'Carroll, S., Bérubé, D., Forbes, D. 2003. Quantifying Recent (1944–2001) Coastline Position Change in Southeast New-Brunswick Using GIS: Results from the Shernogue, l'aboiteau and Cocagne Study Sites.</p>	<p>The «Coastal Erosion» component of this major project consists of measuring rates of coastline change in order to predict future coastal zone response to accelerated relative sea-level rise scenario. Using a GIS, a multi-year aerial photograph analysis (1944, 1953, 1963, 1971, 1982, 1996 and 2001) has been executed on approximately 70 km of varied coastline (beaches, dunes, salt marshes, sandstone and till cliffs). The superimposition of these georeferenced maps serve as a tool to measure coastline position change.</p>	<p>New Brunswick</p>	<p>Southeast New-Brunswick</p>	<p>DNR Minerals Office - Bathurst 495 Riverside Drive Bathurst, NB E2A 2M4 Canada or Geological Survey of Canada. Bedford Institute of Oceanography 1 Challenger Drive PO Box 1006 Dartmouth, Nova Scotia</p>	
<p>77 Catto, N. 2002. Anthropogenic pressures on coastal dunes, southwestern Newfoundland. Canadian geographer, vol 46 (1). 17-33.</p>	<p>Sand-dominated coastlines backed by transverse foredunes, dome dunes, and parabolic dunes occur at several sites along the coastline of southwest Newfoundland Canada. Recent changes in the geomorphology of these coastlines provide evidence of the impact of anthropogenic activity</p>	<p>Newfoundland and Labrador</p>	<p>Southwest Newfoundland</p>	<p>Canadian geographer, vol 46 (1). 17-33.</p>	

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<p>78 Taylor, R., Frobela, D. 2003. Rapid Transformation of Upper Beach Characteristics along Breached Coastal Barriers, Atlantic Nova-Scotia. Canadian Coastal Conference 2003.</p>	<p>During periods of barrier continuity, the upper beach can be transformed from a gravel ridge to a new duneline within 10 years. The sequence of steps involved in the initiation of a breach to its closure is outlined, as well as the role of sand versus gravel during the process of landward barrier migration. The presence of breaches, open or closed, is a warning for planners and has implications for existing and future infrastructure.</p>	<p>Nova Scotia</p>	<p>Cherry Hill Beach</p>	<p>http://www.cciw.ca/ccsea/cc03pr oc/Taylor.pdf</p>	
<p>79 Catto, N.R. 1994. Coastal evolution and sea level variation, Avalon Peninsula, Newfoundland: Geomorphic, climatic, and anthropogenic variation. Coastal Zone Canada '94, 'Cooperation in the Coastal Zone': Conference Proceedings. Edited by: P.G. Wells and P.J. Ricketts. Coastal Zone Canada Association, Bedford Institute of Oceanography, Dartmouth, Nova Scotia. Issue 4. 1785-1803.</p>	<p>Detailed investigations and ongoing monitoring at several sites along Conception, Trinity, St. Mary's, and Placentia Bays, and on the open Atlantic shore, have revealed that recent local anthropogenic activity, in conjunction with geomorphic factors and climatic changes, has resulted in significant changes in the morphology and sedimentary regimes of almost all the sites studied. The combination of transgression-induced erosion and local anthropogenic activity, in conjunction with increased development of winter ice foot conditions along all shores during the last 5 years, has resulted in a general coarsening of the beach textures, an increased sensitivity to large storm events, and changes in morphology of most Avalon shorelines</p>	<p>Newfoundland and Labrador</p>	<p>Avalon Peninsula</p>	<p>Bedford institute of Oceanography</p>	
<p>81 Catto, N.R. Anderson, M.R, Scruton, D.A., Meade, J.D., Williams, U.P. 1999. Shoreline Classification of Conception bay and adjacent areas. Can Tech. Rep. Fish. Aquat. Sci. 2274: v + 72p.</p>	<p>This report classifies the shoreline in the Conception bay region, extending from whiteway Bay (Trinity Bay) to Cape Spear, based on study of the 1981 videotape survey held by the department of Fisheries and Oceans, aerial photograph analysis and site visit.</p>	<p>Newfoundland and Labrador</p>	<p>Conception Bay and adjacent areas</p>	<p>Memorial University of Newfoundland</p>	
<p>83 Shaw, J., Taylor, R.B., Solomon, S., Christian, H.A., Forbes, D.L. 1998, Potential Impacts of Global Sea Level Rise on Canadian Coasts. The Canadian Geographer, vol 42. 365-379.</p>	<p>The sea-level rise that may result from global climate change is placed within the context of past and present sea-level changes on Canadian coasts. To assess future impact, a dimensionless index of sensitivity is determined.</p>	<p>New Brunswick, Nova Scotia, Prince Edward Island, Newfoundland, Québec</p>	<p>Canada</p>	<p>Canadian geographer vol 42. 365-379. OR PRO-QUEST</p>	

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85 Taylor, RB., Wittmann, S.L., Milne, M.J., Kober, S.M. 1985. Beach Morphology and Coastal Changes at Selected sites, Mainland Nova Scotia. Geological Survey of Canada. Paper 85-12.	A network of sixteen shore bluff sites and seventeen beaches along the mainland coast of N.S. The physical characteristics and recent evolution for eight of the beaches were documented and a complete bibliography of previous coastal research along mainland Nova Scotia was compiled	Nova Scotia	Nova Scotia	Dalhousie University Library or Geological Survey of Canada Libraries	
86 Parlee, K.A., 2004. The Highs and Lows of Water Level: The Vulnerability of Coastal Communities to Water Level Change, Proceedings from C-CIARN Coastal Zone Workshop 2003; C-CIARN Coastal Zone Report 04-1, 16 p.	Some of the issues addressed at the workshop are the effects of changing water levels on coastal infrastructure, utilities, property and community development, as well as implications of water level changes to human safety, disaster mitigation, cultural resources, tourism and recreation, property values, insurance, and legal and jurisdictional issues. This report summarizes the general discussion of the working group sessions and presents the priority needs, knowledge gaps and recommendations for action that were generated.	All coastal provinces in Canada	Canada	http://ciarn.bio.ns.ca/documents/CZReport04-1_e.pdf	
87 Ricketts, P. 1988. Shoreline Changes and Associated Coastal Management Issues in the Maritime Provinces. In Day, D. Geological Perspectives on the Maritime Provinces. St Mary's University , Nova Scotia.	This paper provides an overview of the physical diversity of the coasts of this region, together with an assessment of the major coastal management issues facing the maritime Provinces today.	New Brunswick, Prince Edward Island, Nova Scotia, Newfoundland and Labrador	Maritime provinces	Université de Moncton Library	
88 Bowron, T.M., J. Graham, and M. Butler. 1999. Community and Social Considerations in Salt marsh Restoration Work in Nova Scotia. Ecology Action Centre, Halifax, NS. ISBN 0-9683068-4-5	An examination of the ecological, community and social considerations in salt marsh restoration work in the Nova Scotia portion of the Bay of Fundy. Provides an introduction to the ecology of salt marshes, the threats to and impacts of human activities, community based restoration, community concerns and restoration issues, and recommendations for undertaking salt marsh restoration. Intended for a broad audience.	Nova Scotia	Bay of Fundy	Ecology Action Centre 1568 Argyle Street, Suite 31 Halifax, NS B3J 2B3 Tel: (902) 429-2202 Fax: (902) 422-6410 Website: www.ecologyaction.ca Email: coastal@ecologyaction.ca	