

The Canadian Coastal Conference 1980

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The Canadian Coastal Conference 1980

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The conference, held in Burlington April 22-24, 1980, was sponsored by the National Research Council's Associate Committee for Research on Shoreline Erosion and Sedimentation (ACROSES). The goal was to promote a greater awareness of the scientific and engineering research, presently being carried out in Canada, on the materials and processes which interact in the coastal environment. The national focus of the conference was deliberately chosen to highlight the uniqueness which characterizes many areas of Canadian coastal research. In addition to the presentation of papers, the conference's daily schedule included workshop sessions where participants were given the opportunity to discuss coastal research and engineering programmes now in progress or planned. Poster presentations were also on display throughout the conference.

The conference was attended by 140 registrants, and 32 formal papers were presented. From a geographic point of view, the papers covered all the four coasts of Canada (Atlantic, Great Lakes, Pacific, and Arctic), and in subject matter, most of the disciplines represented in coastal research, such as coastal engineering, nearshore sediments, coastal hydrodynamics, paleoenvironments, and shoreline geotechnique.

Although the papers presented were diverse in content, they can be subdivided, for all practical purposes, into two main groups: descriptive papers, dealing with spatial trends and distributions of landforms or sediments, and analytical papers attempting to quantify coastal processes. This grouping does not include the few papers given on other aspects such as shorelands management policy formulation, offshore island construction for petroleum drilling

in Arctic Canada, and criteria for break-water construction materials.

Looking at the category of descriptive papers several papers are worthy of note. Martini's paper used a study on the western shore of James Bay to demonstrate the role of ice in creating and destroying nearshore sedimentary structures. He discussed why such features, visible in very recent deposits, are not normally preserved in older analogous deposits. Drapeau used marine charts and aerial photographs to present a well-documented sequence (dating back to the 19th century) of the shoreline evolution of a section of the Magdalen Islands, and was able to define nodal points of minimal change at quasi-regular spacing along the shoreline, and to postulate on the existence of sediment sources outside the segment. The futility of unplanned channel dredging through the barrier island coastline of New Brunswick was vividly demonstrated by Reinson and Frobel. Work on several beaches along the Pacific coast of British Columbia by Harper indicated the presence of a regular winter-summer movement of the beach profile in response to changing patterns of wave approach. Finally, Amos and Greenberg were able to demonstrate, using Landsat imagery, the usefulness of a model designed to predict the sedimentation and suspended material concentrations resulting from constructing a tidal barrage across an estuary in the Bay of Fundy.

In the category of analytical papers a significant number dealt with either direct measurement of coastal processes or using mathematical models to predict such processes. For instance, Donelan presented a new technique, based on similarity theory, for forecasting wave characteristics in restricted bodies of water. This represents a significant improvement over other techniques presently in use. Several papers, (Symonds and Huntley; and Bowen, for example) described field experiments and preliminary measurements of nearshore process parameters. Coakley combines such measurements with suspended profiles to obtain total sediment flux estimates in the surf zone. One of the other noteworthy papers of this type was by Davidson-Arnott and Askin on an experiment to obtain direct measurements of the subaqueous erosion of glacial clay till substrates in the nearshore zone under wave action.

In the workshop sessions, a highlight was a description by Madam Ying Wang of the People's Republic of China (on a temporary exchange visit at Dalhousie University, Halifax) of coastal research

and mapping in that country. This represented for many attendees, a first look at the broad range of coastal types represented in the Chinese coastline.

The Proceedings of the Canadian Coastal Conference are now in press and are expected to be available by late summer or early fall of this year.

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