Natural Hazard Research

A SELECTED BIBLIOGRAPHY OF COASTAL EROSION, PROTECTION AND RELATED HUMAN ACTIVITY IN NORTH AMERICA AND THE BRITISH ISLES

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PREFACE

This paper is one in a series on research in progress in the field of human adjustments to natural hazards. It is intended that these papers will be used as working documents by the group of scholars directly involved in hazard research as well as inform a larger circle of interested persons. The series is now being supported from funds granted by the U.S. National Science Foundation to the University of Chicago and Clark University. Authorship of papers is not necessarily confined to those working at these institutions.

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INTRODUCTION

This bibliography has largely been compiled from articles appearing in a small number of semi-specialized periodicals. Six of these major sources have been listed, together with other pertinent information, in Appendix I.

Citations have been divided into three broad categories. A) physical background to coastal erosion;

B) nature and control of coastal erosion; and C) human dimensions of coastal erosion. Although it is not possible to treat these as mutually exclusive groupings, there is a significant degree of internal consistency within the divisions.

In an attempt to facilitate contrasts between differing national perspectives on coastal erosion, some sectors of the material have been further divided into three subgroups (i.e., i) general; ii) North America; and iii) British Isles).

Finally, a short second appendix has been added to provide some data on the legal bases for public policy decisions on questions involving coastal erosion.

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FOR HIS CHEET STOP

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A.] PHYSICAL BACKGROUND TO COASTAL EROSION

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APPENDIX I

Major Information Sources for Coastal Erosion and Protection Studies

1) Shore and Beach

The journal of the American Shore and Beach Preservation Association (organized 1926). Published semi-annually, \$4 annually.

Address -- P.O. Box 1246

Rockville, Maryland 20850

It contains short, non-technical articles on current U.S. problems and frequent discussions of federal protection projects.

2) The Dock and Harbour Authority

Described as "an International Journal with a circulation extending to 97 maritime countries," this periodical is published monthly; price 3 shillings (36 cents).

Address -- Foxlow Publications Ltd.

19, Harcourt Street,

London W.1.

Since this publication is chiefly concerned with the operation and construction of shipping facilities, it usually contains meagre amounts of data on coastal erosion and protection.

However, because it is the closest British counterpart to Shore and Beach, its summaries of the Hydraulic Research Laboratory's annual reports and occasional notes on protection progress are worthwhile.

3) Coastal Engineering

Proceedings of the conference on coastal engineering.

Published by the American Society of Civil Engineers; annual price \$12 (2 volumes).

Address -- United Engineering Center
345 East 47th Street
New York, N.Y. 10017

Although both volumes contain pertinent information, the second is perhaps better suited to the needs of researchers interested in human response and the merits of alternative protection schemes. Overall, the emphasis is strongly technical with upto-date comments on protective devices. Because the conference is held in a different nation every year, the locale of case studies varies considerably between volumes.

4) Engineering Progress at the University of Florida

A monthly publication, usually free.

Address -- Florida Engineering and Industrial
Experiment Station
College of Engineering
University of Florida
Gainesville, Florida

Although not all issues contain useable information, many recent numbers have been devoted, completely or in part, to the problem of coastal erosion. Treatment is not as narrowly technical as the title suggests, covering statements of non-structural adaptations as well as purely mechanical responses.

5) Coastal Studies Series, Louisiana State University

This series records the results of primarily geomorpholog' research at the Coastal Studies Institute, Louisiana State
University. Published irregularly, various prices.

Address -- Louisiana State University Studies

Coastal Studies Series

Louisiana State University Press

Baton Rouge, Louisiana

While weak on human dimensions of coastal erosion, the series has produced several notable documents including a well filled Bibliography on Beach Features and Related Nearshore Processes.

6) Publications of the Coastal Engineering Research Center.

This organization and its predecessor, the Beach Erosion Board, have published several serials including the Annual Bulletin and Technical Memorandum. The latter is irregular and variously priced.

Address -- Corps of Engineers, U.S. Army

Coastal Engineering Research Center

5201 Little Falls Road, N.W.

Washington, D.C. 20016

As the premier public agency responsible for conducting research into, and constructing defense systems against, coastal erosion problems, the C.E.R.C. is a mine of information. Particularly valuable are the summaries of Beach Erosion Control Studies and Reports transmitted to Congress, which are carried in the Annual Bulletin. A complete listing of the studies completed to date may be obtained from the above address. It should also

be noted that these Beach Erosion Control Studies are vital data sources for any field researcher. They are generally catalogued as the sample entry shows:

U.S. Congress, U.S. Documents and Papers

Santa Barbara, California. Beach Erosion

Control Study 80th Congress, 2nd Session.

House Document 761 Washington 1948.

APPENDIX II

Coastal Erosion and the Law

U.S.A. (Federal)

Under provisions of the statutes noted below, the U.S. government has moved from a position of advice and research (1930), to one of construction, conservation (through beach nourishment schemes), and research for all areas of the coast --public or private--which bear upon the public interest.

The relevant statutes are:

Public Law 520, Seventy-first Congress, 1930

Public Law 166, Seventy-ninth Congress, 1945

Public Law 727, Seventy-ninth Congress, 1946

Public Law 826, Eighty-fourth Congress, 1956

Public Law 874, Eighty-eighth Congress, 1963

U.S.A. (States)

Of the twenty-two states possessing coastlines on the oceans or Great Lakes, Maine, New Hampshire, Georgia, Louisiana, and Oregon have virtually no beach or shore protection laws. It is generally agreed that six states possess adequate legal provisions in this sphere.

- 1) Massachusetts--Chapter 91, Massachusetts Statutes.
- 11) New York--Chapter 535, Laws of New York.
- 111) Florida-Section 253.03, Florida Statutes 1931
 Section 158, Florida Statutes 1941
 Section 57.362, Florida Statutes 1957
 Section 57.791, Florida Statutes 1957

- iv) California -- Section 330-334, State Water Code.
 - v) Ohio--Chapter 1507, Ohio Statutes.
- vi) Michigan--Act 44, 1952 Act 278, 1952

The British Isles (England and Wales)

Although a variety of legislation covering land drainage and flood prevention (including coastal floods) is in existence, responsibility for protecting the coast and controlling coastal erosion rests with local government agencies. Construction is generally accomplished through the local authorities on the basis of political jurisdictions. Relevant national legislation includes:

Land Drainage Act, 1930, 20 and 21 Geo 5, Chapter 44.

River Boards Act, 1948, 11 and 12 Geo 6, Chapter 32.

Coast Protection Act, 1949, 12 and 13 Geo 6,

Chapter 74.

Coastal Flooding (Emergency Provisions) Act, 1953, 1 and 2 Eliz 2, Chapter 18.

Land Drainage Act, 1961, 9 and 10 Eliz 2, Chapter 48.