

Occasional Paper
No.12



THE SHOREZONE: AN ANNOTATED BIBLIOGRAPHY

by
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and
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B56
1976

■ November, 1976



Environment
Canada

Environnement
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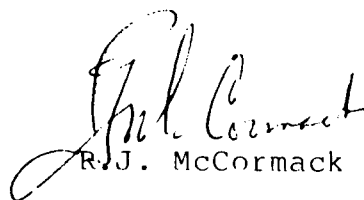
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PREFACE

The subject of shorezone management is of critical importance to Canadians. Canada's over 150,000 miles (240,000 kilometers) of salt-water shoreline and its associated offshore waters and backshore, to say nothing of the shorezones of our almost countless rivers and lakes, are fast becoming the major theatre of environmental - development conflict. To the environmentalist the shorezones are crucial because they act as sinks in which the nutrients of the uplands are combined with those of the coastal waters to produce areas of very high biological productivity - sometimes as much as ten times that of our richest lands.

To the developer, on the other hand, the often gently sloping shorelands and shallow offshore waters of the shorezone offer the best conditions for the construction of transport routes, port facilities, industrial complexes and housing developments.

Obviously both the developer and environmentalist are right. The problem of determining which point of view is more "correct" in any given situation is one that will occupy some of Canada's best minds for many years to come. We are presenting this paper, prepared by J. Bloomfield and P. Harrison, not in the hope of solving the problem, but in the hope of shedding light on it.



R.J. McCormack

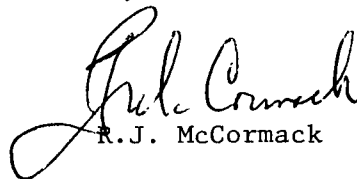
Director General

PREFACE

La question de la gestion du littoral est d'une extrême importance pour les Canadiens. Il y a au Canada plus de 150,000 milles (240,000 kilomètres) de zones littorales, plus leurs arrière-pays et leurs eaux bordières, sans parler des innombrables rives de nos lacs et rivières. Toutes les zones littorales sont à l'heure actuelle le théâtre de sérieux conflits entre la protection de l'environnement et le développement de ces dernières.

Pour les environmentalistes, les zones littorales sont cruciales: elles sont un réservoir dans lequel les éléments pédologiques des terres situées en amont s'associent à ceux des eaux côtières; il en résulte une très forte productivité biologique, celle-ci étant parfois dix fois plus élevée que celle accusée par les meilleures terres.

D'autre part, les développeurs y voient des rivages en pente douce et des eaux bordières peu profondes offrant des conditions meilleures pour les transports, les installations et opérations portuaires, les complexes industriels et les constructions domiciliaires. Tous, environmentalistes ou développeurs ont, bien entendu, raison. Comment déterminer, dans des cas précis, quel point de vue doit supplanter l'autre est un problème qui va monopoliser un effectif substantiel parmi les meilleurs cerveaux canadiens pendant de nombreuses années. Nous présentons ce travail effectué par J. Bloomfield et P. Harrison, dans l'espoir, non de résoudre ce problème, mais bien de l'éclairer.



R.J. McCormack

Directeur général

1. Introduction

Canada's coastline is one of the longest in the world, and the numerous lakes across the country add significantly to the amount of "shorezone" possessed by the nation. It could be said that the very juxtaposition of land and water whether along rivers, around lakes, or beside oceans forms a distinctive element of the Canadian landscape. It is a landscape which has fashioned modes of living and which has profoundly affected the development of Canadian civilisations. The interface between land and water has played a very important role historically, not only in terms of access to the depths of the continent, but also as a basis for economic and cultural survival. The culture of the Haida Indian, for example, was intimately tied to land (forest), river, and ocean. For the Haida the shorezone represented the totality of a balanced relationship between man and his environment. Similarly, other groups whose cultures differ from that of the Haida have also derived their means of existence and sustenance solely from coastal waters and coastal land.

Despite rapid changes in the structure and distribution of population and in the process of resource use and industrialisation, Canada relies more and more extensively upon its shorezone. Transport systems, industrial enterprises, and entire urban areas may well depend upon the coastal system to an extent greater than that at any earlier period in time. There seems to be no reason to suppose that this reliance will decrease. Indeed, actual and potential development of offshore resources adds to the importance which the

zone plays both for the country as a whole and for individual communities in particular.

The focusing of a great proportion of Canadian economic and cultural activity within coastal areas, however, gives rise to certain problems which have yet to be extensively analysed - or controlled. The shorezone, according to most commentators in the field, is at once one of the most productive of ecosystems and one of the more delicate. Since it is also an attractive place for urban and industrial development and for leisure activities and recreation, most of the environmental problems which can be identified in the rest of the nation tend to exist in the shorezone - and sometimes to a greater extent. When one combines this situation with the varying degree to which the coastal ecosystem can withstand the influence of human activity, it seems evident that the shorezone can be identified as a major environmental unit worthy of more than passing consideration. Indeed, one could go further and suggest that the peculiar combination of environmental pressures found within the coastal zone have been largely ignored and that concern over coastal development should acquire priority status. This has happened in certain countries within the past few years (principally in the United States) where legislative control of coastal development has become increasingly evident. Certain provinces within Canada have likewise taken steps to control the pattern and intensity of coastal development.

If it is accepted that the shorezone is the focus of many of today's environmental problems, then the question can be asked - to what extent does this area differ from any other? Land management has been effective in controlling certain land use problems, and

water management techniques are being continually refined. It would be tempting to say, therefore, that the problem of coastal use and development is also being effectively tackled - all that is needed is to apply land management practices and water management practices separately. Unfortunately to do so would be to ignore the fundamental difference between the shorezone and land and water considered separately. The very juxtaposition of land and water can be seen, in many instances, to create problems of a more complex nature than simple land-based problems. In other words the fact that water and land meet within the zone leads to a symbiotic relationship which is peculiar to the land-water interface.

2. Property rights

An immediate contrast between land and water is the different means of allocating their use among various users and user groups. Private ownership of land - for example cottage lots or industrial parks - is the normal method of property right definition. The public sector, via crown ownership or direct purchase of noncrown land, may return some of this land to more general public consumption. The most effective way of doing this is via the recreation sector. Tidal shorelands are generally in the public domain, as is the water body itself. Decisions concerning the use of these shorezone resources are presumably made in a very different forum than those concerning land use. Consequently, controlling only the development of the land portion of the shorezone is not necessarily sufficient in terms of controlling water uses. Likewise the control of water uses does not necessarily reduce or even affect those

problems which have their origin on the land. It would seem necessary, therefore, to consider the problem of managing the zone as a complete unit. The question of property rights differences thus gives rise immediately to that of public jurisdiction over the resources which compose the shorezone.

3. Jurisdiction

The public control over the use of shorelines and the shorezone in general is highly disparate. Municipal, provincial and federal institutions may all, at one and the same time, be involved in controlling land-based and water-based activities. Land use control agencies for example are equally as relevant as those involved in fisheries regulation. Similarly, extensive legislation is already in existence which affects the way in which individuals, both public and private, "consume" the various elements of the coastal system. The legal basis for institutional action is far from lacking, and some would argue that the shorezone is in some ways over managed. In the case of the Canadian federal system the jurisdictional question would seem to be a problem of co-ordination between existing institutions such that sources of problems can be controlled rather than just the problems themselves.

4. Conflict

Differences in property right systems between land and water, and the sometimes hazy or inflexible definition of jurisdiction by public institutions mean that certain groups may sometimes interfere (quite

legally) with the activity of others. In other words coastal uses, whether land or water based, can be quite incompatible: certain land uses may be highly detrimental to water uses and vice versa.

Incompatibility is not always a problem, but in certain instances it may be so great that conflict arises between resource users.

Conflict in this sense would mean that one or some of the parties affected by another resource user take action against that user.

The definition of conflict and "acceptable" conflict levels is an area of study which has not received sufficient attention: the conditions under which conflict arises are little known. When it is considered that coastal areas often portray a higher level and rate of conflict development and more far-ranging conflicts than elsewhere, it is difficult to conceive of shorezone analyses which do not take conflict into account. Indeed it could be argued that the very topic of public jurisdiction may be seen as a question of how well the political economic system solves conflicts.

5. The pressure for coastal development

The shorezone is a dynamic system both in an ecological sense and in a resource use sense. Consequently the pressures for different uses of the coastline and of coastal waters may be seen to change through time and over space. The potential for developing particular stretches of coastline (in the sense of "carrying capacity") is highly variable. Likewise the use of the coastline may undergo significant structural changes.

Perhaps the most significant shift in shorezone use is towards the recreational sector. While coastal areas (both salt and fresh water) have always been important locations for recreational activities, recent increases in leisure time and in disposable income have placed greater and different pressures on the process of coastal development. In many areas the transport-industrial-commercial complex of coastal uses is becoming relatively less important than recreation. Forms of recreation may vary from single-user cottage facilities to massive condominium-marina complexes and may be privately or publicly managed. What are the implications of this shift, and how does it relate to traditional coastal uses? What impact does the shift have on the generation of conflicts? And how, if at all, can management processes reduce or alter this conflict? These questions are more than rhetorical since their answers have important implications for the future of a critical national resource.

6. Management and control

Certain specific pieces of legislation have been enacted by Canadian governments in order to increase the effectiveness of the management and control of coastal waters. The Arctic Waters Pollution Prevention Act of 1970, for example, is an important and far-reaching response to the danger of shipping oil through Arctic waters. Current discussions at the Law of the Sea Conference suggest major future changes in jurisdiction (such as the seaward limit of national economic jurisdiction to be raised from 12 to 200 nautical miles).

Despite such legislative activity (which is reflected at Provincial levels), it is as yet unclear how a policy of shorezone development could be enacted and administered. Certain examples of "shoreline or coastal zone management" legislation exist (e.g. that enacted by the U.S. Congress and by many States of the Union) but few if any management programmes allow for the resolution of complex conflicts. Clearly the existence of management systems and legislation is not sufficient for the problems to go away. A clear definition of the shorezone development process seems to be a sine qua non of effective management.

It was in this spirit that the accompanying review of some of the literature in shorezone and coastal zone management was undertaken. The following section presents selected readings in annotated form. Topics included are:

- (i) Coastal Management
- (ii) Shoreland Use
- (iii) Land Ownership and Acquisition
- (iv) Land Use Planning and Management
- (v) Environmental Law
- (vi) Decision-Making, Game Theory,
and Conflict Resolution.

There is, however, no pretence that the list of publications chosen is either comprehensive or fully representative. Publication of

these annotations at this point in time is seen as part of an ongoing process aimed at shedding light on the complexities of shorezone use and decision making.

BIBLIOGRAPHY

COASTAL MANAGEMENT

Albert, JE and Harrison, P
1974(May)

"Jurisdictional Problems of New Brunswick Coastal Zones"
(Ottawa: University of Ottawa, Dept of Geography Research Notes), pp.32.

The problems inherent in the definition of the coastal zone are discussed in this report, along with a review of existing federal and provincial powers to legislate for and to control the New Brunswick coastal system. Two specific case studies are cited, namely the recreational use of New Brunswick coastal shorelands and the development of the Tantramar marsh area. The implications of existing jurisdictional arrangements and of recent recommendations for coastal management are briefly discussed. Those acts of the provincial legislative assembly and the federal parliament which are part of the existing legislative framework are presented in annotated form in the appendices to the paper. A bibliography of relevant material is included in the footnotes.

Atlantic Unit, Water Management Service, Dept of Environment
1972

Coastal Zone: Proceedings of Seminar at Bedford Institute of Oceanography, Volume I, Selected Background Papers (Ottawa: Department of Environment), pp. 205.

This report is a compilation of background papers presented at a seminar on the coastal zone held in March 1972 in Dartmouth, Nova Scotia. These papers provide an overview of some of the many elements and processes that impart to the coast its special character. They also indicate some of the increasing demands made upon the coast and the problems to which these give rise. Papers are included concerning water, fisheries, wildlife, and land resources and use. It is hoped that these papers will serve to stimulate greater interest in the coastal zone and more intensive study of the development and planning problems posed by the coastal environment.

Bish, RL; Warren, R; Weschler, LF; Crutchfield, JA; and Harrison, P.
1975

Coastal Resource Use: Decisions on Puget Sound
(Seattle: Univ of Washington Press), pp. 206.

This study was designed to address issues concerning both the general question of developing shoreline management policies and the evolution and results of specific efforts to regulate the coastal resources of Puget Sound, in the state of Washington. The study focussed upon how governments associated with the Sound have responded to new public initiatives and have managed the shoreline resources of the Puget Sound. The physical setting of the Sound area is presented along with information concerning demographic, employment and socio-economic characteristics of the region. The major uses of Puget Sound resources are outlined, and

both existing and potential conflicts among these uses are discussed. The interdependencies of resources and resource uses are considered in terms of complementary and competitive activities, and income effects. Market resource allocation decision making is considered to be an important factor in managing and understanding interdependencies of resource uses. The various political organizations and agencies involved in the regulation and management of Puget Sound are reviewed. Environmental conflicts, including water oriented land use issues and water use issues have historically been evident in the area, and have recently become to be among the most volatile political issues. These conflicts are illustrated by several local examples. The Washington Shoreline Management Act of 1972 was enacted in an attempt to create a centralized authority and uniform set of rules to govern the development and management of shorelines throughout the state. Historically, the political process in Washington has been one wherein marine related resource utilization has been and is controlled by both private market transactions and a number of state and local legislative and administrative bodies along with federal participation. The trend over the last decade has been toward an increasing role by the public sector in regulating the use of and enhancing resources generally. This in turn has led to an expansion in the scale of conflicts and an increase in the role of the state government. Consequently, conflicts over shoreline development must extend beyond local boundaries and are very much a state concern.

Brahtz, JFP (Ed)

1972

Coastal Zone Management: Multiple Use With Conservation
(New York: John Wiley and Sons Inc.), pp. 352.

This book is an attempt to indicate a rational approach to regional management of the coastal zone and to describe managements' problems. It also attempts to: (1) describe a rationale for planning that supports innovation by management, provides for optimal utilization of resources and relates regional plans to national policy, (2) provide an overview of the structure of the goals for multiple and conservative use of coastal resources, and (3) describe technologies that are applicable in formulating balanced solutions to the management problem of conflicting goals. A definition of the coastal zone is put forward. The need for a coordinated systems approach to coastal planning and management at all levels of government is discussed. To this end, a flow chart indicating the state and regional advance development planning cycle for coastal zone management is presented. Papers by several authors are included which discuss more specific features involved in defining goals and solving multiple use conflicts, and in designing and carrying out systems planning and engineering.

Devanney, JW

1970

Economic Factors in the Development of a Coastal Zone

(Cambridge, Mass: Massachusetts Institute of Technology), pp. 123.

The purpose of this report is to: (1) develop the reasons for and the situations in which the private market will operate to allocate the coastal zone in a manner which is inconsistent with the values of the economy, and (2) argue the fact that the present system can be expected to operate inefficiently in many coastal zone situations is a necessary but not sufficient condition for the establishment of more broad based decision making bodies. The report emphasizes that the responsibility of a decision making body is not to impute its own values to coastal zone decisions, but rather to attempt to discover what the values of the economy served are and then to be consistent with these values. The practical means for implementing this philosophy is cost benefit analysis, which is briefly outlined and its application to coastal zone decisions is explored in some detail. Case studies are included concerning the provision of a recreation facility in Boston Harbour, the redevelopment of the coastal town of Hull, Mass., the location of a nuclear power plant near Plymouth, Mass., and the establishment and location of a refinery complex in Maine and the associated oil distribution problem. The report concludes that economics, including both market and non-market values, can be usefully applied to coastal zone allocation. It is felt that the amount a person values a good, be it a market or non-market commodity, can at least conceptually be measured by the amount he is willing to pay for that good. In a private market system, allocation of coastal zone resources will be seriously inconsistent with these predetermined values. In summary then, it is felt that since the private market cannot operate efficiently, and since local control is not effective, some form of state or federal action concerning coastal zone development is necessary. This action must include some method of determining what is an efficient allocation of the shoreline. This report is a preliminary effort at the development and application of cost benefit analysis as a partial means to allocate coastal resources.

Gopalakrishnan, C and Rutka, J

1974 (July)

"Some Institutional Constraints to Coastal Zone Management: A Case Study of Hawaii"

The American Journal of Economics and Sociology, Vol. 33, No. 3, pp. 225-232.

This paper is an attempt to examine critically the factors which impede the formulation and implementation of an effective system for optimum management of Hawaii's vital shoreline. Most of the problems plaguing Hawaii coastal management appear to be institutional in nature, namely: (1) the oligopolistic structure of the states shoreline ownership, wherein approximately 50 percent of the total land is owned by a few large private owners. About 67 percent of the total shoreland and 75 percent of the sandy shoreland is owned by large landowners and the military, (2) continuing conflicts and controversies among an array of shoreline interests (ie. the private owners, environmental

and conservation groups, and government agencies) especially concerning the development of the coastal zone, (3) jurisdictional overlapping and a lack of interagency coordination, and (4) the absence of effective institutional mechanisms to ascertain "public" interest and incorporate it into coastal zone legislation.

Harrison, P
1975

"Spatial Aspects of the Pressure for Shoreline Development: The Example of Puget Sound"

Coastal Zone Management Journal, Vol. 2, No. 2, pp. 125-148.

This paper considers some selected variables which create a differential spatial pressure on the use of salt water shorelines with special reference to the 12 county Puget Sound Region of Washington State. The variables of population growth, increased urbanization, changes in the employment structure, and increased personal income in both the urban and rural counties of the region are discussed. Two types of spatial processes which affect shoreline use are outlined. These include: (1) nucleated versus spread development along shorelines, and (2) spatial dominance or the spatial spillover of economic activity from urbanized areas to the more rural areas via the decentralization process. Several cases dealing with spatial conflict on shorelines are reviewed. The main features of the Washington Shorelines Management Act of 1971 are outlined. It is concluded that conflict over shoreline use can alter not only the process of shoreline development, but also the spatial patterns of development.

Healey, WR (Ed)
1971

New England Coastal Zone Management

(Boston, Mass: New England Council, Proceedings of the Second Conference) pp. 98.

The papers presented in this proceedings are an effort to update information concerning the coastal zone which was compiled at an initial conference held in 1970. The initial conference was aimed at defining the problem, identifying the state of the art as related to that problem, and initiating a cooperative regional effort in coastal zone resource planning. The papers include information on the physical and economic effects of the extraction and reclamation of sand and gravel from the sea bed, the projected demands for energy and electric power in the New England states, the possibility of offshore oil reserves off the coast of New England, the legislative activities and aspects of coastal zone management at both a regional and national level, the physical, biological, and ecological research needs of coastal areas to determine the most beneficial solutions to the problems, and the most efficient management. Discussion is also made of possible techniques for the management of coastal zone resources. For effective management, socio-economic, physical, biological, and institutional aspects of the coastal zone must be considered.

Hildreth, RG

1975

"Coastal Land Use in Sweden"

Coastal Zone Management Journal, Vol. 2, No.1, pp. 1-29.

This article reviews the land use controls and legislation existing in Sweden and the effects that such legislation is having on development within the coastal zone. The legislation and corresponding amendments that are discussed include the 1952 Shoreline Act, the 1964 and 1972 Nature Conservancy Acts, the Building Act of 1947 with 1972 amendments, and the National Physical Planning Act of 1972. Discussion is made of the decreasing amount of compensation being paid for restrictions being placed on coastal land use. The developments in Sweden are compared to the Coastal Zone Management Act passed in 1972 by the United States federal government. Specific attention is given to the California Coastal Zone Conservation Commission and the state-wide "critical areas" land use statutes enacted in Florida. It is felt that the United States is perhaps beginning to follow the leading role set by Sweden coastal zone management.

Institute for Environmental Studies

1975

Maintenance of Beaches Summary Report

(Halifax, NS: Dalhousie University, NOT PUBLICLY RELEASED), pp. 38.

This report presents the summary and conclusions of a study that was carried out to: (1) consider the adequacy of existing legislation, policies and practices regarding sand and gravel removal from beaches and to identify the problem, (2) to examine possible solutions to the problem and to suggest practical policies within the framework of existing responsibilities, and (3) to examine the possibility of a governmental structure that could formulate general beach management within the framework of general policy statements made by the legislature. The study concluded that the present policies regarding beach protection are far from adequate in view of the fact that although over time the whole shoreline is retreating landwards due to the rise in sealevel, the rate of erosion is greatly accelerated by human activities such as sand and gravel extraction, engineering construction and recreational use. There is clearly a need for an innovative program of beach regulation and management. The Beaches Protection Act in its present format is found to be inadequate and deals only with sand and gravel extraction. It is recommended that this Act be modified to designate all beaches as protected, to remove compensation provisions from the act, and to provide guidelines for conditions under which sand and gravel may be removed and to make provisions for public participation in the decision making process. It is also recommended that the government implement an active management program for provincial beaches including formulation and implementation of a specific beach management policy, as well as implementation of beach education programs. It is further suggested that in order to provide a comprehensive beach management policy, a commission should be empowered to propose general beach protection objectives for legislative

Knecht, RW
1973

"Current Federal Coastal Zone Legislation and Activities"
in Proceedings Coastal Zone Management and the Western States Future,
(Washington, DC: Marine Technology Society), pp. 1-4.

This paper was presented at a conference on coastal zone management in December, 1973. It is a brief overview of the Coastal Zone Management Act which was enacted by the United States federal government in October, 1972. The act established a new federal program to assist individual coastal states in developing and adopting rational management policies and programs for their coastal zones. It is a voluntary program, however, there are two kinds of incentives to encourage participation by all states, namely financial aid and the fact that states which have federally approved coastal zone management programs will have greater leverage concerning federal activities that could potentially affect their coastline. There are 18 specific items which must be considered in the states' coastal zone management program in order for it to receive federal approval. The effects of the act and the implementation of coastal zone management programs are unknown since at the time of writing of the report, no state had as yet undertaken to prepare a coastal zone management program. Several potential problems are cited, including difficulty in identification of the limits of the coastal zone, especially on the landward side, and difficulty in determination of a feasible balance between state and local government jurisdiction.

Merselis, WmB (Ed)
1974

Coastal Zone Management and the Western States Future
(Washington, DC: Marine Technology Society, Proceedings of Conference December 3-4, 1973), pp. 269.

These proceedings are from a conference which attempted to bring together those who work and direct activities in coastal zone management, to promote the exchange of coastal zone management information and concepts, and to present significant study results in both the technological and management areas particularly relevant at the regional level in the western United States. The collection of papers prepared by numerous authors covers a wide variety of issues concerned with the coastal zones of Washington, Oregon and California. The federal coastal zone management act is reviewed. Several papers deal with the California Coastal Zone Conservation Commissions, plan and management effort. Offshore resources and the effects of their exploitation on coastal land resources are considered. The role of marine recreation in the planning process is discussed. Other conflicting land and water uses are studied in relation to the multiple use concept of planning, management and development in coastal zone areas.

O'Connor, DM
1972 (March)

Legal Aspects of Coastal Zone Management in Escambia and Santa Rosa Counties, Florida (Escarosa)

(Florida: Coastal Coordinating Council, Dept Natural Resources), pp. 77.

This study was carried out in conjunction with a pilot coastal zone management study in the Escarosa area of Florida to explore the laws and decisions relevant to coastal zone management at county, local, state and federal levels. In general, the study concluded that there are a number of areas of opportunity in coordination between state county and local bodies which should be explored and developed in order to make Florida coastal zone management effective. It was found that in the study area there is generally very little zoning at the local level which should make the development of a coastal zone management program relatively free from conflict. The only problem would be the lack of experience with this type of regulatory decision-making. One forward step has been taken by the state in the creation of the Santa Rosa Island Authority (F.S. ch. 24500, no. 886) which vested in the Escambia County Commission the authority to lease a portion of the island and to provide generally for the recreational use, development and management of the area. In 1970, a special act was passed (F.S., ch 70-680) to expand the powers and authority of the Board of County Commissioners to monitor the Santa Rosa Island Authority and to require the authority to prepare a comprehensive land use plan for the development of the property on the island before further leases could be authorized. The act also authorized the conveyance of seven and one half miles of the islands shoreland to the United States for inclusion in the Gulf Islands National Seashore. In 1970, a state Coastal Coordinating Council was also established to organize research, review plans and develop a comprehensive state plan for the management of the coastal zone (F.S., ch. 370, 0211). Recommendations of the study include, among others the need for state developed guidelines, supported by new legislation which would make county and local decisions conform to the guidelines, and to ensure means of eliminating presently conflicting uses and zoning classifications.

Perry, Ja
1974

"Some Effects of the Coastal Initiative on Local and Regional Planning" in Proceedings of Conference Coastal Zone Management and the Western States Future, WmB Merselis (Ed)

(Washington, DC: Marine Technology Society), pp.

This paper outlines briefly the effects the passing of the California Coastal Initiatives (Proposition 20) had on local planners. In addition to pressures imposed by the new ruling of California's Environmental Quality Act, that environmental impact reports had to be prepared for both public and private projects, several questions plagued the planners concerning the Coastal Initiative. These included: (1) the fact that very little was known about the Commissioners backgrounds and consequently how strictly the permit system would be enforced, (2) the problem of how far inland the permit line actually extended (ie. there was some controversy over the wording of the 1000 yard limit stated in the act), and (3) the lack of understanding of how provisions for exemptions and exclusions from the act would be administered. Once these questions

were answered, however, the local planners found that they could use the act to their benefit, especially in improving their city's development standards. The Coastal Initiative has also served as a catalyst for the re-examination of existing agencies and institutions which currently have planning responsibilities.

Pross, AP
1975

"Atlantic Canada: Conditions and Prospects for Coastal Zone Management", Institutional Arrangements for Water Management: Canadian Experiences, B. Mitchell (Ed) (Waterloo, Ontario: University of Waterloo, Department of Geography Publication Series No. 5), pp. 209-244.

Coastal Zone Management in Atlantic Canada is in the earliest stages of development. The area is still experiencing a fragmented, unrelated administration of coastal zone activities, and consequently, it is necessary to consider not the processes of management such as goal setting, communication, research planning, development, regulation, and financing, but rather the more fundamental conditions that will determine the basic structure of management. Discussion is made of the various definitions of the coastal zone and the consideration of the coastal zone as a meta-problem. The meta-problem is seen to be not just an aggregation of problems, but an aggregation in which the lesser or sub-problems are perceived as being dynamically integrated. In order to achieve a general policy applicable to national, regional and local conditions, it is necessary to have a coordinative approach to goal setting, information collection, planning, development, regulation, and financing. A review is made of the principle divisions of powers in the Canadian system of government. Administrative fragmentation has resulted in three conditions which intervene in the effort to treat coastal zone management as a true meta-problem. These include: (1) a limited recognition of the coastal zone as an object for management, (2) internal organizational problems of government agencies operating in the coastal zone, and (3) inefficiencies in the distribution of information relevant to coastal zone administration so that those agencies most knowledgeable about conditions in the zone are frequently the least involved in the development and implementation of policies affecting the coastal zone.

Sorensen, JC
1971

A Framework for Identification and Control of Resource Degradation and Conflict in the Multiple Use of the Coastal Zone (Berkeley, California: Department Landscape Architecture, University of California), pp. 31.

The basis for this thesis study is that conflict among competing uses for coastal resources and the accompanying deterioration of the resource base has been and will continue to be the primary impetus for coastal planning. This thesis is specifically directed at the resolution of conflict among competing uses and control of resource degradation, and

states that the procedure developed to deal with these two issues should be considered only as one component input into a comprehensive coastal planning program. Special reference is made to existing coastal resource conflicts in California. Twenty-nine uses are listed, all but three of which either directly or indirectly seek advantage of a shoreline location and/or the shoreline resources present. One method for making rational choices among competing or incompatible uses as well as a means to aid in the planning or control of resource degradation is presented. This method is based on the proposition that the coastal zone functions as a resources system. It is felt that the incompatibility of a use or the degree of resource degradation can be measured by assessing the total impact a resource use has upon the whole resources system. To delineate existing cause and effect relationships within the system, a cause-condition-effect matrix has been developed. The use of a stepped matrix enables a continuous portrayal of the use to cause to condition relationship. Causal factors are defined as alterations commonly associated with a use that directly produces a change in condition. Causal factors identified are based on the assumption that they are presently being generated by the use in question, however, it does not mean that they will always occur or continue to be associated with a particular use. Conditions are defined as the initial identifiable impacts of the causal factors and indicate what change has been known to occur before and could likely reoccur as the consequence of a causal factor. Consequent conditions refer to those changes induced by the initial conditions that ultimately produce the effect or effects. The effects are the actual use conflicts or resource changes that would contribute to a use conflict. It is recommended that matrices and networks be computerized to facilitate addition, deletion or correction of information. In the next phase of development of the framework, expression should be given to the dynamic variables of the relationships. The framework should be an information aid to a procedure for comparative evaluation of non-quantifiable impacts. An extensive bibliography is included.

Spencer, WH
1971 (Nov)

Environmental Management for Puget Sound: Certain Problems of Political Organization and Alternative Approaches
(Seattle: University of Washington), pp. 50.

This report presents a discussion of various alternative methods by which the uses of water and land resources in the Puget Sound area can be organized and managed more effectively. A literature review of relevant material concerning environmental policy and management is included. Attention is centred on environmental policy and structural arrangement as they either have been proposed or currently exist in the management of shoreland and water resources.

Swanson, GC
1975

"Coastal Zone Management from an Administrative Perspective: A Case Study of the San Francisco Bay Conservation and Development Commission" Coastal Zone Management Journal, Vol. 2, No. 2, pp. 81-102.

This article is an analysis of the San Francisco Bay Conservation and Development Commission (BCDC), the first coastal management effort in the United States. The BCDC was set up by the McAteer-Petris Act of 1965 as an interim commission and as a permanent one in 1969. It has now been replaced by the Coastal Zone Commission. An attempt has been made to determine how successful the BCDC was with respect to its goals of monitoring and regulating development of the San Francisco Bay and its shoreline. It was found that the BCDC had slowed the rate of infilling of the Bay area by a factor of 37, had increased public access to the shoreline by ensuring that all 71 permits issued between 1969 and 1974 provided the maximum feasible amount of public access, and had improved shoreline quality by ensuring that each project met four stated criteria. It was found that the BCDC was successful because the decision-making process was a unified one (ie. there was continual interaction as a group of all members of the Commission, and there was no splitting of the group into subcommittees). Also, the means and processes by which the goals of the BCDC were to be met were clearly spelled out in the enabling legislation and administrative code. In conclusion, it was felt that the success of the BCDC was the result of a process which emphasized the creation of educated political support and a structure that was grounded in goals and that possessed the means to achieve these goals.

SHORELAND USE

Brooks, L

1966 (Aug)

Planning Conservation with Recreation

(Ottawa: Parks Canada, Paper presented to Parks and Recreation Association, 21 st Annual Meeting, Victoria, B.C., August 28-31, 1966), pp. 9.

This paper defines conservation as the wise use of natural resources. In these terms, it is found that resources, in relation to outdoor recreation needs, have not been managed wisely. A recent report by the Lower Mainland Regional Planning Board indicates that they have only one-half of the land area which is needed to meet present requirements. The author suggests that a systematic park acquisition program based on the availability of land (especially within a 50 mile radius of urban areas) and the projected recreation need be implemented. Further, integration of all levels of park planning (ie. national, provincial, regional and local parks) is needed, along with integration of urban parks with potentials and uses of land around the city. Once land has been designated as a park, it should be maintained that way. Legislation is necessary to ensure that, if another competing use of land of higher value is needed, the park will remain as such until an alternative is provided of equal quality and quantity.

Brooks, L

1966 (Nov)

Use of Canada's Shorelines

(Ottawa: Parks Canada, Paper presented to Civic Affairs Committee of Vancouver Board of Trade, November 10, 1966), pp. 5.

This speech, presented in 1966, constitutes a warning that Canada is not as well endowed with shoreland, especially that suitable for recreation, as some may think. Reference is made to the situation in several American states where an effort is being made to recover polluted land and water, as well as to acquire land presently held in private ownership. One such effort is the Massachusetts Act of 1965 which was enacted to ensure the orderly use of inland waterways and wetlands in the general public interest. Specific reference is made also to the recent comprehensive report on Waterfront Lands of the Lower Mainland, prepared by the Lower Mainland Regional Planning Board, which indicates that with good planning, there is adequate shoreland frontage for port facilities and water oriented industry. However, there will, almost certainly, be a shortage of land for outdoor recreation (ie. for the projected population of 4 million, 66 miles of beach are required). It is felt that local planners and councils must be educated to the need for the preservation of recreational lands, especially shorelands.

Campbell, CK
1967 (Sept)

Analysis of Summer Cottage Shoreland Use in the Georgia Lowland Region of British Columbia
(Ottawa: ARDA, Project No. 16014), pp. 119.

This study, carried out in the Georgia Lowland region of British Columbia, was designed to: (1) test the assumptions made in the CLI recreation capability classification system regarding the relative capability of natural shoreland types to engender and sustain recreational use, (2) examine the relationship between natural capability and accessibility in determining use patterns (including water access-land access differentials) and the actual use of shorelands, (3) develop and test methodologies in the specified areas of research, and (4) conduct and report on a search of the literature in connection with the study. Case studies are presented from various cottage areas, containing information concerning location and access, physical and cultural features associated with specific shoretypes, a desirability index based on the site evaluation system discussed in the paper, and the recreational and scenic value of the area.

Canada-Ontario-Rideau-Trent-Severn Committee (CORTS)
1973

Optimum Recreational Development in the Lake Simcoe-Couchiching Area
(Toronto: Ontario Ministry of Natural Resources), pp. 27.

In 1971, the CORTS Committee prepared a report on optimum recreational development of the 425 miles waterway corridor between Ottawa, Lake Ontario and Georgian Bay. The report was favourably received and included recommendations for more detailed examination of the recreation potential of Lakes Simcoe and Couchiching, and of the sector between Trenton and Kingston, Ontario, including the shorelands of Prince Edward County. This report deals specifically with Lakes Simcoe and Couchiching, one of central Canada's most popular recreation areas. The contents of the report include general information describing the area, data concerning resource capabilities and present land use, discussion of the various kinds of recreation activities available in the area, local municipality official plans, samples from public opinion surveys and recommendations.

Chrystian, RW
1971

Survey of Public Open Space for Recreation: Lake Ontario Shoreline--Oakville to Grimsby
(London, Ontario: University of Western Ontario, Department of Geography, Unpublished BA Thesis), pp. 51.

This thesis discusses the existing competing land uses on the Lake Ontario shoreline, and notes that the availability of open space and access for public recreation is rapidly decreasing. The study examines present recreational shoreland use for the section of Lake Ontario from Grimsby to Oakville. Suggestions are made for changes in

institutional arrangements which would allow for more coordinated shoreland management. The author suggests giving initial responsibility for defining terms of reference for lakeshore management to Ontario Conservation Authorities.

Devos, A

1966 (March)

"Recreational Values of the Great Lakes Shorelines"

Ontario Naturalist, Vol. 4, No.1, pp. 16-18.

This report reviews the problems which confront the shorelines of the Great Lakes, and outlines the means by which future demands on these shorelands may be controlled by government action. The increased presence of privately owned shoreland frontage, coupled with the continual growth of urban centres has contributed to the lack of sufficient publicly owned and accessible land along the shores of the Great Lakes. A review is made of the efforts of the Ontario government to preserve public land for recreational uses. A proposed inventory of waterfront lands is outlined, and it is stressed that prompt action should be taken to acquire suitable available beach frontages, and shoreland lots on Lakes Erie and Ontario before the best of such areas are acquired for private and/or commercial development.

Dewsnap, RL

1971

Public Access Rights in Waters and Shorelands

(Arlington, Va: National Water Commission), pp. 71.

This study deals with public rights of access to and use of waters and the adjacent beaches and shores for recreational and aesthetic purposes. Attention is centred on the nature of such waters and lands to determine whether they give rise to public rights of use as a matter of law, rather than on methods of acquiring public rights where none now exist. Initially, the question of public right to use the water and adjacent beaches and to gain access to the water is one of ownership. However, the ownership questions are complicated with questions of public trust rights, public rights through prescription, dedication and custom, and with title questions on lands formed by accretion or exposed by reliction or erosion. Even where there are no public ownership rights, there exists the possibility of protecting some public interests through governmental regulation, such as zoning ordinances. The historical development of the concept of ownership is traced through English Common Law to the Thirteen Colonies, and the ownership of land by individual states. Navigable and non-navigable waters are defined in the context of the United States. Public ownership of land is discussed as a basis for public recreation rights. Public rights of use for recreation and aesthetic purposes are seen to depend upon public rights in the water-course, and state governmental power to regulate and protect such existing rights. The Submerged Lands Act of 1953, is reviewed in the context of its significance to recreational and aesthetic uses of water and adjacent shorelands. The act specifies rules relating to the ownership of tidelands and the beds of waterbodies. It is found that

individual states vary widely in the extent to which the riparian doctrine has been adopted. Public rights in: (1) navigable waters, (2) non-navigable waters, (3) lands beneath navigable waters, (4) shorelands adjacent to navigable waters, (5) accretion and relection land adjacent to navigable waters, (6) privately owned uplands adjacent to shorelands of navigable waters, (7) public trust shorelands that have been conveyed to private ownership, (8) waters navigable under state but not federal law, (9) lands beneath and adjacent to waters that are navigable in state but not federal law, and (10) protecting public interests by the exercise of state regulatory powers where there are no public rights of use are briefly reviewed. Recommendations for state action include: (1) granting of authority and responsibility to an existing state agency to formulate a state plan and to make recommendations in the legislature to protect public recreational rights in water and adjacent lands, (2) giving high priority to legislate proposals to protect public recreational areas in particular danger of impairment of public rights, (3) enacting statutes to define a broader and more specific range of public rights of use in non-navigable waters. Recommendations for federal action include: (1) protection of public recreational use of federal lands adjacent to water, and (2) provision of funds to assist states in financing programs to plan for and protect public recreational use of beach and shore areas.

Dooling, PJ and Herrick, R
1975

Lakeshore and Surface Waters for Recreational Uses: A Bibliography with Abstracts, Recreation Land Use Review, Report No. 3
(Vancouver, B.C.: University of British Columbia, Faculty of Forestry), pp. 14.

This bibliography, containing 23 abstracts and lists of keywords for selected reports, deals with lake and lakeshore management guidelines for recreation. A keyword reference listing is included to aid in information retrieval.

Ducsik, DW
1974

Shoreline for the Public
(Cambridge, Mass: The MIT Press, National Sea Grant Program No. NG-43-72), pp. 257.

This monograph is a handbook of social, economic and legal considerations regarding public recreational use of the coastal shoreland in the United States. Discussion is made of the growing needs and demands for recreation in the United States and the problems of inadequate supplies of shoreland recreation areas that are suitable and/or available. The institutional mechanisms, both economic and political, which govern the allocation of scarce resources among conflicting uses are discussed briefly. The legal definitions of coastal zone and the statutes and legislation regarding public rights to coastal and shoreland areas are reviewed. The texts of the Coastal Zone Management Act of 1972 and the National Open Beaches Bill (before Congress since 1969) are included in the appendices. Common law principles regarding public recreation rights, such as prescription, customary rights, dedication and public trust doctrine are reviewed, along

with the case law and statutory provisions which have relied on them. Techniques of shoreland acquisition are discussed, including purchase, condemnation of the fee simple, and easements. It is suggested that only the dry sand area immediately adjacent to the water be purchased since it is the most important and highly utilized area of the beach. Some form of protection could be provided for the inshore, upland areas and costs would be reduced, while maintaining public access. Various methods of land use control are suggested, including exclusive use zoning to create special zone districts, flood plain zoning to restrict land use to open space uses, building set backs and official mapping, subdivision exaction to ensure provision of land for public use from subdividers, compensable regulation to allow certain compensation for losses to landowners, and finally, tax incentives or techniques.

Hough, Stansbury and Associates Ltd.
1972

Lake Alert Phase 2

(Thornhill, Ontario: York Printing House Ltd), pp. 91.

The Lake Alert manual presents a systematic approach to studying cottaging opportunities in order to prevent deterioration of land and water resources and/or the public recreational quality of Ontario lakes through an excess of demand over supply. The manual outlines three basic methodologies for determining the total cottage capacity of a lake or area, alternative cottage locations, and a basis for formulating flexible planning controls. Several variables, including water quality, fish and wildlife, vegetation, soil, scenic elements, boating, public outdoor recreation, climate, were examined in order to determine any specific lakes' shoreland capacity for development. Alternative programs for cottage development, related to land capability, are indicated for the general use of planners.

Institute of Public Affairs and Lands Directorate, Environment Canada
1972

Shoreland: Its Use, Ownership, Access and Management

(Halifax, N.S.: Dalhousie Institute of Public Affairs, Proceedings of Seminar, Amherst, N.S., March 8-10, 1972), pp. 82.

This report consists of papers presented at a seminar on the "Use, Ownership, Access and Management of Shorelands". The seminar came about in response to the growing concern for Canada's coastal lands as a limited, non-renewable resource. It is felt that the implications of man's impact on the land/water interface are problems of today and not of the indeterminate future, and that the shorelands are a finite and highly fragile resource. The seminar was divided into three sections, namely: (1) the definition of the issues and concerns in broad terms, (2) discussion of methods of collection, analysis and dissemination of factual information about shorelands, and (3) discussion of methods and instruments of management and control.

Jaakson, R
1974 (October)
"Mosaic Patterns of Balanced Land -- Water Planning for Cottage
Development and Lake Planning"
Plan Canada, Vol. 14, No. 1
(Toronto: Canadian Institute of Planners), pp. 40-45.

This report suggests and describes a new concept for the planning of lakes and the development of cottage subdivisions. Three phases of cottage development are noted, namely: 1) ribbon development which is the early pattern of growth of summer cottages in linear fashion along the shoreland where nearly all lots have shore frontage, 2) development-in-depth where the backshore or area immediately behind the linear development begins to develop as shoreland frontage becomes scarce, and 3) the new concept which removes the pressure of development from the immediate lake environment and calls for subdivision development away from the lake. The onus for development rests with the public agencies. The advantages and disadvantages of such a concept are described and case studies of its implementation are examined in the light of certain areas of northern Ontario. The study of the carrying capacity of a lake is seen as being an important element in the selection of a lake for such development. The concept of phased-monitored development is also described.

Jaakson, R
1972 (January)
"Recreation Zoning and Lake Planning"
Town Planning Review , Vol. 43, No. 1
(Liverpool, England: Liverpool University Press), pp. 41-55.

This paper presents a framework which incorporates five shoreland land-use zones and three water-surface zones into a conceptual model of lake planning. A lake planning strategy for recreation is suggested which states that zoning must deal both with the development of the shoreline and the control of activities on or in the water. Proposals that are attendant to recreation zoning have been woven into the main theme, and include criteria for the design of holiday home subdivisions and ideas on the regulation of public access and public use of lakes. The Ontario socio-economic and physical setting criteria for recreation lakes are presented as an example of the implementation of the zoning and planning concepts.

Redpath, DK
1971
Policy Implications for Shoreland Recreation: A Pilot Study in New Brunswick and Nova Scotia
(Waterloo, Ontario: MA Thesis, Planning Dept), pp. 261.

This study outlines the importance of shoreland in meeting the needs of the recreating public and examines various problems associated with the recreational uses of shoreland. The existing policy with respect to the creation and/or solution for these problems is reviewed, alternatives

aimed at more effective solutions are suggested, and a procedure for implementation of these suggestions is offered. The research involved interviewing 95 cottagers in the study area. No overall policy with respect to shoreland management was found for the area. Although some regulations do exist, the degree of enforcement of each of these varies. Subjects covered in the terms of this thesis research include: 1) pollution as a threat to the recreational use of Northumberland Strait, 2) discussion of the legal and administrative aspects of shoreland ownership, 3) discussion of private versus public control of shorelands, 4) non-resident landownership, 5) assessment and taxation of cottages and lots, 6) conflicts among shoreland uses, 7) role of summer cottages in shoreland recreation, 8) public access to shorelands, 9) summary and procedures for implementing policy suggestions, and 10) suggested techniques to guarantee public access to the shore.

Technical Committee on Lakes and Lake Shorelands, Alberta Land Use Forum
1974

Use of Our Lakes and Lake Shorelands

(Edmonton, Alberta: Alberta Land Use Forum), pp. 272.

This report describes the present land use status of all the lakes and lake shorelands in the province of Alberta. It is divided into seven sections. Part I, serving as an introduction to the study, contains a short summary of the findings for all the lakes and lakeshoreland in the province of Alberta and the for different lake regions which have been identified throughout the province. Part II presents a provincial overview of lakes and lakeshorelands. Part III presents regional analyses and Part IV is concerned with specific lakes. In Part V, site specific aspects or specific portions of various lakes and lake shorelands are discussed. Part VI discusses by way of examples, how the results of the regional, the particular lake management, and the site specific aspects are combined to become the basis for decision-making as to what lakes and lake shorelands should, or should not be developed for particular uses. Part VII contains a list of studies, agencies and information sources for further information. All of these agencies participated in the study and will continue to work to achieve a rational approach for the use of lakes and lakeshorelands within the entire province of Alberta.

Whiting, JN
1971

Shoreland Recreation--An Environmental Approach to Development

(Winnipeg, Manitoba: Dept of Urban and Municipal Affairs), pp. 45.

This report is concerned with outdoor recreation as it relates to Manitoba's waterways and lake shorelands. Discussion focusses on the need to formulate sound government policy in order to wisely guide the conservation and development of water and shoreland resources in accordance with an environmental ethic. The report is intended to serve as an interior guide and reference until long range and comprehensive shoreland water and land use policies can be evolved.

LAND OWNERSHIP AND ACQUISITION

Antoft, K
1971

Matters Related to Non-Resident Land Ownership in Nova Scotia
(Halifax, Nova Scotia: Dalhousie Institute of Public Affairs), pp. 19.

This report is a preliminary study of matters related to non-resident ownership of land in Nova Scotia. The study is an attempt to update information concerning ownership patterns of the Bras d'Or Lakes region of Nova Scotia that was collected in a previous study in 1967. Information was also compiled in the present study concerning land price movements and changes in assessment values over a ten year period. The research involved a systematic examination of records in assessment and deed registry offices and the development of a questionnaire and interview schedule to elicit a variety of information from lake front property owners. It is felt that time is needed to formulate long term land use planning, but that certain immediate stop-gap measures should be initiated to preserve as wide a range of land use policy alternatives as possible. Recommendations include the establishment of a Nova Scotia Land Conservation Agency, an annual budget for acquisition of recreational land, and the acquisition as quickly as possible of beach properties recommended in the previous study. Tables concerning land ownership, assessment values and size of land holdings are included in the appendices, along with a copy of the questionnaire.

Antoft, K
1973

Taxation and the Non-Resident Landowner in Prince Edward Island
(Halifax, Nova Scotia: Dalhousie Institute of Public Affairs, Report to the Royal Commission on Land Ownership and Land Use), pp. 11.

This paper is a discussion of the relative tax contributions of resident and non-resident landowners in order to put into perspective the role of non-residents as taxpayers. The research suggests that contrary to popular belief, non-residents are not a particularly lucrative source of increased revenues for local government purposes, even when taking into consideration that they make few demands on public services. Also, they make little or no direct contribution towards the support of provincial services, although in the case of non-residents from other Canadian provinces, transfer payments from the federal government to the provincial government are a possible mechanism for an indirect contribution. The research is carried out in the context of the Prince Edward Island situation with respect to non-resident owners and taxes paid.

Canadian Wildlife Service
1974

Land, Law and Wildlife: A Legal Study of Landowner-Wildlife Relationships
Part I: Background and Summary of Conclusions
(Ottawa: Canadian Wildlife Service Manuscript Report), pp. 12.

This report focusses principally on the legal framework for wildlife-management in urban and near-urban areas. As urbanization increases

in Canada, there is an increasing alteration and destruction of wildlife habitat. The number of hunters and persons seeking other forms of wildlife related recreation is also increasing. At the same time, there has been an increasing number of naturalist groups and anti-hunting groups appearing on the scene. Finally, hunters themselves are becoming more and more aware of the need for improved wildlife management. Private landowners are playing a more significant role in wildlife management, an area wherein the law was previously designed for open-access, largely public land areas. The basic objective of the study is the identification of the existing legal framework in Canada as it affects the right or ability of landowners to manage wildlife on their lands for economic gain. Comparative studies of laws and legal techniques in the United States and Europe are included. The concepts of common property and land ownership, the various resource uses causing stress on wildlife populations, and statutory and legislative frameworks are covered in the study.

Cutler, M

1975 (May)

"Are We Alienating Too Much Recreational Land and Too Much of Our Best Agricultural Land"

No. 2 of Series "Foreign Use and Control of Our Land and Resources"
Canadian Geographical Journal, Vol. 90, No. 5, pp. 18-33.

This report is a review of the situation regarding foreign and non-resident ownership of land in each of the Canadian provinces. In general, the dramatic increase in foreign holdings in the past twenty years has led to stricter controls on the sale or lease of Crown or government controlled acreage which comprises almost 90 percent of Canada's territory. At present, most provinces prohibit foreigners from buying Crown land, and the trend appears to be toward restricting even the lease of these lands. It has been found that foreign demand is a significant factor in the lack of reasonably priced recreation facilities and real estate, and in the rapidly escalating price of urban land for housing.

David, E.J.L

1969 (February)

"Exploding Demand for Recreational Property"

Land Economics, Vol. 45, No. 2, pp. 12.

This article reports on the findings of a study of riparian property values around sixty artificial lakes in Wisconsin. Three values were obtained from the county tax roles for each tract over a ten year period. The study excluded lakes smaller than 100 acres, lakes having a dam height of less than 10 feet, and lakes having less than 10 percent of tracts in private ownership. It was found that there is a rising demand for riparian property. This is illustrated by increasing land and improvement values. Also, the number of improved lots in each acre of riparian land is increasing. Rising prices mean an increasing tax base, which is not offset by increasing demands for public services. Therefore, there is a net gain to the governmental unit. It is felt that as cottages and land become more valuable, there

will be increasing demands or attempts to preserve or enhance the other attributes of the lakes, such as shoreline zoning and better water quality.

Esau, AAJ
1974

Land Ownership Rights--Law and Land: An Overview
(Alberta Land Use Forum, Technical Report No. 9), pp. 195.

This report is an attempt to provide general background material regarding the specific issue "of the extent, if any, to which the historical right of a landowner to determine the use and disposition of agricultural property ought to be restricted". An historical survey of property law from Pre-Roman times to the present situation of rights of eminent domain, right to police, right to tax, and right of escheat is included. The nature and the extent of rights to use and control airspace, subsurface minerals, and water are discussed. The tort law restrictions of negligence, trespass, public and private nuisance and Rylands and Fletchers' doctrine of strict liability are reviewed. A brief survey of the various acts and statutes existing in Alberta with respect to land use and disposition is included. Special emphasis is placed on a discussion of the Alberta Land Use Planning Act, and a brief look at the zoning issue in the United States and the problem of betterment (ie. the effect of increased land values due to external influences) in Britain.

Johnson, N and Tyrrell, J
1961

"Problems and Techniques of Land Acquisition"
Resources for Tomorrow Conference, Vol. 2
(Ottawa: Queen's Printer), pp. 1009-1026.

Canada, having approximately three million square miles of land in the public domain, has an immense supply of lands for future recreational use. A problem arises in the lack of effective machinery at all governmental levels for identifying, managing and preserving potential parklands from alienation or unwise development. There are two main methods of securing lands for public recreational use, namely by reserving lands already in public ownership, or by recapturing land now in private ownership through purchase, exchange or donation. Other methods of control such as zoning, subdivision control and other planning techniques also exist. Parks may also be created as a by-product of other public undertakings such as dams etc. Discussion is made of the reservation of public lands for public recreation. Current problems include such things as: 1) finding lands suitable for outdoor recreation now earmarked for other uses, 2) overlooking the potentialities of lands no longer needed for their original use by military etc., 3) the lack of communication between various government levels concerning what lands should be reserved, and 4) the protection of parklands against non-conforming uses. The federal government and all provinces, except New Brunswick, have powers to purchase or otherwise acquire any private lands for use as public parks or recreation areas. Similarly, most municipalities and certain regional authorities have powers to acquire

land for parks. Major problems arise concerning the costs of acquiring or expropriating land for public parks. Saskatchewan is the only province known to lack the power to expropriate land, and must therefore forgo acquisition of lands of too high price. Other possible methods of land acquisition and planning include leaseback, purchase of development rights in land, long term planning, conservation easements, donations, development control measures such as subdivision controls, zoning, provision of anchorages and marinas, reservation of public access along the waters edge, provision of access to shorelines along survey roads, and provision of island access. A glossary of terms concerned with shoreland recreation, access and ownership is included.

LaForest, GV
1969

Natural Resources and Public Property Under the Canadian Constitution
(Toronto: University of Toronto Press), pp. 230.

This book is a general survey of the entire subject area of the constitutional framework existing in Canada concerning natural resources and public property. This includes a review of the distribution of public property and public works, such as harbours, canals, lighthouses, rivers and lake improvements, and public buildings to the Dominion. The provinces are granted rights to lands, mines, minerals, but not fisheries. Offshore submarine resources are discussed in the context of federal-provincial conflicts over control, those resources found in inland waters, and those found on the continental shelf. The Dominion is given power over Indians and lands reserved for Indians by virtue of the BNA Act. The various sections of the BNA Act pertaining to public property rights are reviewed, and the texts of the BNA Act and amendments of 1867, 1930 and 1949 are included in the appendices. The federal-provincial legislative and executive powers over such things as expropriation, fisheries, public property and Indian lands are briefly discussed.

Prince Edward Island Report of the Committee on Land Acquisition and Land Transfer to Non-Resident Corporations and Private Individuals
1971 (March)
(Charlottetown, PEI), pp. 9.

This brief report outlines the existing situation in Prince Edward Island with respect to non-resident ownership and acquisition of land. The province of Prince Edward Island is found to be comparatively unique in Canada since it has the highest percentage (94 percent) of privately owned land. The other provinces have greater proportions of Crown land than of privately held land. PEI has a minimum of control over the sale of privately owned land through the Real Property Act, which states that the consent of the Lieutenant-Governor-in-Council is necessary before an alien can hold more than 10 acres of land. However, as of December 1970, approximately 5.13 percent of Prince Edward Island land was owned by non-residents. If the acquisition rate was to remain constant at approximately 22,000 acres every five years, then 14.5 percent of the land would be foreign owned by the year 2000. Recommendations that are put forward by the committee include: 1) that public access to beaches be ensured, 2) that an assessment and tax policy be instituted

to encourage residents to own, develop and use available land, 3) that non-resident owners and corporations be required, via a Land Disclosure Act to disclose their holdings in PEI, 4) that land use by foreign owners be regulated to discourage land speculation, 5) that use of agricultural land be regulated and left to bona fide farmers, 6) that land acquisition by non-residents be regulated, and 7) that the Real Property Act be amended to require that land transactions be advertised immediately to the public.

Prince Edward Island Resource Use Planning Unit
1971

Extent and Implications of Non-Resident Ownership in Prince Edward Island
(Charlottetown, PEI: PEI Resource Planning Unit), pp. 20.

This report reviews the existing situation in Prince Edward Island with respect to acreage of land owned by non-residents (ie. persons outside of Prince Edward Island), amounts of land in various Canada Land Inventory agricultural capability classes held by non-residents, acreage being consolidated into large commercial farm holdings, and ownership of coastal and tributary shore frontage. In general, it is felt that the factors controlling property acquisition are those of economic supply and demand derived from the value of land use or potential. It is felt that more is to be gained by promoting consolidation of land into economic sized farm units than to be concerned about residency of owners. It is also felt that the import of non-resident development capital, provided safeguards are applied, would be beneficial to the local economy. Similarly, taxation could be both a form of revenue and an effective method of stimulating improved land use.

Redpath, DK
1972

"Ownership of and Access to Coastal Lands: Some Practical Implications"
Coastal Zone: Vol. 1, Selected Background Papers
(Ottawa: Environment Canada), pp. 189-197.

This paper discusses briefly, from a recreational point of view, the importance of two components in programs aimed at the wise use and management of the shore-zone, namely ownership of coastal lands as an essential part of the information base and access to coastal lands as one of the very basic requirements for meeting the recreational needs of the public. Results of a study of cottagers in and access to the shore of Northumberland Strait are discussed. Possible methods of maintaining public access to the shore land, other than by outright acquisition, are presented. The importance of a long term program of land use planning and controls to assure the effective and efficient use of the coastline and its resources is stressed.

Reed, WC and Woolnough, DF
1974 (March)

Caveat on Non-Resident Ownership -- Prince Edward Island
Occasional Paper No. 1

(Charlottetown, PEI: Maritime Council of Premiers), pp. 17.

This report is a collection of tables and graphs which are intended to

isolate patterns of non-resident ownership and to give insights into how these properties distribute themselves in space and time, and relative to other variables. These tables include information such as the distribution of mean parcel size by place of residence of the owner, the distribution of actual parcel size by place of residence of owner, a comparison of number and percent of non-resident landowners by place of residence (it should be noted here that Ontario is gaining in the number of parcels owned), and the percentage of properties held by non-residents within two miles of the coast by place of residence of owner (where non-residents are found to be disproportionately represented). Several sample maps illustrating the present capability of the Land Registration and Information Service (LRIS) are included. This information will in future be overlain with Canada Land Inventory (CLI) data via the Canada Geographic Information System (CGIS). This will show graphically such things as percentage of land of Class 2 agriculture over percentage of land owned by non-residents. This information will be available for the committee that would rule on applications for non-resident purchases.

Reed, WC and Woolnough, DF
1974 (June)

Patterns of Non-Resident Ownership Prince Edward Island

Occasional Paper No. 2

(Charlottetown, PEI: LRIS Land Statistics Division), pp. 20.

This report is an attempt to interpret the dynamics of the non-resident population of Prince Edward Island. Information in the report includes a grid division of Prince Edward Island showing the frequency of non-residents in each cell. When plotted, this information indicates that non-residents tend to either avoid each other or cluster with steep gradients between. The grid cells were then classified according to the number of non-resident versus resident owners in each cell. Generally, it was found that residents predominate, but non-residents tend to occur in groups. A map showing the absolute frequency of foreign ownership on Prince Edward Island indicates an obvious concentration at the eastern end, with small peaks distributed over the island. Further analysis shows that there is a significant correlation between the peaks of non-resident ownership and the distribution of cottage lots. However, there are a few exceptions. It is felt that the concentrations of non-resident owners should aid planners and legislators in developing policy and in monitoring the effects of programs.

Report of the Royal Commission on Land Ownership and Land Use, Prince Edward Island

1973

(Charlottetown, PEI: Chairman, CW Raymond), pp. 98.

The Royal Commission was established to devise and recommend a set of land ownership and land use policies to deal with the effects of new demands and pressures on the land resources of Prince Edward Island, and to provide the public with an opportunity to participate in the development of a land use policy. Discussion is made of the amendment of the Real Property Act in 1972 to restrict the purchase of land by all non-residents to no more than 10 acres and/or 330 feet of shoe frontage without prior

approval. By March, 1973, non-resident owners held 6.3 percent of the total land area of Prince Edward Island, which includes a minimum of 100 miles or 11.5 percent of its total shore frontage. Half of these non-resident owners hold plots of land less than 5 acres in size which accounts for less than 2 percent of the total non-resident acreage. Consequently, the concern regarding large holdings of land. The coastal purchases which include most holdings of less than 10 acres show a marked preference for Class 1, 2 and 3 beaches. Recommendation is made for the establishment of a minimum maintenance program wherein each landowner would be required to either maintain his property (farm land, woodlot) to a minimum standard or in lieu of that to pay a large fee. This attempt at stewardship of the land would require the owners of private land to consider the interests of non-owners. It is also recommended that a generalized land use plan, utilizing CLI maps, soil surveys etc be compiled for the entire province to establish a base for the participation of local residents in the more detailed planning of their own community. Planning guidelines for agriculture, recreation and forestry are presented. There is also need for a coastal land use plan which would open up more access points to the shore using former public rights of way and opening new ones. Cottages and campsites should be developed further back from the shore (ie. in subdivisions) allowing day users access to the beach. Suggestion is made that the province could be divided into approximately 30 communities for purposes of planning, participation and decision-making. It is also recommended that corporations be forced to provide more public information regarding their activities and corporation, and also that a limitation of 200 acres of land ownership be re-imposed on all partnerships and companies, both foreign and domestic. Finally, it is felt that once alternative land control methods are implemented, the present acreage restriction on non-resident land purchase should be removed.

Report to the House of Assembly of the Select Committee on Non-Resident Ownership of Land

1974 (November)

(Halifax, Nova Scotia: Queen's Printer), pp. 39.

This report presents the findings of the Nova Scotia Select Committee on non-resident ownership of land. The Select Committee was directed by the Nova Scotia House of Assembly to determine if there is a problem in Nova Scotia dealing with the ownership of land by non-residents, and if so, the nature and extent of the problem, and was requested to make recommendations to the House concerning solutions for any such problems. It was concluded by the Committee that land use and not land ownership is the more important issue. The Committee recommended:

- 1) that the proposed 1973 Bill regarding the approval of Purchases of Land Holdings by Non-residents be discarded since land ownership is not the issue,
- 2) that the proposed 1973 Bill regarding Land Holdings Disclosure by Non-residents and certain corporations be discarded since it would impose a tax on the transfer of land holdings to non-residents,
- 3) that a Land Resources Board be established under separate legislation to advise the governor on proper use of land and to designate land within

the province for specific uses, 4) that the province should encourage the use of land by providing financial assistance for acquisition, and tax differentials to promote the best use of the land, and 5) that municipal taxes should be changed to reflect the designated use. Copies of the proposed draft bills (An Act Respecting the Approval of Purchases of Land Holdings by Non-Residents and An Act to Provide for the Disclosure of Land Holdings by Non-Residents and Certain Corporations) are included in the appendices.

LAND USE PLANNING AND MANAGEMENT

Bosselman, F and Callies, D

1972

Quiet Revolution in Land Use Control

(Washington: United States Government Printing Office), pp. 327 and App.

This report is concerned with the regulatory and legislative systems of nine American states or regions. This includes a review of key statutes, regulations, decisions, and interviews with the administering officials of each innovative land regulatory system. The nine case studies include: Hawaii Land Use Law, Vermont Environmental Control Law, San Francisco Bay Conservation and Development Commission, Minneapolis and St. Paul Metropolitan Council, Massachusetts Zoning Appeals Law, Maine State Location Law, Massachusetts Wetlands Protection Program, Wisconsin Shoreland Protection Program, and the New England River Basins Commission. Other legislation that is considered is grouped into three categories: 1) critical area legislation creating special regulatory mechanisms to control land use in specific geographic areas such as the Tahoe Basin, Hackensack, New Jersey Meadowlands Development Commission, and the Adirondack Park Agency in New York, 2) study commissions often with some interim regulatory power, but basically created to propose new legislation such as the Colorado Land Use Act, and Washington Land Use Planning Commission, and 3) wetland and shoreland laws designed to control development of this environmentally critical type of resource, such as comprehensive protection statutes dealing with filling and dredging. There has been a gradual change in the concept of land. Wetlands once considered useless now have value. The concern over the interrelatedness of land uses has led to the recognition of the need to deal with entire ecological systems rather than with small segments of them. Land is now considered as a resource as well as a commodity. Regulation and planning of land use are essential, however, it is also important to consider the extent to which the use of land may be restricted without violating constitutional rights.

Bryant, RWG

1972

Land: Private Property, Public Control

(Montreal, PQ: Harvest House), pp. 383.

This study is designed to consider private property in land in relation to the social necessity of co-ordinating and controlling its development, especially in an urban and suburban context. The history of land tenure and the concept of property ownership is traced from primitive societies through feudal times to the present. The two legal systems of Roman or Civil Law and English Common Law are considered in the context of Canada, where both are in effect (ie. Civil Law in Quebec, and Common Law in all the other provinces). Land ownership policies in the United States, Israel and Australia are briefly reviewed. The attitudes of mind associated with the conventional form of residential development both as they relate to the physical form and to the concept of home ownership are discussed. Several examples of conflicts of interest situations concerning zoning and zoning changes in master plans are outlined. The operation of the market in land use and development, especially in urban areas, and the role of decision-making

Forward, CN
1968

Waterfront Land Use in Metropolitan Vancouver, B.C.

(Ottawa: Department of Energy, Mines and Resources, Geographical Paper 41),
pp. 54.

In most port cities, waterfront land is a valuable but limited resource. The value of the resource is well established by the demand for waterfront property for port facilities or industrial uses. This study is designed: 1) to ascertain the condition and present use of water areas and waterfront land, 2) to evaluate waterfront land in terms of the various uses to which it may be devoted, 3) to measure the economic and social requirements of the metropolitan community for waterfront space and to evaluate the relative importance of competing uses; and 4) to suggest a possible allocation of waterfront land for major use categories according to established priorities. A brief description of the physical setting is given. Present land use of the Vancouver area was mapped in 1965, and frontage of waterfront land occupied by use categories was measured. These uses included recreational land, residential land, land used for government, utilities and transportation requirements, land used for commercial, service and construction requirements, and land used for manufacturing requirements. Probable future waterfront land requirements for port facilities, industry, recreation, residential and other uses are reviewed. It is found that Boundary Bay is the only shoreland area possessing the physical advantages required for major expansion of waterfront parkland that would include the extensive beaches considered essential to meet future recreational demands. Other areas such as Barber Island-Ladner Marsh should be preserved in their natural state as recreational assets. It is suggested that to minimize conflicts with deepsea or ocean ports, marinas should be located outside the busiest portion of Vancouver Harbour. It is recommended that the shoreland and waterfront resources of Vancouver could best be managed by and coordinated on a metropolitan basis, that the harbour be rejuvenated and improved, that certain areas suitable for industry be zoned and reserved as such for future industrial development, that additional marine parkland and beaches be acquired and developed and that residential use of the immediate shoreland be discouraged in favour of maintaining a strip of parkland between the shoreline and the first roadway inland.

Jaakson, R
1975

"Riparian Land Management in Saskatchewan and Ontario"

Institutional Arrangements for Water Management: Canadian Experiences,

B. Mitchell (Ed)

(Waterloo, Ontario: University of Waterloo, Department of Geography
Publication Series No. 5), pp. 173-207.

Lake and reservoir shorelines and other riparian interfaces are important water resources, and their planning and management are key issues today. Also, most summer outdoor recreation is strongly dependent on water.

Land areas adjacent to water have become the foci of intensive activity and development, requiring innovative riparian land use planning concepts and adaptable new administrative mechanisms if conflict between uses and environmental overload are to be avoided. Two case studies are presented. The first concerns Lake Diefenbaker, the multiple purpose South Saskatchewan River reservoir in Saskatchewan, where an established framework for shoreline planning has proven successful. This involved the coordination of federal and provincial involvement in the project via the creation of the South Saskatchewan River Development Board and a Commission of the same name concerned directly with the project. In 1960, the act establishing the Commission was amended to enable the Commission itself to undertake land use planning and to control development at Lake Diefenbaker. In 1964, the Commission was replaced by the Saskatchewan Water Resources Commission. In 1972, this was incorporated into the Department of the Environment. Riparian land use regulations were established around Lake Diefenbaker for purposes of safety, efficiency, and to maintain minimum interference in reservoir operation. These regulations are similar to a series of concentric circles or lines wherein the outermost line represents the furthest extent of the regulations. The lines inward toward the shoreline represent increasingly more intensive land use controls. These lines include the restricted building area which is within the first, innermost ring, the take-line which is the ring outlining all areas susceptible to floodings, slumping etc., and the safe building elevation. The second case study deals with the Trent Canal Reservoir-Lakes area, and is an attempt to relate the planning scheme used at Lake Diefenbaker to the Ontario situation. In summary, it is felt that the riparian planning schemes outlined in the Lake Diefenbaker case are applicable to most shoreline planning situations, be they small lake, medium lake, great lake or marine areas. The importance of planning on a regional basis rather than on a piecemeal, non-integrated method is stressed. Lake development areas may be delineated around groups of small lakes. The concept of take-line may be adapted for purposes of shoreland acquisition for public use, or for ecological preservation. The take-line could be used almost as a holding by-law to limit further private development in designated property transfer areas, or it could be utilized to build flexibility into long range planning. It could also be used to delineate land where certain rights of easements have been purchased from private people. Finally, public rights, controlled private privileges and ecological harmony are considered to be the key stress of riparian planners.

Raymond, C
1975

"Comments" on Paper by DP Emond "Emerging Issues in Land Use Planning"
Proceedings of Conference on Government Regulation and the Law
(Halifax, N.S.: Dalhousie University Faculty of Law), pp. 52-55.

In this brief comment, Raymond suggests that regional planning should involve all levels and areas of government and there should be strong cooperation between the province and municipalities when preparing regional plans to ensure the incorporation of long term objectives.

It is felt that zoning is a negative form of land use control, although at present it is still the best alternative. It is suggested that mandatory minimum maintenance requirements or stewardship of the land is essential for the wise and efficient use of the land and other resources. This would only be a problem in the case of non-resident ownership of land, when the owner is not actually residing on the land in question.

Rawson, M
1973

Minimum Maintenance: A Report for the Royal Commission on Land Ownership and Land Use, Prince Edward Island, Vol. 2,
(Ottawa: Department of Regional Economic Expansion), pp.

This report is concerned with the concept of minimum maintenance requirements as a method of managing and controlling land use and recreational land access. Minimum maintenance is in essence the concept of stewardship of land for the good of all people. The concept involves the establishment of criteria for good management for specific areas throughout the province, dependent on what the land is capable of sustaining. Individual landowners would be required to maintain their land according to these prescribed standards. If they did not, the province would carry out the necessary work for them and send the landowners the bills. It might also be possible to have a system wherein fees might be payable in lieu of undertaking the actual management. In this case, the fees should be relatively high to encourage good management practices. Possible ways of policing such a system include a declaration by the owner with his property tax return that he has performed the necessary maintenance, periodic air photographic checks, random field checks, and assessors visiting the property once every three years.

Report of the Nova Scotia Royal Commission on Education, Public Services, and Provincial Municipal Relations, Vol. II, Municipal Government and the Province, Part B, Structure and Services
Chapter 18, Planning
1974

(Halifax, Nova Scotia: Queen's Printer), pp. 192.

It was found by the Royal Commission that effective local or regional planning cannot be achieved except where there is also effective provincial planning and where there are appropriate structures and procedures to coordinate plans and programs within each level of government and between the two levels. Planning at any level of government is seen as a reasoned approach to meeting community needs and to dealing with community problems, whether they are simple or complex. It involves a rational determination of longer-term goals and a choice of shorter-term objectives and strategies from among many possible alternatives. If municipal planning is to be effective it must have the appropriate legislative power, financial resources,

technical capacity, and geographic jurisdiction. It is felt that county councils should have a broad degree of autonomy in planning, but that the provincial government should accept ultimate responsibility for the effectiveness of planning in the province. In addition, the provincial government should develop economic and environmental plans and an indicative land use plan for the province, and should ensure the coordination at the regional level of provincial and county plans and budgets. The present situation in Nova Scotia with respect to legislative changes regarding planning is discussed. It was recommended in the Town Planning Act that municipal plans should be formulated within a framework of regional plans, although this is not absolutely necessary. A critique of the Planning Act is included. The provincial policies with respect to land (especially non-resident) ownership, land access, land use, taxation and control are put forward and commented upon. The increased concentration of non-resident ownership of land in areas most suited to recreation and tourism is seen as a major problem, with respect to decreased public access, decreased control over use, deprivation of use of land by residents and interference with regional developments.

ENVIRONMENTAL LAW

Estrin, D and Swaigen, J (Eds)

1974

Environment on Trial: A Citizen's Guide to Ontario Environmental Law

(Toronto: Canadian Environmental Law Association), pp. 406.

This book is a handbook for the Ontario laymen to use when considering action against some person, group of persons, industry or agency that is causing environmental pollution detrimental either to himself, to public property, or to common property. The various acts pertaining to environmental matters (noise, odours, water, waste, pits and quarries, litter, pesticides, radiation, air, land) are reviewed for Ontario and for federal jurisdictions. The authors are concerned with the need for public participation in the process of determining regulations to enforce the various acts, and in the process of planning urban, recreational, park and general land use. The common law concepts of riparian rights, nuisance, negligence, trespass, and strict liability are discussed. The need for an Environmental Bill of Rights for Ontario and Canada is suggested, along with the text of a proposed Bill.

Yanggen, DA and Kusler, JA

1968 (Feb)

"Natural Resource Protection Through Shoreland Regulation"

Land Economics, Vol. 44, No. 1, pp. 73-86.

This article presents a discussion of shoreland protection and regulation in the state of Wisconsin. A model of shoreland protection is outlined which attempts to establish a development code and a simple districting scheme for shoreland areas. Public education and voluntary cooperation appear to be necessary factors for success of the program, especially in those areas which are predominantly rural and which have only limited enforcement personnel.

DECISION-MAKING, GAME THEORY, AND CONFLICT RESOLUTION

Boulding, KE

1963

Conflict and Defense: A General Theory

(New York: Harper Torchbooks, The University Library, Harper and Row Publishers), pp. 349.

Conflict is considered to be an activity which is found almost everywhere, throughout the biological, social, economic and political realms. This book is an attempt to answer the questions of whether or not there is a general phenomenon of conflict and if there is, whether there is a general theory of conflict that is applicable to all areas, or rather is the type of conflict that is studied in one area quite different from that studied in another. A general framework of concepts of both dynamic or static systems models of conflict are reviewed. This series of events includes: 1) the concept of the party or behaviour unit in that a conflict is a situation that involves at least two parties, 2) the concept of behaviour space or all the possible future positions of a behaviour unit, 3) the concept of competition between any two behaviour units, and 4) the concept of conflict or a situation of competition in which the parties are aware of the incompatibility of potential future positions and in which each party wishes to occupy a position that is incompatible with the wishes of the other. The Richardson Process Models concerning the submission of one party to another are reviewed. Game theory is defined as a situation in which there are a certain number of parties each of which is capable of assuming one out of a given number of positions or choices. The basic concept of this theory is the payoff or outcome matrix, or in other words, the set of rewards or penalties accruing to each party at each combination of positions of all the parties. These positions may be either simple choices or complex strategies which take care of all possible eventualities. The theory of viability or the ability and willingness of one party to destroy or eliminate another is discussed. Parties may be unconditionally viable (ie. a party that cannot be absorbed or destroyed as an independent source of decisions) or conditionally viable (ie. the party that can be absorbed or destroyed by another party is not due to restraint on the part of the more powerful or dominant party). Parties to conflict may be either individuals or groups. There are basically three levels of conflict, namely simple conflict among individuals or persons acting on their own behalf and not in any representative capacity, a middle ground known as the group which is a subpopulation within some larger population with which individual persons may be identified, and conflicts of organizations or well-structured groups with clearly defined roles and constitutions. Within the context of group conflict, there are voluntary and involuntary groupings. Group conflict is complicated by the fact that each person belongs to many different groups. The two distinctions of boundary and ecological conflict are discussed. The field of conflict is defined as that set of relevant variables within which conflict movements may occur that make one party worse off and one better off in their own estimation. The concepts of economic, industrial and international conflict are reviewed. It is noted that the conflicts of individuals groups, and organizations lie embedded in a matrix of more general

conflict, namely the great battles of ethical, religious, scientific and ideological systems for the allegiance of men. Methods of conflict resolution are discussed, including; 1) avoidance wherein a) one party removes himself from the field, b) both parties remove themselves, and c) one party forcibly removes the other or conquest, and 2) procedural resolution wherein the parties must live together after a) reconciliation, b) compromise, and c) award. There are basically three sets of procedures for each of the procedural forms of procedural conflict conclusion. These include bargaining and mediation and legal constitutional and legislative settlements.

Buchanan, JM and Tullock, Q
1962

The Calculus of Consent: Legal Foundations of Constitutional Democracy
(Ann Arbor, Michigan: University of Michigan Press), pp. 361.

This text attempts to analyze the calculus of the rational individual when he is faced with questions of constitutional choice. The choice process is examined with reference to the problem of decision-making rules. The term methodological individualism is employed to describe the analysis wherein human beings are conceived to be the only ultimate choice makers in determining group as well as private action. Collective action, defined as the action of individuals when they choose to accomplish purposes collectively rather than individually, and collective choice processes, wherein the represented individuals seek not to maximize their own utility but to find the public interest or common good, are discussed along with two approaches to collective choice (ie. economic or positive sum games and power-maximizing or zero-sum games). The various external and decision-making costs involved in collective action are examined. The use of models or game theory to analyze simple majority voting or the operation of a single collective decision-making rule are considered. The concept of utilizing logrolling or vote trading to change the outcome of bargaining or decision-making is considered in light of decreasing decision-making costs. The rule of pareto-optimality wherein in any given situation, it is impossible to make a change without making some individual in the group worse off is discussed. This rule of pareto optimality applies only to the characteristics of a change, and not to the characteristics of a situation or state either before or after a change. Further discussion of external costs breaks them down into those resulting from allocational externalities or inefficiencies and redistributive externalities or inefficiencies. The ideal solution to a problem of organization is felt to be one in which all external costs are absent.

Clawson, M
1975 (July)

"Economic and Social Conflicts in Land Use Planning"
Natural Resources Journal, Vol. 15, No. 3, pp. 473-489.

Discussion is made of the history of conflicts between public and

private land use and development in the United States. Society has asserted its right to control private land use for one or a combination of the following four reasons: externalities, interdependencies, indivisibilities and efficiency. It is felt that like nature and economics, wherein everything is related to everything else, so to each land use is related to everything else. In the United States, some level of government possesses such powers and mechanisms to control land use as: 1) police power or the right and power to regulate private land use for the health, welfare and safety of the general public, 2) power to tax land and improvements on the land, 3) power to eminent domain or legal power to take private land with due compensation for public use, 4) power to provide certain types of public improvements or services, and 5) power to wheel and deal agreements in land use. Until about 1965, local governments had almost sole control over private land use. However, in the past ten years, state governments have begun to take over more control of some kinds of private land. Also, legislation has been under consideration for some time at the federal level to implement a national land use act. Two major characteristics of land use planning and implementation are discussed with reference to the conflicts that may arise. These are: 1) land use planning is wealth creating in that zoning or rezoning is usually to increase the value or minimize depreciation of land values, and 2) land use planning and zoning is discriminatory in effect and often in intent. There appears to be in the United States a widespread awareness of the deficiencies in the present system of land use planning and controls. One attempt to remedy this has been made by California, where via a referendum, a Coastal Zone Planning and Control Act was implemented. The need for further controls such as this is discussed.

Frolich, N; Hunt, T; Oppenheimer, J; Wagner, RH
1975 (June)

"Individual Contributions for Collective Goods: Alternative Models"
Journal of Conflict Resolution, Vol. 19, No. 2, pp. 310-329.

Samuelson has identified collective consumption goods as those goods which are indivisible and non-excludable (ie. if one member of a group received some, so did others). The main problem concerned with the supply of these goods was the difficulty of achieving an optimal supply. It is generally agreed that much of politics can be viewed in terms of behaviour concerning collective goods. However, there is much disagreement among scientists and economists concerning predictions of the expected behaviour of potential consumers of collective goods. Several of the opinions held are presented. This paper attempts to argue that the sort of behaviour one can expect from rational self-interested persons cannot be inferred from the definition of a collective good alone, but rather depends on a more complete description of the situation. In particular, it is felt that more must be known about the shape of the production function governing the supply of the collective good as well as about the shape of the utility functions of the individuals concerned. Several techniques or methods of graphically representing choice of strategies are presented, including

Schellings binary choice technique, Hardins' linear production and valuation model, S-shaped production functions, and Frohlich and Oppenheimer's lumpy good method. It must be remembered that the methods mentioned here are only binary choice and do not take into account all possible nuances and variations in individual preferences and choices.

Johnson, RJ
1974 (Jan)

"Conflict Avoidances through Acceptable Decisions"
Human Relations, Vol. 27, pp. 71-82.

This study is designed to examine the conflict avoidance aspect of decision-making which has considerable influence on the decision thought processes. The basic hypothesis of the study is that executives will make a less desirable but acceptable short-run decision to avoid a potentially conflict generating condition. A sample of businessmen were asked to evaluate and make decisions in ten structured situations. All of the situations were concerned with interpersonal relationships or organizational behaviour problems. Four of these situations are presented in the paper along with the results obtained regarding ideal and practical or second best decisions in each. It is felt that second best decisions are evidently based in part on past experience and an anticipation of future behaviour. When an executive makes an ideal or first decision, he reviews in his mind the potential results of such a decision and then, if he anticipates conflict or too great an uncertainty, he will draw on past experience or anticipated future experience and make a second decision. It is felt that there is a tendency for selective perception in decision-making, wherein members of an organizational unit tend to evaluate action only in terms of sub-goals even when these are in conflict with the overall goals of the larger organization.

Mack, RW and Snyder, RC
1973

"The Analysis of Social Conflict--Toward An Overview and Synthesis"
in Jandt, FE (ED) Conflict Resolution Through Communication
(New York: Harper and Row Publishers), pp. 25-87.

See also: Journal of Conflict Resolution, Vol. 1, 1957, pp. 212-248.

This article attempts to define a set of properties which constitute a model for identifying and characterizing conflict phenomena and situations. These properties include: 1) conflict requires at least two parties or two analytically distinct units or entities, 2) conflict arises from "position scarcity" and "resource scarcity", 3) conflictful behaviours are those designed to destroy, injure, thwart or otherwise control another party or parties and a conflict relationship is one in which the parties can gain (relatively) only at each other's expense, 4) conflict requires interaction among parties in which actions

and counteractions are mutually opposed, 5) conflict relations always involve attempts to gain control of scarce resources and positions or to influence behaviour in certain directions, 6) conflict relations constitute a fundamental social-interaction process having important consequences, 7) a conflict process or relation represents a temporary tendency toward disjunction in the interaction flow between parties, and 8) conflict relations do not represent a breakdown in regulated conduct but rather a shift in the governing norms and expectations. Various types and distinctions of conflict are reviewed, including: 1) conflict within and between parties, 2) realistic and non-realistic conflict, 3) real and induced conflict, 4) communal and non-communal conflict, 5) institutionalized and non-institutionalized conflict, 6) extreme, aggressive or violent and non-violent or diplomatic conflict, 7) primary face-to-face and secondary mediated conflicts, 8) personal subjective and impersonal objective conflict, 9) conflicts of right and conflicts of interest. The concept of conflict as an interaction system is discussed. Possible modes of conflict resolution are discussed including arbitration, mediation, negotiation, inquiry, legislation, judicial settlement, and informal consensus.

McNeel, SP and Reid, EC
1975 (Dec)

"Attitude Similarity, Social Goals and Cooperation"
Journal of Conflict Resolution, Vol. 19, No. 4, pp. 665-681.

This study is designed to investigate the effects of perceived attitudinal similarity of the other person on cooperation in a two-person interaction. It has been illustrated in several studies that perceived similarities generally enhances cooperative tendencies, presumably through the increased attraction which a similar other has for subjects. However, there are some limitations to this positive similarity/attraction effect. It has been found that both the behaviour of the other person and the subjects goals strongly affect the subjects cooperative tendencies. It is also felt by Krauss that the positive similarity effect is significant only if either similar or dissimilar attitudes are strongly anchored. Hence the balance theory is applied wherein if an imbalance exists in an interaction, the person is motivated to reduce the imbalance by changing the weakest bond in the unbalanced structure. Thus, unless strongly anchored, similar (positive) attitude information will be a weaker bond between interactants than competitive behaviour. The methodology and results of a study carried out to test the hypothesis that 1) individualistic subjects who receive a competitive first choice will show significantly more cooperation in the similar than in the no-information or dissimilar attitude conditions, 2) there will be enhanced cooperation for individualistic subjects in the similar cooperative first choice group, and 3) no imbalance would be expected in the no-information cooperative first choice groups and hence no enhancement in cooperation.

Mitchell, JaK

1974

Community Response to Coastal Erosion

(Chicago: University of Chicago, Department of Geography Research Paper No. 18), pp. 209.

This research focusses primarily on the processes by which hazard zone occupants both individually and collectively make adjustments to erosion hazards. Two main issues are studied, namely how individual coastal resource managers perceive and adjust to coastal erosion, and to what degree it is possible to analyze local conflicts over coastal protection by applying community decision-making theory. Five Atlantic coastal communities suffering from erosion problems are studied. This involved the examination of individual resource managers (both private and commercial hotel) hazard perceptions and adjustment strategies. Thematic apperception tests and questionnaire based interviews were conducted for a total of 130 respondents. Particular attention is paid to the formation and structure of erosion interests groups, their effect on local public policy, and the emergence or absence of conflicts over coastal protection. A majority of coastal managers strongly favour the concept of public protection for private property. Membership in formal private erosion groups is largest, and the groups most effective in changing public policy where coastal managers populations are composed of higher socio-economic status persons with well developed communicative skills and experience in organizational management.

Quinlan, DW

1968

"Conflicts Arising from the Use of Shore Property on the Great Lakes"

Proceedings of the Great Lakes Water Resources Conference

(Toronto: Canadian Department of Public Works), pp. 145-153.

Conflict is defined as: 1) competition for mastery or power, and 2) battle. Until recently, little concern was felt regarding use of Great Lakes shoreland (approximately 10,000 miles) because there appeared to be sufficient for all. Investment and development has occurred at such a rate that at present, a relatively narrow strip of land around the lakes now represents some of the most valuable real estate on the continent. This investment varies from private recreation to urban to industrial development. The result has been the disappearance of high quality agricultural land, potential conservation areas, wildlife habitat, and open recreational land. At present, the person or use offering the highest price wins. This should be replaced by better land use planning coupled with public reservation of open areas. Comment is made concerning the need for flood plain zoning to control the haphazard development which is occurring. It is suggested that a program of information and education should be undertaken on a continuing basis to make people aware of the characteristics and behaviour of the lakes, recurring fluctuations in levels, and that zoning be enforced.

Schofield, N

1975 (Sept)

"A Game Theoretic Analysis of Olson's Game of Collective Action"
Journal of Conflict Resolution, Vol. 19, No. 3, pp. 441-461.

It has been assumed by Olson that each player can choose to contribute to the collective good by accepting a fixed cost function, that the total collective good is dependent on the number of players who accept the cost function, and that the collective good is equally divided among all the players in the game. The benefits accruing from the collective goods are thus indivisible or public goods and the payoff to the individual is the value of the public good which he consumes less the cost function. According to Olson, it is individually rational for any member of society to refuse to accept the cost function, and if each individual makes this choice then society as a whole benefits less than it might have done. This paper outlines Hardin's interpretation of Olson's argument and suggests a solution to the collective game in which utility is transferable. It is concerned with the provision of goods which are collectively public but individually private. It is suggested that a possible solution to individual refusal to accept cooperative strategies is that coalition beyond a certain size must unanimously and rationally grow until it forms the grand coalition. The solution supposes that subgroups form within the primary group and considers the consequent rational dynamics of the situation.

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