COASTAL COMMUNITY BASED DECISION-MAKING: VALUES FOR SUSTAINABLE COASTAL ZONE MANAGEMENT

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Laura A. Loucks
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ABSTRACT

The main thrust of this thesis is to argue for the need for coastal community based resource management. While government has been developing "action" oriented programs such as the Atlantic Coastal Action Program (ACAP), they have not succeeded in bringing the resource users - the people dependent on the ocean for a livelihood- to the decision-making process. This is not surprising given the underlying values bureaucracy uses to build policy. Policies designed for instrumental rational decision-making are better aligned with large corporate industry agendas than with small scale sustainable community management initiatives. This thesis argues that community based management is our best opportunity for sustainable resource decision-making, however several communication barriers must be overcome.

The barriers in communication between government agencies and the differing values between bureaucrats and people in coastal communities perpetuate mistrust. The increase in mistrust is directly related to an increase in boundary setting as different groups feel threatened. Government culture is such that it is continuously having to

justify its actions. Culture is symbolized and defined by boundaries and government agencies, just like any cultural group, define their boundaries in terms of legislative jurisdictions, laws, normative behaviour and underlying values. Government culture is different than community culture however, in two fundamental ways. Bureaucracy defines its boundaries explicitly through legislation, policies, written rules and regulations. This rigid and explicit definition of boundaries is related to the underlying values of instrumental rational decision making. The "Tragedy of the Commons" theory which depicts these values, assumes humans can not be trusted. The increase in mistrust perpetuates the perceived need for rigid boundary setting.

Highly socialized communities however, define boundaries less explicitly. Boundaries are symbolized through experiences and shared community living patterns. The boundaries are protected by their very invisibility. If one is not part of the communication network within the community, one is outside of the local information exchange and therefore not able to understand the local ways of doing things. Thus the term "outsider". The boundaries of highly socialized communities are understood internally or implicitly rather than explicitly. This is related directly to value rational decision-making which is founded on trust and respect for one's social and ecological surroundings. As trust increases, the barriers for communication decrease, thus networks are complex and integrated throughout the community.

The invisible boundaries of embedded communities however, contribute to their vulnerability. Implicit values and decision-making based on trust is highly susceptible to exploitation. Although communication patterns are clear when individuals share the

same values, when differing values are imposed upon community based decision-making processes, it is difficult to defend the invisible community boundaries. This explains the vulnerability of community based fishery management. Without legal enforcement or formalized agreements, traditional informal rules and regulations are dismissed or over ruled by rigid government boundaries.

The significance of these findings is the demonstration that community based management is capable of being more sustainable than government management, if value rational decision-making is strong enough to maintain instrumental decision-making within the boundaries of the community interest. This thesis demonstrates how embedded communities still maintain essential parts of the value rational decision-making framework. It also shows how government imposed decision-making structures in many cases, work to destroy and dismantle value rational decision-making because bureaucracy is pre-programmed with instrumental rational values based on mistrust. This alignment is also congruent with capitalist values inherent to many large corporate sectors. For sustainable coastal zone management, government alignment has to be reversed.

For shared decision-making and truly sustainable coastal zone management to occur, government decision-making has to come into alignment with value rational decision-making. This requires a fundamental shift in the underlying values of bureaucracy. The myth of the "tragedy of the commons" must be exposed or disposed of, community action has to build and grow in order to influence political sensitivities.

INTRODUCTION

The idea of integrated Canadian coastal management has long been in the minds of many scientists and resource managers.[1] Over twenty years ago, a conference held in Amherst, Nova Scotia , brought together representatives from both federal and provincial governments, industry representatives and public interest groups from across the country to identify priority areas for shore management policies. A set of principles for shore management was generally accepted and put forward as recommendations for federal government policy. The seven major principles were identified as the following:

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[1] For the earliest Canadian discussions on integrated coastal zone management see Environment Canada, Atlantic Unit, Water Management Service, Coastal Zone, Proceedings of a Seminar held at Bedford Institute of Oceanography, Dartmouth, N S (Ottawa: Environment Canada 1972); and Institute of Public Affairs, Dalhousie University, Shoreland: Its use, Ownership, Access and Management, Proceedings of a seminar held at Amherst, N.S. (Halifax: Institute of Public Affairs, 1972).

1. The recognition of the importance of shore areas.

2. A co-operative approach to management

3. Policy and program coordination

4. The protection of sensitive, unique and significant areas

5. The right of public access

6. Information systems

7. Public awareness

(Harrison and Parkes 1983)

Environment Canada appointed a coastal zone coordinator until 1981-1982 and a national conference was again organized with representation from all Canadian provinces sponsored by the Canadian Council of Resource and Environment Ministers(CCREM). Conference recommendations however, were never implemented nor were any legislative goals and objectives for integrated coastal management initiated (Gamble and Day 1990). Twenty years later the management of the Atlantic Canadian coastal zone remains complex, controversial and uncoordinated despite the consistent recommendations and unchanging principles.

It would be misleading however, to give the impression that no effort has been made to achieve this goal. On the contrary, several initiatives have been established in Atlantic Canada to attempt the ultimate goal of integrated coastal zone management. More recently, Environment Canada has initiated ACAP, the Atlantic Coastal Action Program, which is designed as a public participation approach to community based environmental management. As well, the Nova Scotia Provincial departments of Environment and

Fisheries have compiled an integrated management strategy for Nova Scotia entitled "Coastal 2000" which outlines roles and responsibilities for all coastal zone "stakeholders". Both initiatives recognize the importance of community involvement in resource management decision making. This modus operandi was further emphasized at a coastal zone management conference held in Halifax N.S. in 1994. Community based management and public process were highly acclaimed as the avenue for successful coastal zone management.[2]

Meanwhile however, coastal communities in Atlantic Canada are experiencing severe crisis due to the decline of groundfish stocks. Fishing communities throughout the coastline of Nova Scotia are struggling with high levels of unemployment, confusing fishery adjustment programs, and an overall sense of uncertainty. Various policy proposals and vision documents present a future fishery far removed from the traditional livelihoods and lifestyles many rural Nova Scotians have been accustomed too.[3] The call for community volunteers for coastal zone management is somewhat misaligned with the socio-economic difficulties coastal communities are experiencing. Not to mention the political hot bed in which the jurisdictional issues of coastal management lie.   Coastal   zone management now has to balance economic , environmental as well as social issues within coastal communities, in order to be truly integrated and successful. This is no simple task.

See Coastal Zone Canada ' 94, Cooperation in the Coastal zone: Conference Proceedings (Halifax: Coastal Zone Canada Association, Volume 2)

'See Fisheries Council of Canada Document, Building a Fishery that Works: A Vision for the Atlantic Fisheries, (Ottawa, 1994) for the corporate vision that advocates a formal economic, vertically integrated approach to resource management with little government involvement, or Department of Fisheries and Oceans, Atlantic Licensing Policy Review consultation paper (Ottawa: Minister of Supply and Services, 1995) for an idea of how government proposes to reduce the number of fishers in the industry.

Furthermore, the demands on the coastal zone are increasing as people and communities search for alternative means for economic stability. People are more willing to sell their coastal properties, alternative fisheries are being sought out and exploited without proper management guidelines, alternative employment opportunities such as tourism are demanding more coastal parks both for the immediate employment and the perceived long term attraction to tourists, not to mention the increased conflict within the fishing industry itself as scarcity grows and the struggle for resource access continues. Furthermore, all levels of government are undergoing both a fiscal crisis and a legitimacy crisis. People are sceptical of the governments' ability to manage our natural resources.

The following research has evolved from this question: Who should be managing our natural resources for sustainability? Upon asking this initial question, two more questions arise: 1) Is the government capable of managing for sustainability through policy making and enforcement ? 2) What prevents government from working more closely with community management initiatives? Although these questions seem broad and contemplative, it may be helpful to explain the setting in which I posed these questions to myself.

Approximately three years ago I was employed by the provincial department of Natural Resources, Parks and Recreation Division to work on the Parks and Protected Areas Systems Plan for Nova Scotia. Although this work was very rewarding, it gave me new insight to the internal conflicts within government regarding the management of our natural resources. The Parks and Protected areas Plan attempts to rank the remaining large wilderness areas on crown land and designate the most representative, unique and outstanding tracts of wilderness for protection. The plan is well researched, well

documented , an^d ... isses many issues for wildlife conservation and long term forest stability. Despite the integrity of the plan however, internal conflict protesting the plan was initiated early on in the planning process by departmental foresters, wildlife biologists, geologists and various managers. Furthermore, a powerful lobby group headed by Industry representatives associated with the Mines and Energy division of Natural Resources, directed large sums of money towards lobbying the Minister of Natural Resources to cancel the Parks Plan. It was and remains an enormous fear that protecting these landscapes ,as identified by the plan, will incur great economic loss to the various industries dependent on crown land resources for their operation. Furthermore, this imposes political consequences as well, if local people employed by these industries perceive that impacts on their employment options have occurred due to government decision-making, they could react against their local representatives.

And so I sat in my office, diligently writing reports on these areas awaiting possible protection, yet it was not yet public information. It was strictly internal confidential information. Despite the possible allies to be made form a public participation process, it was thought this may complicate the issue, especially the possible negative reaction of hunters and anglers if they felt their traditional access was being restricted. In this mode of silence I carried on with my work, yet I grew more and more restless with the uncertainty that my work would never be implemented. Furthermore, it became a challenge to feel positive about the work given the enormous pressure building internally to veto the project. Perhaps one of the factors that narrowly saved the Plan was the fact that the Minister of the time was sympathetic to the project. Yet this contrasted highly with even the sentiments

of my co-workers. Many of whom felt cheated of their own projects because Parks Division money was being re-directed to finance the systems plan.

Meanwhile, other Parks planners were having their own dilemmas. The public participation process for Crescent Beach, Queens Co. was failing. People were calling the Parks Division daily with complaints. The media was covering the issue poorly, yet the planner involved was warned not to speak to the media for any reason. There was an overwhelming sense of frustration and helplessness in the office. It was under these circumstances I was asked to represent the Parks Division at a thesis defense for a student attending the School for Resources and Environmental Studies at Dalhousie University. Her topic was "The Role of Coastal Provincial Parks in Facilitating Coastal Zone Management" and her thesis was directed towards the need for community based management. The thesis outlined a possible scenario for community based coastal zone management at Crystal Crescent Beach, an undeveloped provincial park property approximately 30km. west of Halifax. The management concept suggested the formation of a committee with local citizens, parks planners and other government representatives, to oversee the management of the beach. The concept was insightful, however my knowledge of the internal management problems within the Parks Division gave me a considerable feeling of doubt for its likelihood of implementation. Despite my feeling that this scenario was unrealistic, it did challenge me to delve further into the question of resource management. I was frustrated with the inefficiency of government with its departmental infighting and secrecy. it also worried me that crown land resources were more readily set aside for large corporations than for areas of protection. It also frustrated me that the public was so rarely

consulted or informed of government procedures for resource management. It was this setting that nurtured a desire to answer a series of questions that have puzzled me for some time.

Why has an integrated approach to coastal zone management not been achieved? What is the "world view" or set of values underlying government policy that excludes the participation of the public? And finally, what would a successful, sustainable decision-making process look like for integrated coastal zone management and how could management policies be successfully implemented?

Herein lies my hypothesis: For sustainable management to take place within the coastal zone, those individuals who perceive a vested interest in maintaining the integrity of the environment should have the role of decision-making for the allocation of natural resources and the ongoing management of these resources. Sustainable management must be perceived as a need. For this management to be successful, its implementation must be agreed to and respected by those who work, play and live within the coastal zone region, and must provide some recognizable advantage for the community. I argue that for sustainable resource management in the coastal zone to be implemented and enforced, those people who live by the sea, work by the sea and have a strong attachment to their surrounding social and ecological environments, are best capable of making decisions for the good of their community rather than just for their own narrow interests. Through strong community linkages and effective communication, families in coastal communities are better equipped, in some cases, at planning for the future of their children and their childrens' children. An interest in the future, together with strong historical roots, gives their families an intrinsic

stake in sustaining coastal community life.

The following thesis was written using a participant observation methodology. I actively participated in the following groupsover a period of two years: ACAP Sydney, The District Five Community Development Association, the Coastal Community Network and various youth activities in connection with the community of Sambro and the Sambro Elementary School. I live close to Sambro and continue to participate in many of these community based initiatives and I believe strongly in the need for community based management. My various practical experiences, as both a government employee and community volunteer, have guided me significantly in the direction of this paper. I was interested in this research topic to satisfy my own questions regarding government bias and the difficulties with integrated resource management decision-making.

Chapter one introduces a brief history of coastal zone management in Canada and more specificly Atlantic Canada. The purpose of this chapter is to identify patterns of values and underlying beliefs that contribute to the complexities and inefficiencies characteristic of government policy making structures. Chapter two attempts to explain the underlying thinking that perpetuate these inefficiencies via the "tragedy of the commons" model and its rather narrow view of human nature. Chapter three illustrates the need for shared values and vital communities for sustainable community based management. Focusing on embedded communities, it is demonstrated that humans can and do act in the best interest of the community as well as pursuing individual needs. Chapter four examines the case study of Sambro and the District Five Development Association. Through this window on an embedded community, I demonstrate the negative impacts government biases can have

on communities and how one community is attempting to move beyond the oppressive values inherent to government structures. Chapter five contains conclusions and recommendations for improved sustainable decision making in coastal communities and insights on coastal zone management implementation.

CHAPTER I

COASTAL ZONE MANAGEMENT :

PATTERNS IN GOVERNMENT DECISION MAKING

1.0 Introduction

The evolution of coastal zone management in both Canada and the United States has

endured numerous obstacles for integrated decision making and effective implementation

(Godschalk 1992). From the early stages of the 'coastal management' concept -s identified

in the 1960's, resource managers and scientists foresaw the need for a cooperative approach

to long term management(Beanslands 1978). History has demonstrated however, that

fragmented government administration, a lack of political motivation, the lack of explicit

management policies and flawed decision making processes have contributed to an over all

lack of integrated coastal zone management(Hildebrande 1989).

More recent environmental and socio-economic crises in the Atlantic fishery however, have stimulated renewed interest and motivation for an integrated response to coastal zone management issues(Van Dusen and Johnson Hayden 1989). Marine ecosystem uses are expanding as alternatives[1] to the declining traditional commercial fishery are explored for coastal community economic diversity. The necessity for coastal zone management is inseparable from the economic reality of our human dependence on natural resources.

The Nova Scotia Sustainable Development Strategy states:

> Much of Nova Scotia's wealth has been derived from our natural resources. The social programs that we have grown to expect are funded in part by economic activity in the natural resource sectors. In the past, industry has undervalued our air, water and land. Consequently, there was little reason to implement environmental protection measures. With the loss of economic activity in certain areas (especially coastal ones) due to degraded environmental quality, Nova Scotians have come to realize that environmental and economic health are indelibly linked. Therefore, it is important that the environmental and economic ramifications of all coastal zone issues be considered.(Nova Scotia Round Table on Environment and Economy 1992)

Increased awareness of environmental issues together with the increased demand for economic value from the coastal zone has fostered a greater understanding of the complex linkages between local, regional and global influences on the marine ecosystem. It is now widely recognized by scientists, resource managers, planners, and community leaders that sustainable integrated management requires effective coordination and methods for clear communication(Bernstein et al. 1993). Clear coastal zone management objectives are

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[1] examples of alternative economic initiatives in the coastal zone are: aquaculture, eco-tourism, sport fishing, clamming, sea urchin harvesting, periwinkle harvesting, crab fishing and scuba diving.

difficult to define however, given the multitude of players and the diverse range of perspectives individuals bring to the decision making process. Research done on environmental monitoring programs in the United States has illustrated the importance of resolving conflicts between scientists and managers (Bernstein et. al. 1993). Decision making processes are endangered by misunderstandings and false perceptions of the players involved. Scientists and managers are two distinct group 'types' that manifest stereotypical behaviour traits. The perceived differences between these two groups have often stalled or eliminated effective implementation of coastal zone management objectives.

> In general, scientists are trained to achieve increased understanding and managers
> to manage problems and create policies. From this fundamental contrast flow the
> other dissimilarities between the two cultures. (Bernstein et al., 1993 p. 189)

Differences in values or perceptions are characteristic of the various disciplinary or occupational cultures of these interest groups. Such differences play a fundamental role in the decision-making process. Problems with communication are often rooted in the differences in beliefs that underlie every individual's approach to decision-making. Problems with communication in coastal zone management decision making processes have been widely cited as significant barriers to successful policy implementation and enforcement(Beanslands 1978,Dale 1979,Godschalk 1990, Johnston et al. 1975,Kinsey 1985,Lamson and Hanson 1984,Lowry 1988,Owens 1985, Sabatier 1986, Sorenson 1978).

It is the premise of this thesis that communication barriers are rooted within the structure and culture of decision-making processes: in people's mental models or world views, written rules, unwritten rules, habits, norms, expectations, perceptions, values, beliefs, hierarchy, information flows, control mechanisms, delays, reward systems as well

as the physical structure (Innovation Associates 1993). In other words, the structure for decision-making is a configuration of interacting elements that create an underlying pattern for the whole process. Understanding the underlying pattern can reveal variables that are contributing to conflict within the decision-making process. The purpose of this chapter is to outline the dynamic patterns of decision making that have dominated coastal zone management issues. Outlining trends and repeated problem solving methods will illustrate the conflicting values present within bureaucratic institutions and the forces or pressures which perpetuate these values. This will be achieved by examining briefly the history of coastal zone management in Canada and Nova Scotia and how it has contributed to the most recent coastal zone management action initiatives such as the Environment Canada Atlantic Coastal Action Program(ACAP) and Coastal 2000, an integrated Nova Scotia Provincial Department initiative. Conclusions from this analysis will lead into a brief examination of the underlying mental models dominating government decision making frameworks.

1.1 Canadian Coastal Zone Management: A Brief Review

Canada has an oscillating history of attempts to manage its coastal zones. Analysts have articulated several reasons for the variegated movement towards an integrated national Coastal Zone Management Framework, however it seems the problems are still greater than the capacity for solutions given the continued delays in establishing a unified management approach. The issue of coastal zone management has been described as a 'meta-problem'(Johnston, Pross and MacDougall 1975) perhaps too large for government to

dissolve on its own. The lack of integrated Canadian Coastal Zone Management has been attributed to difficulties in establishing a national policy that would designate one legislative body as being responsible for coastal zone management(Johnston, Pross and MacDougall 1975). Many have described the attempts as being highly fragmented and piecemeal. The nature of the fragmented administration is directly related to the legislative framework applicable to the management of coastal resources within shorelands and adjacent waters. These legislative responsibilities are shared between Federal and Provincial governments as dictated by the original jurisdictions defined by the British North American Act in 1867 and restated in the 1982 Canadian Constitution(Johnston, Pross and MacDougall 1975). The Federal government has jurisdiction over protection and conservation of marine and inland fisheries, navigation, shipping, interprovincial undertakings, and international boundary issues. The Provincial governments are responsible for property and civil rights, and issues of local or private matters. The Provinces have delegated varying degrees of land use planning authority to municipal and regional governments (Gamble and Day 1990).

A thorough review of the legislation in 1970 revealed at least 67 federal statutes that could be regarded as relevant to the management of the coastal zone (Johnston, Pross and MacDougall 1975). The number of Federal and Provincial agencies responsible for these is sizeable.

> In all, there are 16 federal agencies responsible for at least as many acts pertaining to various land, marine and resource interests. However, none deals exclusively with the coastal zone. A lead agency has not been empowered and instructed to coordinate federal coastal initiatives.(Gamble and Day,1990 p.119)

The initial complexities of the legislative framework require much coordination

between government agencies to carry out integrated management schemes, however as the history of fragmentation illustrates, the method of decision making negates such cross departmental interaction.

Government response to coastal zone management only came after several organized meetings and seminars hosted by concerned scientists and citizens raised the Federal government awareness level to address the coastal zone management issue(Hildebrande 1989). In Atlantic Canada, this resulted in a commissioned study to address the existing legislative framework and make recommendations for coastal zone management policy. Although the study determined that the slow government response to coastal zone management was due to the lack of one agency having responsibility for it, additional conclusions were also drawn:

> ..too many divergent interests are involved to expect that a unified organizational structure, or even a unified plan will ever be possible, even if constitutional barriers did not exist. Having accepted fragmentation as a fact of life, then, we must now consider the subsidiary conditions in the current situation that may be amenable to modification. Briefly these are:
>
> a)A limited recognition of the coastal zone as an object for management
>
> b) Internal organizational problems of government agencies operating in the coastal zone
>
> c) 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 zone.
> (Johnston, Pross and MacDougall 1975,p. 92).

The study identified interdepartmental secrecy and the lack of communication between agencies as central issues to the difficulty of policy coordination.

Of the four Atlantic Provinces, Nova Scotia has the least developed system of policy coordination and integration. Both within and outside the provincial public service, critics complain that there is little communication between agencies and that no structures exist below the cabinet level that are capable of requiring agencies to cooperate with one another or of developing a master plan.
(Johnston, Pross and MacDougall 1975, p.99)

Similar trends in other Canadian provincial governments resulted in reorganization

strategies as attempts to increase the coordination of department program and policy making

, however changes in structure only provoked short term progress. In the long term, the

changes disrupted communication linkages that were working well prior to reorganization

and mistrust was elevated(Johnston, Pross and MacDougall 1975).

In Nova Scotia, two different attempts at developing central policy coordinating

bodies were viewed with apprehension because of the fear of a loss of departmental policy

advisory roles and a change in traditional decision making power(Johnston, Pross and

MacDougall 1975, see also Foresta 1986). The level of uncertainty in decision making may

have been amplified however by the lack of communication between Federal and Provincial

government agencies. The path of delegation often led to Municipalities having to deal with

policy implementation without the same resources or information available to Federal

departments.

At the Municipal level, resources of this sort are even more limited and the problem is exacerbated by constitutional provisions that prohibit Federal and Municipal governments from establishing direct formal relations in order, for example, to carry out programs in land-use planning. (Johnston, Pross and MacDougall 1975, p.150)

A high level of mistrust was apparent between government departments, particularly

between those of diverging purposes of either conservation or development.[5] This conflict

of goals has been the historical dichotomy of resource management in Nova Scotia and

Canada.

> Analysis of natural resource policy in Canada during the past hundred years or so
> reveals that there have been, in reality, only two major forces at work; but they have
> been largely conflicting forces. On the one hand, there has been the impetus towards
> exploitation and development. This approach is based largely upon the concept of
> a relatively inexhaustible supply of resources and aimed at combatting regional
> disparities and, thereby, holding the many sided nation together... Ranged against
> this view were the conservationists. The latter were not against economic
> growth...nor did they necessarily suggest that resources were scarce in Canada and
> would have to be husbanded and harvested frugally. But they were convinced that
> most of the development of natural resources was carried out in a wasteful and
> prolifigate manner which, in the long run, could lead to resource depletion(
> Johnston, Pross and MacDougall 1975, p.107).

The recommendations made in the commissioned study recognized that managing

these varying degrees of departmental conflicts was essential for the efforts of coastal zone

management. Cooperation and communication were the repeated themes of solutions to the

coastal management impasse.

The study acknowledged the correlation between inter-agency mistrust and the lack

of communication that perpetuated it. Despite the conclusions and recommendations

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· The debate between conservationists and developers is situated within the values each group represents.
Conservationists represent the values of protecting the environment and not wasting resources unnecessarily.
Developers represent the values of growth and economic development. The term "sustainable development" attempts
to merge the two groups to a balance of values, however what often happens is the definition becomes
meaningless.(personal communication)

Government agencies are often perceived as "siding with the developers" irregardless of the terminology. For
example, opposition to aquaculture in Blind Bay was perpetuated by the belief that the Provincial Department of
Fisheries was not neutral but biased in favour of the developer. The bias
originates from the perception that the department does not enforce fishing violations and issues licenses without
discretion. (Environment and Economic Committee 1992)

The differences in values between conservationists and developers occurs within government agencies as
well as outside and is often the source for much internal conflict as well as inter-departmental conflict.

however, these problems were neither ratified nor alleviated and are still with us today. The study did provoke a series of meetings which resulted in an information network. In 1976, the Nova Scotia government established a Coastal Zone Issues Group within the Provincial Land Use Committee, however land use policy issues raised another interdepartmental legislative problem.

The Nova Scotia Planning Act allows for Municipal control of land use via land use policies, developed by an interdepartmental committee, and incorporated into Municipal Planning Strategies. The formation of land use policies has still not been completed however, due to the complexity of legislation and the restrictive interpretation of the Planning Act. The Department of Municipal Affairs interprets the Act to mean all private land must have a use: That is, restrictive zoning only applies to public land. Given this interpretation, the enforcement of land use policies on private land is both difficult and questionable.

Land use conflicts contribute to the difficulty for coastal zone management decision making. The case of Cole Harbour/ Lawrencetown illustrates the classic coastal zone management land use conflict. Located East of Halifax, the Cole Harbour area contains a series of salt marshes and barrier beaches, however population density is growing, resulting in several negative environmental impacts. In 1976, most of the harbour was under a shellfish closure. Homes and housing developments were contributing to the Harbour pollution via sewage effluent going into the tidal inlets. As well, new houses were being constructed on the beach dunes. As a response to growing complaints from residents, Cabinet approved a regional plan for a "green belt" that would freeze development within

the zone. This was initiated without any public consultation, causing great concern for local residents regarding property rights. Public resentment continued to grow when a private consulting firm drafted a conceptual plan, again without community participation. Three years and twenty two sessions between a community committee and the private consultant, resulted in an innovative concept for land use control. One community group in Lawrencetown however, felt poorly represented in the planning committee and demanded a new planning committee be formed. This occurred and the new committee rejected the complete conceptual plan. The original planning committee reformed and the two groups maintained two distinct approaches to land use control which perpetuated conflict as well as inaction. This demonstrates how poor communication and mistrust can perpetuate group conflict and poor decision-making processes. The second committee was concerned that the initial committee was not elected by the community. This resentment perpetuated group conflict, resulting in the complete dismantling of the plan. It is significant that the groups represented two distinct communities. The first committee was more representative of the citizens in Cole Harbour, many of whom are new residents living in newly established subdivisions. The other group is more representative of long time residents of Lawrencetown. These distinct groups have different approaches to land use although both are interested in the protection and management of Lawrencetown beach and Conrad Island.

> This underscores once more the need for a more communicative and informed system for coastal decision-making. The proponent of actions with potentially harmful effects as well as the affected public, the permitting agency and other municipal, provincial and federal officials all lose from situations like this. Changing the way that decision processes flow is a major item on the agenda of coastal zone management, as it has been carried elsewhere, and as it should be in Nova Scotia (Dale 1979, p.17).

This example of coastal zone management conflict explains partially why momentum for coastal zone management lapsed in the mid 1970's. It wasn't until the establishment of the Coastal Resources Sub-Committee in British Columbia that interest renewed in Canadian coastal zone management(Hildebrande 1986). In 1978 the Sub-committee produced a report that articulated similar findings to the Nova Scotia study. Most activities were operating without departmental coordination, with an absence of policy objectives and without an overall management framework. The report stimulated action from the Canadian Council of Resource and Environment Ministers(CCREM) who then recommended policy and planning guidelines to integrate management at the level of jurisdiction governments felt appropriate. The measures addressed the issues of new institutions, impact analysis, habitat protection, information systems, public access and citizen involvement(Gamble and Day, 1990). A national "shore" management symposium was held in Victoria B.C where many of these issues and initiatives were discussed. Although the Victoria symposium was successful in establishing principles for shore management, the overall policy and implementation objectives weakened with very little momentum regained. The plan for an overall federal strategy for coastal zone management did not seem to be attainable.

> Twelve years following the CCREM symposium, it is obvious that the recommendations of this national conference have been largely ignored. This does not imply that any of the problems identified have been solved by other means; rather, they have intensified. During this period, the Canadian federal and provincial governments independently decided that the traditional agencies, and their customary ways of making decisions affecting coastal environments, are adequate.(Gamble and Day, 1990, p.116)

Although a national policy has not been developed, smaller scale regional programs are beginning to address coastal zonemanagementt issues. In British Columbia, inter-agency task forces are working to develop integrated management strategies to guide decision-making and future use planning. The most ambitious to date has been the Fraser River Estuary Management Program.(FREMP) It involves more than 60 government agencies and interest groups and although much progress has been made, it has been made slowly. Two reasons are attributed to the slow rate of progress: (1)participation among the members is voluntary and (2) limited funding has restricted the availability of personnel needed to plan and conduct research and consult with the public prior to land and water allocation decisions.(Gamble and Day 1990)

Integrated management has also been attempted on a national level. In 1989, The Gulf of Maine working group was established which grew into an inter-agency network involving government participation between the American States of Maine, Massachusetts, New Hampshire and the Canadian Provinces of New Brunswick and Nova Scotia. The emphasis to date has been on data collection and management. Although data management is necessary, implementation has not been addressed directly by the working group. [6] The Atlantic Provinces have attempted to address implementation through a participatory process. In 1991 Environment Canada launched the Atlantic Coastal Action Program (ACAP) as one of the first government initiatives aimed at implementing environmental management plans at a community participation level. Sponsored by the 1990 Canadian

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[6]Personal communication with several participants of various working group meetings has given me the impression this initiative, though valuable, steers more towards politically safe issues such as environmental research and data compilation rather than policy implementation and enforcement.

Green Plan, ACAP was set up in 13 communities throughout Atlantic Canada with the mandate to have watershed based environmental management plans up and running five years after the initial program inception. We will focus more on this initiative later in this chapter.

Momentum for coastal zone management in Nova Scotia has returned in recent years. The Nova Scotia provincial Departments of Environment and Fisheries have coordinated efforts to produce "Coastal 2000", an integrated coastal zone management strategy for Nova Scotia. It is the first provincial government initiative in Nova Scotia that recognizes the need for integrated management as a support for community based action The strategy is based on four underlying principles(Coastal 2000 1994):

1) Sustainable Development, which requires:

- the development of a stable environmental climate for   renewed   community economic development

- the recognition that longer term economic development   must be based on sound principles of sustainable resource management and ecological pre-planning;

- the establishment of linkages between environment and   economy   at   an operational level;

- the inclusion of traditional resource activities within an   ecologically   based framework of resource manage.nent.

2) The understanding that partnerships between community groups and the various levels of government is critical to the success of integrated coastal zone management.

3) The commitment from government to provide communities with integrated and efficient service delivery.

4) The commitment from government to empower communities so that they can make decisions on issues that most affect them. This entails a recognition that

community priorities, issues and concerns must be addressed.

The Coastal "2000" management strategy is unique in its recognition of the linkages between economic development, community partnerships with government and the need for community empowerment. The strategy however, does not identify how this will be accomplished. Of particular importance is the recommendation for increased voluntary action. This has complications given the present socio-economic crisis many coastal communities are undergoing.

The Coastal 2000 initiative clarifies the definition of the coastal zone, it has made progress with defining government jurisdictional conflicts, it identifies clearly the issues and management objectives required to address each issue and identifies roles and responsibilities. Furthermore, it identifies the need for public participation in coastal zone management implementation. [7]

This brief outline of coastal zone management in Canada reveals several trends or patterns that repeat themselves through time, many of which relate to mistrust and poor communication. Identifying these patterns in coastal zone decision making exposes the underlying assumptions, values or "world views" that have influenced the decision making process. It is important to understand these trends, biases and values that government representatives carry with them to the decision making process. If fundamental values between decision making participants are not aligned within the decision making process, solutions are very difficult to find. Furthermore, if fundamental government values are not

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Other Nova Scotian initiatives include the hosting of "Coastal Zone Canada '94", an international coastal zone management conference held in Halifax.

aligned with sustainable values, the capability of government departments to manage resources sustainably is to be questioned.

The trend of government to establish laws and legislation is part of a government *hierarchial approach* to decision making. The enormous amount of legislation applicable to the coastal zone has the affect of overwhelming and stymieing collective action. Government hierarchy creates barriers in communication flow both vertically and horizontally which results in organizational problems leading to reorganization and re-structuring. Hierarchy also contributes to uneven distribution of resources. Responsibilities for management repeatedly are passed down the hierarchy, often landing in the laps of municipalities without the financial resources required to implement the policies. The lack of financial capability leads to the use of volunteers for implementation.

The tendency of government departments to specialize is characteristic of an *expertise bias*. The emphasis on professionalization and individualized areas of expertise, contributes to secrecy and mistrust between government agencies. These barriers to communication also block information flows from the government agency to the public. Furthermore, this lack of communication contributes to internal division of values between those aligned with conservation values and those aligned with economic growth.

Communication linkages are also reduced by the tendency for government to fragment into separate divisions, floors, offices and buildings based on specialized tasks or duties. The *fragmentation* of government administration also reduces the pressure on any one department for decision making authority.

These patterns or trends are characteristic of a larger value system pervasive

throughout many bureaucratic structures. Government structures are situated within a larger "world view" that believes in individualism. This is most apparent by the compartmentalized approach government uses to administer policies. This is also made evident by the tendency for government to manage the problem without solving the cause of the problem. These solutions are often short term and often grow to be worse in the long term. The tendency to use short term solutions that are easier to achieve than long term fundamental solutions is illustrated in the repeated pattern of establishing legislation, commissioning studies, re-organizing government departments and passing responsibilities down the management hierarchy. These patterns are common for bureaucratic agencies and symptomatic of the biases with which government agencies can operate.

Government agencies also manifest cultural norms of behaviour that permeate decision making processes. An analysis of American and Canadian administration for public preservation programmes found consistent patterns of bureaucratic behaviour which contributed to poor preservation action(Foresta 1986). Six behavioral tendencies were identified as having predictable influences on public programmes: First, the *appearance-of-efficiency* tendency in which a government agency formulates a policy to produce visible results that will give the illusion of productivity. Furthermore this policy will be implemented where a combination of resource availability and visibility work to facilitate implementation. Second, and connected to the first tendency, is *formalization*, the tendency for government to seek a positive image in order maintain legitimacy within the public eye. This tendency leads to the establishment of formal goals rather than substantive ones. Third, the concept of *"new wine in old bottles"* refers to the tendency of government to maintain

organizational inertia, the idea that old ways are the best ways. Fourth, The tendency for

concentration is related to the previous tendency in which government agencies tend to pour

much of their resources into old ways of doing things rather than exploring alternative

solutions. The fear to try new solutions is embedded within the fear that the agency is

measured by its own success or failure at solving the problem , rather than risk legitimacy,

government agencies get stuck in old ruts. Fifth, *Professionalization* as a bureaucratic ideal

draws in the need for specialized skill and reduces the need or ability to be judged by other

government departments. This acts as another safety barrier from critique or the question

of legitimacy. Finally, Foresta makes the sixth point that the final behaviour trait of

bureaucrats is *opportunism*. A government agency will have competitors and will seek allies

to perpetuate its image of legitimacy. These behaviour tendencies all contribute to an overall

lack of communication and propensity for mistrust. The inter-government relations are

restricted by their ingrained biases. These biases diminish the ability for government

departments to make good decisions.[8]

The characteristics and values that bureaucrats represent are indicative of the cultural

influences government structure has on decision making processes. The government is unto

itself a kind of culture or community with shared values and normative behaviour. These

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[1]My own experience with the cycle of diminishing trust within government agencies gives me a firm basis for my conclusion that good human relationships are essential for good decision making. I worked in a Provincial government office for three years and witnessed the frustration and growing depression of employees as they struggled to do good work. Those employees that still cared about their service to the public, (and many no longer care) were forced to "leak" information out to the public in order for something to be done about a specific problem , otherwise it was covered up internally by either extensive paper filing or simple "misplacement". The chain of events leading to such irresponsible apathetic behaviour is symptomatic of instrumental rational decision-making that works to atomize individuals rather than build unity and trust. The sad result is a working environment in which people demarcate their time by coffee breaks and lunches. When I first began my work in a government office, I was quick to berate my seemingly lazy fellow employees for their extended breaks. I realized after awhile however, it was the only time for group sharing, for socializing , or for communication.

values are maintained and reinforced by the organizational structure. This raises several questions for resource management. For example, if government decision-making is based on hierarchy, expertise biases and fragmentation, which all reduce communication exchange and information flow, how can the public participate equally within a decision making process? Second, how can government values be changed? Thirdly, where does this structure come from?

Today, government agencies are being trimmed down, government budgets are being reduced and people are more depressed than ever now that job security is uncertain. It is perhaps this crisis within government that has contributed to the growing willingness for government to introduce public participation programs and implementation strategies. Given the cultural values and biases characteristic of bureaucracy however, it is questionable whether or not government agencies are prepared to form equal partnerships with communities. We will explore public participation further within the context of coastal zone management to determine what kind of relationships have evolved between government and community partnership initiatives and what effect the public can actually have on coastal zone management decision-making.

1.2 The Call for Public Participation

The recent call for public implementation of "Coastal 2000" in Nova Scotia is a mixed message. On one hand government legitimacy is being threatened because of its history of inaction and poor communication networks, but on the other hand government is

experiencing a financial crisis and therefore is no longer in a position to fund the costs for project implementation.

Public participation is more than citizens attending an information meeting. In discussion with participants of CARP, Clean Annapolis River Project(now ACAP), they said their biggest challenge was to educate politicians and government officials against their prejudices. The typical bureaucratic attitude that the public is not a reliable basis for decision making neglects the knowledge base within the community. The tendency for government to rely on the legitimacy of experts and professionals, can effectively alienate citizens who are not comfortable with the issues or who feel they are not knowledgeable enough to comment. The effect of public participation becomes a series of imbalanced relationships between professionals and well educated middle class citizens who carry an air of a superior position. [9]

> The relationship between the citizen and professional is characterized by an imbalance which places the professional in a different and superior position. The differing world views and positions of the citizen and the professional often lead to conflicts in expectations, to misunderstandings and to failures to grasp what the other is saying. This " miscommunication" is reinforced by the professional-client relationship which involves the mystification rather than the clarification of knowledge.(Christiansen-Ruffman and Stuart 1981, p.85)

It is significant that community conflict with government often leads to community action. The literature for community action has been growing since the mid 1960's and includes the human rights movement, community resistance to planning and development, and the womens' movement in both the private and public sectors(Lees and Mayo 1984). A

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[9] This position is often used as a power control when bureaucrats feel outnumbered or when their policies will be disputed. I've witnessed government representatives who purposely wear suits and ties to mark their position and use professional jargon to appear authoritative of the subject

common principle for these various movements is the value of decision making and everybody's right to make decisions for themselves about their everyday environment.

> It is proposed that community action can be seen in terms of values held by groups and individuals in relation to the environment and its use. The way in which individuals perceive their environment becomes the dominant underlying factor in the explanation. Human values serve as guides for personal decision making, giving significance and importance to objects and events,and directing choices toward things considered desirable and good.(Flood, Cocklin and Parnell 1993,p.93)

We will analyze this trend further by examining the Atlantic Coastal Action Program(ACAP) for further insights into the structural dynamics present in coastal zone management decision making aimed specifically at implementation. Given the discussion thus far, several issues will be examined in the ACAP case study: (1) What is the role of government representatives and under what assumptions do they operate under? (2) What is the process for membership and what kind of community representation is there? (3) How significant is communication and community networking to the implementation process? (4) how economically self-sufficient is ACAP?

Examining ACAP allows for insights as to how government agencies work with the public to make resource management decisions and whether the biases and values arise within the process. Looking at ACAP will also reveal the representation of resource users at the decision making table. ACAP is a coastal zone management initiative. It is argued that representation from the industry is significantly poor.

1.3 Case: The Atlantic Coastal Action Program

The Atlantic Coastal Action Program (ACAP) was designed as a Federal Department of Environment demonstration project for involving community participation in environmental decision-making. ACAP originated as a Green Plan initiative for thirteen communities situated on harbours and estuaries in Atlantic Canada. The approach is unique to traditional government projects in its attempt to bring community stakeholders to a consensus on a community environmental plan. The founding principles of ACAP identify the programs' philosophy on shared decision making. The three principles are: (1) A commitment to involve all stakeholders in the working committee. (2) A commitment to partnerships between committee members and (3) a commitment to work by consensus wherever possible.

The program encompasses three project goals, however the primary focus is the first goal which is to produce a comprehensive environmental management plan. The remaining goals include hands on activities and demonstration projects, education and awareness building. The formation of a management plan is to be completed within a five year time period. The Federal government has budgeted a minimum of fifty thousand dollars per year per project. After this time, the termination of government funding is anticipated. Four major steps are outlined as components of the management plan process. They include:

Step 1: vision building, setting goals and use objectives.

Step 2: environmental quality assessment

Step 3: choosing remedial conservation and prevention measures

Step 4: Writing the plan

(ACAP Program Guide)

The ACAP process is intended to be a guide for communities to make their own decisions about environmental remediation and conservation. It facilitates an approach through the definition of roles and responsibilities and identifying key objectives to be achieved by the stakeholder committee.

> It is intended by Environment Canada that ACAP communities will become the primary actors in the planning process. This will be assured by the formation of local committees which represent a broad spectrum of stakeholders within each community. These committees are generally charged with the responsibility of:
>
> -developing a community-based "vision" for the desired   future state of the project area and identifying use objectives
>
> -defining environmental impairments and problems with the project area
>
> -choosing remedial actions, coordinating and demonstration of small scale, innovative clean up and conservation solutions
>
> -preparing a Comprehensive Management Plan with a timetable for implementation and a schedule of costs.
> (Atlantic Coastal Action Program VOL I Sharing The Challenge p.9)

ACAP provides a comprehensive program guide which clearly identifies the planning process to be used as a guideline for the stakeholder committee. Within this document, procedures for community meetings, letters of commitment, templates for environmental inventory, tools for evaluation and tips for keeping organized are outlined. It makes the planning process easy to understand and identifies a clear direction for the stakeholder committee.

ACAP has been up and running since 1992 in Atlantic Canada. Two areas in Nova Scotia have been particularly successful with the program: Annapolis Royal and Sydney

Cape Breton. Project coordinators are pleased with the process but identify areas of improvement in the sharing of power between government and citizens and the method of shared decision making(personal communications).

Although ACAP was designed to be carried out by the community stakeholders, Environment Canada controls the funding and therefore maintains significant control over project approval. This was identified as a conflict with community agenda and decision making. Environment Canada representatives play a role as facilitator in both projects. Sydney required a significant amount of leadership in the initial stages, which the Environment Canada representative provided at first and then backed slowly away from the process. [10] Provincial and Municipal government representatives play a role as members of the board. In Annapolis Royal, they are elected just as every other citizen is. In Sydney however they are appointed.

The decision making process itself is flexible from community to community. This poses some concern when evaluating the democratic process for stakeholder input and voting power. In Sydney, stakeholders meet once every two months, sometimes less, and vote on every issue that comes before the committee. People have found difficulty with the time it takes to pass decisions and lengthy process for any action to be taken. Much of the work falls into the lap of the paid co-ordinator, however this is typically administrative work such as letter and proposal writing rather than any hands on action.

In Annapolis Royal however, decisions are made by the executive board and

[10] It is significant that she was a woman and was very sensitive to community needs and concerns. The ACAP group greatly appreciated her help and respected her for also letting them take over.

reviewed once a year through an annual stakeholders meeting. This allows for rapid decision making and approval, however it leaves out the stakeholders from much of the decision making process. One respondent explained that much of the public participation happens at the action level in the form of committees and working groups. Decision making is done on this level frequently.

Membership is open to the public with no restrictions except in Sydney where one must fill out an application form. This is primarily as a statement of commitment and no application has been denied. Participation is high in both areas with membership continuing to grow. When asked why, the coordinators felt that people trusted the process. It has good credibility, it is fair and things are getting done. Also important for participation is the education process. People have to feel connected to the problem before they'll help to remedy it.

> "People have to be able to make a connection to the problem in a real way that doesn't threaten them. In Middleton, for our water conservation project, people began to see the connection between where water was coming from into their tap and where water was going down their drain and into the river. This elevated the interest in the Clean Annapolis River project."(Interview, 1993)

Participation grows with the number of action projects. In Annapolis Royal, four categories of projects are running at the same time: (1) action projects (2) Education and public awareness (3) environmental planning process and (4) problem definition. The majority of public participation takes place in the first two types of activity.

The central most important factor for the success of ACAP is the communication linkages that get initiated and spiral from there on. ACAP attempts to link government departments via newsletters and information updates as well as the community.

Furthermore, with so many members, the projects get talked about in public.

> "That's where the real action is. The Saturday market and shopping trips where people talk and ask 'say, did you know about the such and such project, it's right by your place' that's when the real connections start to get made. We get phone calls and interested people all the time saying they heard it from a friend." (Interview 1993)

ACAP also works to collect community knowledge and expertise. Not professional but experiential. But program organizers stress that until someone sees their own personal connection to the problem, they don't feel connected to the process of fixing it. Low representation from fishers in both areas is explained by this. They don't feel connected to the problem or solution.

An interesting an somewhat unexpected result of the ACAP, is its capability of employing project staff for many of the identified demonstration projects and information gathering processes. In this manner, ACAP has in some ways contributed to community economic development. The common denominator throughout these projects however, is that they are mostly funded by government grants. It is questionable whether or not this is sustainable for long term economic development. It has been proposed that the information generated throughout the projects become supplied to other groups on a fee per unit basis, however this has not been set up as of yet.

The success of ACAP seems highly dependent on the capability of the hired co-ordinator.(personal communication) The individual in this position has the role of administrator such as secretarial functions, operates under instructions of stakeholder committee chair and executive, performs proposal writing and project tracking and other identified tasks. Responsibilities include taking meeting minutes, plan public consultation

events, managing the office, and keeping people informed. Problems have been identified however with much of the work load ending on the lap of the coordinator with very little effort and commitment displayed by stakeholders. This dilemma is amplified during the stages of project implementation. It is questionable whether or not stakeholders truly recognize their "stake" in the process and environmental issues. (personal communication)

ACAP has been and continues to be, a program aspiring to greater community involvement in the decision-making process. Its advantage is its comprehensive approach and guidelines make for a clear direction for people to understand and assess their interest in participating. The question remains however, whether or not people have enough vested interest in the outcome. The stakeholders are not necessarily resource users and the final completion of a management plan may not relate to many of the participants, thus diminishing commitment and investment in the initiatives. This question relates to a larger question of whether or not ACAP is effective enough at generating a sense of community and shared values. In Sydney Cape Breton, the representation from fishers was weak if at all. The problem of representation is typical of public participation processes however, this problem must be addressed if ACAP is going to effect any changes in the coastal zone that have meaning for coastal community people.

Another problem encountered by ACAP coordinators is the difficulty in overcoming government department fears over shared power. It was suggested to me by one coordinator that many government agencies were apprehensive about community based management because it reduced their ability to control the situation. Complex legislation and government restrictions were excuses often cited to stymie ACAP project proposals. ACAP coordinators

had to find "allies" within government departments that believed in sustainable community

values and were willing to carry the project further.

1.4 Conclusion

The problem of conflicting values between "conservationists" and "developers"

seems to be relevant to the conflicts present in coastal zone management decision making.

This dichotomy is even more explicit in the realm of fisheries management. The division

between the sustainable coastal community perspective and the" rationalized fishery" model

is fundamental to the present crisis in the fishery. ACAP initiatives do not appear to be

addressing these fundamental concerns for coastal community members. [11]The gap between

coastal zone management initiatives and fisheries management is quite obvious yet the

reasons for this disconnection are less so. This poses a significant problem for

implementation strategies that are relying on coastal community volunteers. The current

socio-economic crisis has caused several ad hoc linkages through The Groundfish

Adjustment Strategy (TAGS) that connect fishermen to coastal zone work projects such as

park construction and management, however the fundamental issues regarding conservation

measures in the fishery are left alone by ACAP or other coastal zone management agencies.

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[11]There is no ACAP representative in the Coastal Community Network (CCN)for example The CCN was first set up as a response to the fishery crisis in Canso Nova Scotia in 1991 Fish plant closures resulted in high unemployment and community organizers initiated a community network to increase communication between coastal communities and to lobby government for shared decision making power The network has grown significantly and representatives from coastal communities all around the province meet monthly to tackle issues relevant for coastal communities. Many of which touch on both coastal zone management and fisheries issues

Meanwhile the coastal communities of Nova Scotia are experiencing the tumultuous effects of an environmental and economic crisis in the fishery. Several fishermen have told me their stories of bankruptcy, family conflict and describe an overall feeling of uncertainty and despair. These same people question their future and the future of their children without a fishery. A fixed gear fisherman from South Western Nova Scotia remarked:

> Who are we saving the last fish for? National Sea? Clearwater? Nobody gives a ---- about us. What can I retrain for? If they listened to us and managed the fishery properly we could all be working. But greed has taken over and they expect us to learn conservation measures? We're the ones that have been conserving all along!"

The frustration expressed by this fisherman is echoed throughout Nova Scotia in rural coastal communities dependent on the fishery for economic survival. People feel helpless, cheated, unsupported and unwanted. The existence of our coastal communities is being threatened. Initiatives such as ACAP or Coastal "2000" may provide important opportunities for integrated coastal zone management if they can connect with resource users: the fishers, and help integrate decision making between the various government departments involved.

An enormous part of the present problem in the coastal zone is the conflicting department mandates. While the Provincial departments have worked together to prepare Coastal "2000" with a vision for vital and sustainable coastal communities, the Federal Department of Fisheries is presenting policies that potentially may undermine the vision of the Coastal "2000 "initiative.

The ACAP case study demonstrates an opportunity for alleviating a fundamental problem with coastal zone management decision making processes that are rooted in the

varying value systems within the bureaucratic institution and coastal communities. For this to occur however, the role of an initiative such as ACAP needs to be expanded to the resource users and the underlying value systems of both government and coastal communities have to be better understood. Furthermore, there exists a hesitancy within bureaucracy to share decision making power between government agencies and community based organizations.

The variation in value systems between government representatives and community members is not well enough understood by planners in the preparation of resource management policies and implementation proposals. Many of the conflicts in coastal zone management are rooted in the conflicting "world views" between those who make the policies and those who are affected by them. The underlying assumption of government management is that the general public is not capable of managing public property. This rationale is the basis for instrumental rational government decision making as validated by the "tragedy of the commons" theory (Hardin 1968). This underlying philosophy has not changed yet government is proposing more community groups take responsibility for the implementation of coastal zone management policies. It is argued in chapter three that we need to first expunge the myth of the "tragedy of the commons" before we can hope for shared and fair decision making for coastal zone management.

CHAPTER II

THE TRAGEDY OF THE COMMONS: PERCEPTIONS OF VALUES

2.0 Introduction

The previous chapter outlined the patterns of government decision making within the context of Canadian coastal zone management. The repeated trends in decision-making revealed various values and behaviours characteristic of the bureaucratic structure. Although government agencies are advocating the need for public participation, it was evident from the ACAP case study that representation from resource users is low within the government public participation initiative. Furthermore, the issues of coastal zone management are examined in isolation from the realities of the fisheries crisis. Government is still managing resources in isolation rather than using a holistic and integrated approach.

It appears that although some government agencies and bureaucrats recognize the need for public decision making and implementation, others are more aligned with the traditional view that government is most capable of managing natural resources. This belief is symptomatic of the instrumental rational individualism bias that perpetuates many of the values and behaviours associated with bureaucracy. Fundamental to this belief is the idea that humans are self interested rational individuals that have to be controlled by laws and regulations created by the government. This is the premise for the "tragedy of the commons theory". This chapter will explore the origins of this belief and explain why it is more mythical than realistic. The purpose of explaining this fundamental government belief is to expose many of the false premises on which government policy is based. The patterns of decision-making in fishery management clearly demonstrate a number of biases stemming from the "tragedy of the commons " theory. Understanding this highlights the need for shared decision making and community based management.

2.1 The Tragedy of the Commons

The "tragedy of the commons" theory , developed by Garrett Hardin in 1968, addressed the problem of shared resources and concluded that resources held in common were destined to be over-exploited because of humans' inherent motivation of self interest. Using the scenario of an eighteenth century common pasture, Hardin applies a rational choice analysis based on a definition of utility that assumes people are motivated by the opportunity to maximize their own personal gain and would continue to add more cattle to

the commons to the point that the pasture could no longer support any grazing whatsoever. This in ecological terms , is the collapse of the pastures' 'carrying capacity' and is symptomatic of severe resource mismanagement.

> There in is the tragedy. Each man is locked into a system that compels him to increase his herd without limit - in a world that is limited. Ruin is the destination toward which all men rush, each pursuing his own best interest in a society that believes in the freedom of the commons. Freedom of the commons brings ruin to all.(Hardin 1968, p. 2370)

The theory incorporates the use of economic rationalization and ecological systems theory to illustrate the devastating effect human behaviour can have on natural resources. The cycle of events leading to resource mismanagement has no "technical solution" as explained by Hardin. Human impacts on the environment have to be minimized through government intervention. The argument Hardin is trying to present is that human behaviour cannot be trusted to act in the best interest of society or the environment. The theory is still upheld by scientists and economists today(Feeny, McCay, Berkes and Acheson 1990). Hardin's explanation for the deterioration of the commons rests upon two underlying propositions: 1) that rational herdsmen make decisions in isolation from community sanctions or social arrangements, and 2) that human behaviour is motivated by self interest thereby requiring centralized authoritarian control and intervention.

Hardin was correct to isolate human behaviour as a fundamental element of resource management. However, Hardin used a scenario in which people were separated from community cultural norms and responded only to market demands. This assumption maintained that humans are naturally individualistic and competitive without the capacity for acting in society's best interest. This is suggested in his criticism of Adam Smith and the

process of individual decision making in the context of population control.

> (Adam Smith) contributed to a dominant tendency of thought that has ever since interfered with positive action based on rational analysis, namely the tendency to assume that decisions reached individually will, in fact be the best decisions for an entire society. If this assumption is correct it justifies the continuance of our present policy of laissez faire in reproduction. If it is correct we can assume that men will control their individual fecundity so as to produce the optimal population. If the assumption is not correct, we need to re-examine our individual freedoms to see which ones are defensible. (Hardin 1968, p.2370)

Hardin is challenging the ability of humans to make individual decisions in the best interest of society. Although he is criticizing the assumption of laissez-faire, he himself is assuming that humans do in fact make decisions in isolation from each other and broader community norms and culture. He is suggesting that the process of decision making is disengaged from other relationships such as family or community.

Hardin concludes his argument by saying responsibility can only occur when accompanied by imposed social arrangements or sanctions. He calls this mutually agreed upon coercion. In his view however, central authority is the only option identified for limiting human behaviour. Community sanctions and standards are not addressed. This conclusion illustrates his underlying assumption that social arrangements are not present within existing communities. The paradox of his argument is in his conclusion that social arrangements are necessary for controlling human behaviour. What does Hardin consider to be social arrangements? This point is not made very well as he jumps from mutual coercion to private property rights. In reference to the management of National Parks for example, Hardin provides the following solutions:

> The National Parks present another instance of the working out of the tragedy of the commons. At present, they are open to all, without limit. The parks themselves are

limited in extent - there is only one Yosemite Valley- while population seems to grow without limit. The values that visitors seek in the Parks are steadily eroded. Plainly, we must soon cease to treat the Parks as commons or they will be of no value to anyone. What shall we do? We have several options. We might sell them off as private property. We might keep them as public property, but allocate the right to enter them. The allocation might be on the basis of merit, as defined by some agree upon standards. It might be by lottery. Or it might be on a first come first serve basis, administered to long queues. These I think are all t h e reasonable possibilities.(Hardin 1968, p.2372)

In general, Hardin is promoting a system of centralized authority. He demonstrates

this bias with his interpretation of utility. Hardin uses the term "utility" to mean the

maximization of the greatest good for the greatest number. He then dismisses the possibility

of common "good" based on individual incommensurability.

We want the maximum good per person; but what is "good"? To one person it is wilderness, to another it is ski lodges for thousands. To one it is estuaries to nourish ducks for hunters to shoot at; to another it is factory land. Comparing one good with another is, we usually say, impossible because goods are incommensurable. Incommensurable cannot be compared.(Hardin 1968, p.369)

Hardin argues that Darwin's theory of natural selection does provide a basis for

commensuration. In nature the basic criterion is based on competitive survival. Compromise

depends on a weighting of the variables. What Hardin doesn't allow for however, is the

values of judgement that exist within human society that affect decision-making. Hardin

does not account for human relationships and the necessity for cooperation in order to

survive. He fails to recognize the social framework associated with community property

management, and how socialization contributes to implicit criterion for decision-making.

The model of the tragedy of the commons fails to recognize the social nature of property institutions, even though Western Law, like the customs and laws of many non-western groups, clearly conceives of property in social terms: 'property rights do not refer to relations between men and things, but rather, to the sanctioned behavioral relations among men that arise from the existence of things and pertain

to their use.' (McCay and Acheson 1987, p.7)

The real tragedy of the commons is the proposition that society has deteriorated to the point that human beings are functioning on an individual basis without consideration for the consequences of their behaviour. This implies a loss of obligation to community. Hardin is not alone in his assumptions. The loss of community thesis is central to modern social science (Hale 1990). This perspective is examined in chapter three. Nevertheless, such a premature assumption can have the negative effect of contributing to a self fulfilled prophecy. Hardin's fear of the tragedy in many ways has contributed further to it.

Hardin concluded that to avoid the tragedy, common property should be privatized or kept as public property to which rights of entry and use could be allocated by government agencies. This conclusion has now been integrated widely within the conventions of resource management and has been used in the formation of resource allocation policy. But the real tragedy has not been addressed, that is to say , we have not looked closely enough at why communities are breaking down, nor have we examined fully the relationship between government policies and community dislocation. Furthermore, the establishment of government agencies for the purpose of allocating rights to the resource has further perpetuated differentiation rather than unified decision making (Acheson 1981).

Communities have the capacity to construct and enforce rules that constrain the behaviour of individuals. Social arrangements are crucial for successful resource management. The tragedy of the commons is the break down of these established relationships.

2.2 The Origins of the Human Nature Debate

The question of human relationships has been contemplated at length throughout history. Many of these debates have focused on human nature and what motivates our behaviour. In other words, what is pushing us to survive and what is the relationship between an individual and community? Adam Smith in his analysis of economics assumed it was wealth attained by the individual. He adopted the term "utility" to represent the maximization of individual good. Herein lies the crux of the problem...what is considered to be good in terms of definable "utility"? Furthermore, how does economic theory incorporate the same fundamental assumption that individuals are seeking maximum utility. What is in fact the definition of "Utility"? Hardin, in his analysis of the commons, is really questioning the foundations of human behaviour. Let us explore the central social theories on individualism and the relationships these theories propose for managing human behaviour. This exploration will help to explain the basis for Hardins' assumption that humans are rational self interested individuals and point out its bias and very limited view of things.

The dilemma of "utility" is whether or not the outcome of the process of its pursuit is either virtuous or vicious for society. [12] This refers to the movement of individuals towards the "betterment" of themselves and the consequences this motion has for society . It is

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[12] By the term virtuous, I imply the motion of positive gain to society. By the term vicious I imply the negative erosion of society

presumed by Hardin that the definition of utility is generally accepted as delineated in the "tragedy of the commons". Further inquiry into the origin of the definition of utility reveals an underlying bias prevalent to Hardin's analysis. Furthermore, it may be shown here, that the definition of utility used by Hardin is consequential to a vicious cycle in society rather than a virtuous one. I argue that Hardin unknowingly is perpetuating the same values that lead to unlimited growth and financial profit, rather than supporting community values based on interests of the community as well as individuals. Examining these values and motivations reveals a fundamental problem with the tragedy of the commons. It perpetuates its own demise.

The question of the "betterment" of individuals has long been contemplated by philosophers, historians and social theorists. Most of the historical philosophic debates were based on the inquiry into peace and liberty for society. Through discussion and deliberation on the 'natural state of human behaviour', philosophers determined theories on the structure of society that would best yield a better, more peaceful and prosperous society for all. The common footing for all the great social theorists is their aspiration to a better future than that of their own experience. It is this momentum of hope for the future that provoked tremendous change in the past.

Looking at the cycles of thought progression throughout history, one sees a pattern in the pursuit of peace and freedom. Beginning in the ancient civilizations of the Greeks and Romans, philosophic inquiry advocated the inherent connection between justice and happiness. Long before Christianity, societies were struggling with the question of how to achieve natural order and what 'natural' meant for the state of human nature. Socrates, in

the tenth book within Plato's Republic, concluded that the pursuit of justice brings happiness and furthermore, the human soul is immortal and ultimately good in its pure state. This conclusion is significant because it marks a definite belief in the goodness of human nature.

[1]

The question of utility is actually a question of virtue - or more simply - what action taken by individuals will lead to the betterment of society. Three distinct human motivations have been argued in history that contribute to a "greater good". These are embodied in the theories of individualism as presented by: 1)The human moralists such as John Stuart Mill, Jean Jacques Rousseau and Karl Marx 2)The scientific rationalists such as Thomas Hobbes and 3) The free market theorists such as Adam Smith.

The Human Moralists such as Rousseau and Mill advocated that the 'Nature of Man' is located through feelings and intuition. In many ways, these moralists maintained a close connection with nature and ecology in their perception that humans could not control everything. Through knowing oneself, however, and taking responsibility for ones own

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"Although Socrates recognized the scars our human soul carries while burdened in the physical reality, he also believed our soul could resume back to a pure form out of physical reality.

That the soul is immortal both our recent argument and others would compel us to believe, but to see it in its true nature one should not observe it as we do now, maimed by its association with the body and other evils, but in its pure state, and as such it must be contemplated by reason which will find it far more beautiful and will also see more clearly justices and injustices and all that we have now discussed. What we have said about it is true, as it appears at present. We have observed it in this state like those who saw the sea-god Glaucus and would no longer easily see his original nature because some of the old parts of his body had been broken off, others had been crushed, and his whole body marred by the waves, wh'   ier accretions - shells and seaweeds, and stones - had grown upon him so that he was more like a wild animal than he was like himself. This is how we observe the soul beset by countless evils. This is where we must look, Glaucon. To the Soul's love of wisdom, and realize what things it apprehends, what company it longs for as it is akin to the divine, the immortal, and the ever existing, what would it become if it followed this with the whole of its being and if that impulse lifted it out of the sea in which it now dwells, if the many stones and shells, the many stony and wild things which have been encrusted all over it by those so-called happy feasts as it feeds on earth, were scraped off. Then one would see its true nature, whether it is multiform or simple, the way and manner of its being. However, we have now rightly described its experiences and its parts, I think, as it exists in human life (Socrates 431 B.C. in Grube 1974, p.241)

happiness, it was argued that humans could then enter community by form of reason and obedience to a social contract. Both Rousseau and Mill saw the link between obeying oneself and obedience to community. Obedience to others when at the same time obeying yourself, creates the rational form of unity based on love of oneself and the feeling of that love. This is what Rousseau argues as being the state of nature. This pattern of human behaviour is conducive to social bonds of obligation rooted in equality. Social order is linked to morality and justice, which is maintained through the pursuit of loving oneself and in turn this extends to the love of community. Rousseau uses this argument as the basis for saying the general will is always right.

> Why is the general will always right, and why do all invariably desire the prosperity of each, unless it is because there is no one but appropriates to himself this word 'each' and thinks of himself in voting on behalf of all? This proves that equality of rights and the notion of justice that it produces are derived from the preference which each gives to himself, and consequently from man's nature; that the general will, to be truly such, should be so in its object as well as in its essence; that it ought to proceed from all in rectitude when it tends to some individual and determinate object, because in that case, judging of what is unknown to us, we have no true principle of equity to guide us(Rousseau (1755),1967p.33).

John Stuart Mill in his work entitled "Utilitarianism" attempted to clarify the principle of equity on which the principle of utility was based. Originally, the foundation of morals associated with "utility" were under the creed of the "greatest Happiness Principle".

The original principle of utility , ironically enough, was intended to motivate people to attain their highest esteem. Not in the sense of power, but in the manner of pleasure and happiness.

The creed which accepts as the foundation of morals "utility" or the "greatest

happiness principle" holds that actions are right in proportion as they tend to promote happiness; wrong as they tend to produce the reverse of happiness. By happiness is intended pleasure and the absence of pain; by unhappiness, pain and the privation of pleasure(Mill (1861), 1957 p.10).

The crucial and often forgotten point in the definition of Utilitarianism is the standard of the greatest happiness all together, not just the happiness of the individual alone. In fact, the definition of utility as explained by Mill is a moral premise that promotes the respect of oneself as w"ll as the respect for others. The principles of utility are essentially a reiteration of the "golden rule".

In the Golden rule of Jesus of Nazareth, we read the complete spirit of the ethics of utility. 'To do as you would be done by,' and ' to love your neighbour as yourself', constitute the ideal perfection of utilitarian morality. As the means of making the nearest approach to this ideal. Utility would enjoin, first, that laws and social arrangements should place the happiness or (as speaking practically, it may be called) the interest of every individual as nearly as possible in harmony with the interest of the whole; and secondly, that education and opinion, which have so vast a power over human character, should so use that power as to establish in the mind of every individual an indissoluble association between his own happiness and the good of the whole, especially between his own happiness and the practice of such modes of conduct, negative and positive, as regard for the universal happiness prescribes; so that not only he may be unable to conceive the possibility of happiness to himself, consistently with conduct opposed to the general good, but also that a direct impulse to promote the general good may be in every individual one of the habitual motives of action, and the sentiments connected therewith may fill a large and prominent place in every human being's sentient existence(Mill (1861), 1957 p.23).

According to Mill's theory of Utilitarianism, the ethics of utility have to be enforced. Justice has to serve the elements of utility.

...the idea of justice supposes two things - a rule of conduct and a sentiment which sanctions the rule. The first must be supposed common to all mankind and intended for their good. The other (the sentiment) is a desire that punishment may be suffered by those who infringe the rule.(Mill 1861 (1957), p.65)

In other words, for the principle of utility to develop within society, people have to be treated fairly, treated with respect and any failure to comply with the agreed rules must be punished. This is supported by Mill and Rousseau in their argument than humans are motivated by moral action and community, that is value rationality. Value rationality is the type of decision making that considers values pertaining to the whole community as opposed to values that only improve ones' personal position in the market place.(Weber, 1968)

The principle of utility, according to the scientific rationalists, contrasts significantly with the views of either Rousseau or Mill. The nature of man according to Hobbes, is rooted in the fear of violent death. In his famous writing, Leviathan, Hobbes explored the structure for social order that would provide a society of peace and liberty. His premise for debate was the argument that war was man's 'natural state'. The pursuit for peace and liberty could only succeed if man replaced his fear of violent death with the fear of the sovereign sword. Rational men could exist in peace within artificial communities bound by the rule and order of government. Unity was attained by giving up ones' personal power. This was perceived to be better than living with the insecurity of war.

> The incommodities of such a war, whatsoever therefore is consequent to a time of war, where every man is enemy to every man; the same is consequent to the time wherein men live without other security than what their own strength, and their own invention shall furnish them withal. In such condition, there is no place for industry; because the fruit thereof is uncertain; and consequently no culture of the earth; no navigation, nor use of the commodities that may be imported by sea; no commodious building; no instruments of moving, and removing, such things as require much force; no knowledge of the fate of the earth; no account of time; no arts; no letters; no society; and which is worst of all, continual fear and danger of violent death; and the life of man solitary, nasty, brutish and shor (Hobbes (1651), 1962 p.100).

Hobbes identified three principle causes for the nature of war: competition,

diffidence and glory. He viewed human action as the result of the pursuit of selfish appetites and an aspiration to power. Only through strict rule and order by government could humans ever hope to be controlled from their desires.

The choice for sovereign rule was an attempt to motivate social change beyond the disparity of aristocratic and religious rule. Hobbes argued that the motivation for change in human behaviour existed in the form of calculated 'reckoning'. For the purposes of this chapter, I call this instrumental rationality. This means decisions are based primarily on a strategy for increasing one's personal power position (Weber, 1968). Hobbes argued that structures were necessary to override the human tendency to pursue power. The pursuit of justice was once again, central to the origin of Hobbes argument. The French Revolution and the Industrial revolution marked momentous change in the structure of social order. A factor of reality to any great change is the financial means necessary to perpetuate the new order - the reality of power. Thus the Industrial revolution was perpetuated by this need.

The momentum of the Industrial revolution was maintained and developed through the idea that financial wealth of the nations would bring freedom to individuals. Adam Smith in his principle work, An Inquiry into the Nature and Causes of the Wealth of the Nations 1776, developed the first rationale for the unregulated market economy characteristic of capitalism.

According to Smith's doctrine of laissez faire, the betterment of society is attained through the pursuit of ones' individual financial advantage. This theory of human motivation is closely linked to Hobbes' perspective on instrumental rationality. It is significant that this is the definition of liberty at a time when people are dependent on other peoples' property,

are oppressed by the financial power, and highly restricted by social status. Smith advocated a society based on the free market for labour, land, capital; an ordering of society by contractual relations rather than status, private property and laissez faire market relations. Smith contrasts with Hobbes however in his theory that the role of government should be minimal.

> All systems either of preference or of restraint, therefore, being thus completely taken away, the obvious and simple system of natural liberty establishes itself of its own accord. Every man, as long as he does not violate the laws of justice, is left perfectly free to pursue his own interest in his own way, and to bring both his industry and capital into competition with those of any other man, or order of men. The sovereign is completely discharged from a duty, in the attempting to perform which he must always be exposed to innumerable delusions, and for the proper performance of which no human wisdom or knowledge could ever be sufficient: the duty of superintending the industry of private people and of directing it towards employments most suitable to the interest of the society. According to the system of natural liberty, the sovereign has only three duties to attend to...first, the duty of protecting the society from the violence end invasion of other independent societies; secondly, the duty of protecting , as far as possible, every member of the society from the injustice or oppression of every other member of it or the duty of establishing an exact administration of justice; and thirdly, the duty of erecting and maintaining certain public works and certain public institutions which it can never be for the interest of any individual, or small number of individuals because the profit could never repay the expense to any individual or small number of individuals, though it may frequently do much more than repay it to a great society.(Smith ----)

Smith envisioned a system in which people are free from individual responsibility to society. The momentum of the market, termed 'the invisible hand', would take care of the efficiency and order necessary for society. The government is responsible for justice. Economic ins> .nental rationality as it pertains to society, unencumbered by government regulation, is the goal of the free market.

Hardins' analysis of the tragedy of the commons is nestled within the Hobbsian

assumption that humans make decisions based only on instrumental rationality for the benefit of the individual. As shown here in the origins of individualism, this assumption is closely related to the rationality advocated by Adam Smith. Both views of human nature impose the need for a government structure. For Leviathan, government is necessary to prevent war and reduce the individual pursuit for power, for Adam Smith however, government is necessary to replace the aristocratic rule in support of private property and the need for a democratic state in order for the dynamics of capitalism to occur: the free market. Both Hobbes and Smith focus on the nature of humans as being fundamentally based on instrumental rationality and as a consequence, both have designed structures and systems that both control and maximize this tendency. Hobbes advocates government for control, Smith advocates the free market to perpetuate it. Smith does acknowledge however that government is necessary to take care of the "infrastructure" and to ensure freedom from oppression, yet Smith does not acknowledge that the free market has limits to growth.

Hardin is unknowingly supporting the same assumptions made by Adam Smith, even though his entire argument is intended to be a rebuttal of the "invisible hand" position. The link to be made is the connection between the assumption that humans are self-interested individuals motivated by instrumental rationality and therefore maximizing utility equates to maximizing capital. This assumption then leads to the necessity of private property and thus the need for a democratic government to protect the private pursuit of profit. In other words, a government body is necessary to perpetuate the self interested instrumentally rational individual, which effectively works to protect the interests of those in pursuit of power. Hobbes, Smith and even Hardin, in their assumptions of human nature propose

solutions that are narrowly defined by instrumental rational decision making. Through their own incomplete assumptions, they create barriers to decision making because they begin with an assumption that humans can not be trusted. Assuming humans are self interested rational individuals perpetuates an underlying barrier to communication because people are defensive and suspicious. The problem with this assumption is that it is inaccurate and incomplete. Hobbes, Smith and Hardin neglect the arguments presented by Rousseau and Mill which suggest that an ordered society requires self respect and a respect for others. Value rational decision making is based on a broader consideration for others and the surrounding community. Excluding this element for decision making in designing policy structures denies the reality that people do cooperate in many situations and do make decisions based on trust and soildarity. Furthermore, many community based decision making is based on trust relationships.

I argue that individualism can co-exist with community given a decision making process based on value rationality. This requires relationships and connections within community, and this assumes humans are naturally social creatures and will thus benefit from these relationships. When individualism is presumed to be the basis for human behaviour without values based in community, decision-making is falsely isolated from environmental and social realities. Although capitalism operates on many levels through instrumental rational decision-making, one cannot assume capitalism automaticly destroys value rational action. What is more destructive is government policy based on the belief that humans are only self interested rational individuals.

2.3 Government Rationalization Policy : The Tension Between Individualism and Conservation

Decision-making structures that operate on the exclusive premise that humans are rational self interested individuals, instrumental rationality, have eroded decision-making structures based on value rationality. Furthermore, these decision making structures have proven to be ineffective at maintaining social and ecological sustainability. Examining the trends in Atlantic Canadian fishery management illustrates the damaging effects the "tragedy of the commons" theory can have on coastal communities. The decision making processes which are based on inaccurate assumptions of human behaviour are indicative of the weaknesses in government resource management approaches. The use of terms such as rationalization and professionalization are indicators of the government bias to instrumental decision making.

The argument that human behaviour is reduced to self interest rational individualism is highly flawed. Despite this however, Hardins' Tragedy of the Commons is still used as a basis for resource management and a justification for either government intervention or privatization, depending on the cost. A closer look at government indicates however, that the model of behaviour government acts upon is incomplete and rather biased. The distinction to be made is between the value rational will, necessary for value based decision making such as conservation, and instrumental rational will that is necessary for technical or economic decision making. I argue that humans operate with both types of values. Furthermore, depending on which behaviour is dominant within an individual or

organization, the decisions made will reflect the corresponding values. As discussed in chapter one, government agencies may be in conflict with one another as well as communities, primarily because of these differences in values. In The Theory of Communicative Action (1984).Habermas introduces the idea of two distinct spheres of activity within human life patterns, that operate both separately and interdependently. The "system" is the activity of material production and entails both strategic action (following rational choice rules) and instrumental action(following technical rules) for the purpose of success or growth. The "Lifeworld" sphere is the symbolic space for collective values, including conservation, and institutions from which culture and social norms are derived. This perpetuates communicative action (following consensus rules) and is carried out for the purpose of reaching an understanding within a shared situation. Habermas observes that social stability is dependent on the communicative relationships that affectively work to create a common understanding. This is how collective action operates to remove barriers and transcend boundaries between individuals in order to achieve a task as a unified whole(Miller 1992). Rational choice theory overlooks the reality that individuals need to interpret their shared situation with others and look to communicative action within social situations to overcome boundaries. The conception that humans only operate at the level of the "system" and not at the "lifeworld" level is the fundamental flaw with rational choice theory and its basis in government policy. Government, in an attempt to resolve the "free rider" problem as outlined by Hardin, is fulfilling its own prophecy.

> The conception of action coordination founded in rational choice theory is fundamentally flawed. By ignoring the social context in which identities are formed, values learned and interests interpreted, rational choice theory excludes what many would argue are the necessary preconditions for overcoming the free rider problem.

(Miller 1992, p. 28)

The "tragedy of the commons" was a cry to government to increase regulations and intervention on market controlled resource use during a time in which resources were becoming measurably over-exploited. The theory suited economic trends established in the 1950's fostering a liberal economy with increased state management and centralized decision making. The Maritime fishing industry clearly depicts the changing trends of government policy and economic theory. As one reviews the patterns of government decision making within the last forty years, it becomes apparent that bureaucratic administration is aligned with instrumental rational decision making. This alignment negates the value for conservation policies which are more aligned with value rational decision making or the "lifeworld" according to Habermas. Rational orthodox theory advocating individualism is an enormous part of the conservation problem because it has neglected the people who are closest to the resource.

> ...the biologists, managers (neoclassical economists) and the industry representatives often have a good deal of information on the biology of the species in question, and good economic data on catches, incomes and so on. They (however) have no systematic information on the social organization of fishing communities or the values of people who live in them. In short, they have very little information on the differences among the communities they are trying to regulate, the basic socio-cultural factors which so strongly influence the impact of fisheries management plans and the reactions of fishermen to those plans. (Acheson 1989, xii)

Despite the neglect of community in fisheries management, the underlying decision making model based in the tragedy of the commons theory restricts federal agencies such as the Department of Fisheries and Oceans(DFO) from becoming more aligned with value rational decision making. Instead, as a reaction to crisis, DFO tightens its policy with those

that perpetuate instrumental rational individualism. It appears that the (DFO) vision for the future is becoming progressively more aligned with the visions of corporate industry (Bannister 1989). The most recent DFO consultation document entitled <u>Atlantic Licensing Policy Review</u> addresses the need for fisheries renewal with the perspective that there are too many individuals in the fishery making too little money.

> Essentially the fishery is characterized by too many people involved, low income and overcapacity which results in wasted competing resources, dissipation of wealth and more pressure on the stocks (Department of Fisheries and Oceans, May 1995, p.7).

There is no acknowledgement in this report that the effort for fishing is highly divergent depending on boat size and gear type. There is no discussion on the importance of sustainable management practices that do not reduce the carrying capacity of the ocean ecosystem. There is no talk of experience or skill in the fishery and the ways to reward those who fish fairly instead of rewarding greed. These however, are the discussions that take place amongst the fishermen involved in the industry. (South West Nova Fixed Gear Association 1995) The difficulties for resource management are summarized by DFO as access and inefficiency. The solution presented is to restrict access by privatizing the right to access and efficiency will be attained by reducing numbers of fishermen in the fishery. DFO is aligned with the Corporate vision which wants Individual Transferable Quotas (ITQs)as a fisheries management tool for controlling access.

> Assigning individual transferable quotas in otherwise competitive fisheries is intended to overcome the common property problem which leads in the short run to a race for fish, gluts, poor quality and short seasons, and in the long run to overcapitalization of fleets as fishermen, behaving rationally, invest in harvesting capacity to gain an advantage over others. The net level of investment is a waste of money, since the cost of fishing rises much faster than the revenue the fishery is able to generate (Fisheries Council of Canada 1994, p.20).

Furthermore, DFO considers this to be agreed upon by consensus.

The March '95 'Round Table on the Future of the Atlantic Fishery' confirmed that a consensus vision of the fishery is emerging, one that recognizes both that change is needed and the directions that change should take (Department Fisheries and Oceans, 1995,p.8)

The March 1995 Round Table however, was exclusive of coastal communities and inshore fishermen's associations. The Coastal Community Network requested a place at the table but were refused on the premise that the discussions were not relevant for coastal communities! An alternative Round Table was organized and had an historically high representation of fishers' associations. Contrary to the words in the DFO Licensing Review Policy, the Vision shared by many of the fishers associations was different than that of DFO or the larger Corporate players:

Vision Statement for the Nova Scotia Fisheries Round Table:

1. A fishery managed for sustainability of both the resources and the community

2. Establish a fully owner operated fishing fleet whose representative organizations participate fully in the assessment of the resource, making of management plans, and in fair and appropriate enforcement practices.

3. We are opposed to a vertically integrated fishery because it leads to abuse of the resource and does not foster healthy coastal communities.

4. Individual Transferable Quotas should be carefully limited, not imposed on other fisheries and transferability should be prohibited. The right to fish should be earned by participation in the fishery.

(South West Nova Fixed Gear Association, Round Table Report, April 1995)

The Alternative Round Table was successful at bringing together people with very different views and drawing out shared values, most commonly values based in strengthening coastal communities. People listened to one another and shared a genuine

concern for the future of coastal communities and the ocean environment. Irregardless of this unprecedented event of shared decision making in the history of the industry, government policy is apparently not adopting the values expressed by the independent fishers. Instead, policy initiatives are directed towards a "rationalization of the fishery".

Attempts to rationalize the fishery are not new, the 1950's and 60's saw the effects of economists working to "rationalize" economic development often causing detriment effects to fishing communities with proposals for resettlement. Increased Federal involvement in policy making was evident in the 'centralization program' in Newfoundland. Ottawa integrated economic theory into fisheries policy by means of moving hundreds of fishing communities inland.

> Ottawa saw it as simply an adjunct of fishery policy. In those communities deemed unpromising for a continued fishery, it seemed reasonable to fishery officials to move the fishermen and their families to other locations. Their attitude was similar to that of a large corporation which learns that one of its plants is no longer profitable. Under such circumstances it is often economically wise to close the operation (Matthews 1983, p.121).

The 1970's saw a steady increase in fisheries conflicts, further entrenching government into the realm of crisis management and control. More and more policy decisions were being made in the Federal Fisheries Ministers' office without the consultation of those whose lives were dependent on the resource.

> In the past decade particularly, the government has often been accused of failing to consult adequately with all sectors of the industry prior to the establishment of total allowable catches (TACS) and the allocation of these quotas. In part, confusion and misunderstandings regarding consultation stem from the fact that the decision making process has never been laid out in a legislated or formal customary framework (Hanson 1984, p.7).

In the late 70's a brief and much needed digression from the "rationalization" of the fisheries occurred with the policy document entitled "Policy for Canada's Atlantic Fisheries in the 1980's". Although the policy maintained government involvement, it also addressed the need for decentralization and increased community participation in the decision making process. The document had a short shelf life however, as policy revisions with the 1981 Kirby task force once more advocated the need for sectoral management and diminished all references to community- specific management schemes (Lamson and Hanson 1984).

The role of Government in the management of natural resources needs to be challenged. Many cases of resource exploitation have their roots embedded in the decisions made by politicians and governments. Economic factors generally lead the decision making process without adequate consideration for the resource or any long term social ramifications. The tendency of government to subsidize boat sectors and various corporations has been justified in the past by the "need" for economic stability. The outcome has been a series of short term solutions that breed long term unsustainable consequences. The short term fix approach is labelled as the ratchet effect.

> Harvesting of irregular or fluctuating resources is subject to a ratchet effect: during relatively stable periods, harvesting rates tend to stabilize at positions predicted by steady state bio-economic theory. Such levels are often excessive. Then a sequence of good years encourages additional investment in vessels or processing capacity. When conditions return to normal or below normal, the industry appeals to government for help: often substantial investments and many jobs are at stake. The governmental response is typically direct or indirect subsidies. These may be thought of initially as temporary, but their effect is to encourage over harvesting (Walters 1993, p.36).

The dependency on government to intervene in market supply and demand has been the result of economic trends evolving since the period of industrialization.

A profound difficulty with the free market approach is its negation of one of the true

binding agents in society: communal socialization patterns which contribute to community

cohesion. The market was considered to be the primary focus for human relationships,

however, this theory did not consider the very fabric which allows market exchange to

successfully occur - trust. Were the behaviour of humans confined strictly to self-interested

competition, the presence of economic organizations such as the "firm" would not be so

successful as they apparently are. Evidence now suggests that the "rational self interested

individual" is too simplistic view of any human behaviour.

> ...it may justly be claimed that the self interest assumption behind liberal economics
> has not stood up well to theoretical and empirical interrogation. It either functions
> as a tautology about human behaviour of little explanatory use, or as an empirical
> generalisation which is only of limited explanatory use. The attempt to found an
> exhaustive account of human behaviour on the basis of self interest fails (Holton
> 1992, p.83).

The lack of market controls perpetuated by free market theorists saw an increase of

hierarchial regimes based on power control and an inequality of the division of labour.(Li,

1988) Insights in to this problem were disclosed by economic theorists such as Karl Marx,

who advscated that private property rights and market control derailed the functions of

"community".

> Within a system dominated by the market and production of commodities to be
> exchanged for private profit, individuals lost any creative control over the process
> of labour through which they endeavoured to satisfy their wants. Market
> competition not only ruled out any kind of creative self-expression through work, but
> also isolated individuals from one another as each competed for employment. In this
> argument competition ruled out genuine co-operation and community because
> human labour was reduced to a commodity to be bought and sold in an impersonal
> manner according to requirements of profitability (Holton 1992, p.106).

The focus on power relationships brought forth the ideology that government was

necessary to neutralize the power hierarchies established by the market. Post War Keynesian economics promoted State intervention to boost welfare support and increase government regulations in order to counter balance the negative affects the free market economy was having on society. Although government intervention may reduce power monopolies, the absence of culture is still prevalent in economic theory given the priority to economic behaviour rather than the vitality of society.

The fundamental problem behind resource exploitation is the lack of consideration for the collective interest. With government policies based on economic theory advocating practical action of the individual, it is conclusive to relate the over-exploitation of natural resources to the dismantling of community cohesion. Government policy is too strictly tied to the avenues of economic fluctuation. The human reality of culturally and environmentally based needs is wiped from the contemporary decision making process.

> What is the meaning of democracy, freedom, human dignity, standard of living, self realization, fulfilment? Is it a matter of goods or of people? Of course it is a matter of people. But people can be themselves only in small comprehensible groups. Therefore we must learn to think in terms of an articulated structure that can cope with a multiplicity of small scale units. If economic thinking cannot grasp this it is useless. If it cannot get beyond its vast abstractions, the national income, the rate of growth, capital/output ratio, input-output analysis, labour mobility, capital accumulation; if it cannot get beyond all this and make contact with the human realities of poverty, frustration, alienation, despair, breakdown, crime, escapism, stress, congestion, ugliness and spiritual death, then let us scrap economics and start afresh (Schumacher 1973, p.62).

E. F. Schumachers' impassioned speeches, as the above quotation illustrates, pleaded for community based development strategies that would decrease the inequalities evoked by political economic management approaches. Schumacher posed four questions for individuals to ask themselves before any type of development could occur: Development of

what? Development for whom? Development how? Development with what side effects? Such questions require a conscious decision making process that acknowledges the roles and the players necessary for development to occur. Furthermore, the answers to these questions are very revealing of the values being priorized by the players.

Fisheries management systems have been dominated by government values based on the rationale that government is required for reasons of efficiency, equity and administration (Jentoft 1989). State control is required to regulate the variables associated with open access resources such as the fishery. This is achieved presumably through control mechanisms such as catch limits and harvesting regulations. Ideally, the state is also responsible for "fair distribution of fishing opportunities and incomes among participant groups"(Jentoft 1989). Time has proven however, that government has great difficulty with allocation. The increase in government intervention has increased the bureaucratic decision making process which has in turn posed great difficulty for establishing quick adaptive and effective problem solving mechanisms (Angel 1994). Government regulations lack the incentives required for fishermen to follow the rules.

> Regulations, both indirect and direct, mean by definition that the government imposes restrictions on fishermen. Fishermen almost always have an immediate economic interest in finding ways to bypass them. There is no reason to assume that fishermen, when confronted with the rules of individual quota management, will lose either ingenuity at circumvention or their incentive to promote individual interests at the expense of collective interest (Jentoft 1989, p. 139).

The central question for the effective management of the fisheries is this: What needs to be done to build incentives into the fishery that will convince fishermen to participate for the good of the collective interest over their narrow private interests? What does it take for

fishermen of distinctly different sectors to come to a mutual agreement?

In economic terms, what does it take to keep people mutually bound to contracts? In theory, contracts are mutually binding because of their legitimacy, their value to each contract signee and because of consequences if the contract is broken. Furthermore, contracts are binding because of trust. The strength of an agreement is proportionately increased with the strength of obligation and honesty built into it.

The role of Government in the management of natural resources needs to be challenged. Many cases of resource over-exploitation have their roots embedded in the decisions made by politicians and their respective government departments. The conflict between instrumental rational decision making as it relates to economics and private property has in the past been in direct conflict with value rational decision making necessary for resource conservation. This is the fundamental conflict in resource management and one that challenges the stability of communities, especially those ba..ed on natural resources for their economic well being. To reiterate a previously made point, instrumental rational decision making perpetuates individualism in isolation of community. Value rational decision making however recognizes the necessary relationship between individuals and community. Values are a part of the motivating behaviour for individuals and should be accounted for by decision makers.

A recent investigation on patterns of individualism within the Small Boat Fishers, reveals a significant division between "utilitarian" small boat fishers and "rugged individualist" small boat fishers. Utilitarian in this context refers to the pursuit of individual profit as advocated by instrumental rational decision making. Rugged individualism

however, is rooted in the social relationships of community. It was found that these two divisions for decision making were inherently linked to the success or failure of fishers organizations. It was found that the utilitarian individualist fishers were more inclined to be comfortable with government policy and were also the same group most likely to undermine attempts to organize cooperatively.

> Utilitarian individualist fishers can be expected to rest more comfortably with bureaucratic institutional processes than can the rugged individualists. To the latter, bureaucratic institutional processes constrain independence, violate discretion over labour processes and threaten the basis of a way of life. To the former, bureaucratic processes are a necessary and seemingly " natural" precondition of the pursuit of livelihood goals, especially material advantage. Formal institutions and bureaucratic processes are viewed in this way by utilitarians mainly because they are more culturally familiar with them. Most of all, utilitarians welcome the bottom line assurances that bureaucratic institutions provide regarding matters such as credentialing occupational participation (e.g. the definition of professional fishers) and exerting control over distributional factors(e.g. the management of access to particular fisheries through devices such as limited licensing and quotas.) These qualities reflect utilitarians' rationality by creating economic value in association with institutionally defined, allocated and managed privilege to participate in small boat fishing. For the rugged individualists, however, they underscore the social meaning of being of and from a way of life (Jentoft and Davis 1993,p.359).

The fundamental problem behind resource exploitation is the lack of consideration for the interests of the whole system, communities and the environment particularly. With government policies based on economic theory advocating practical action of the individual, it is conclusive to relate the exploitation of natural resources to the dismantling of community cohesion. Government policy is too strictly tied to the avenues of economic fluctuation. The human reality of culturally and environmentally based needs is wiped from the contemporary decision making process.

2.4 Conclusion

The creation of bureaucracy has contributed to instrumental rational decision making. Rational will has been infused within the structure of government agencies and therefore perpetuates a system of differentiated decision making. Characteristics attributed to this institutionalization reflect a deeply ingrained assumption that humans need to be organized, compartmentalized into specific spheres of expertise, procedures need to be standardized, outcomes have to be predictable and operations are carried through a hierarchy of order with no one individual being accountable for their actions (Berger et al. 1973). This pattern of behaviour presupposes a preference for mechanized, formalized decision making process, with little flexibility or spontaneity. It is significant that a similar logic is applied to the production of technology. Even the terminology used within government documents, illustrates a preference for efficiency and production. It is beyond the scope of this paper to fully analyze the relationships between bureaucracy and technology, however the connection is significant for sustainable resource management. The point to be made here is that the underlying assumptions and mental models of bureaucracy are based on the principles of self interested rational decision making. These values negate the very real elements of community decision making processes which are based more on value rationality. The consequences of government policy making based on these false assumptions has been very destructive for coastal communities and the natural environment. Furthermore, these policies have undermined the traditional connections communities maintain between people and their surrounding environment. By perpetuating rules and

regulations that are only short term solutions, with a fundamental belief that humans are not

to be trusted, the government has assisted the corporate industry in their pursuit of financial

profit and maximum growth. Even at this time of environmental crisis, the government is

advocating policies which will further perpetuate the unsustainable cycle of resource over-

exploitation and community upheaval.

The government is advocating that fisherman become more professional and

responsible. Although this sounds reasonable, it portrays an image suited more to the bias

of instrumental rational decision making. The following description of the future fisherman

is actually more aligned with the future fishing corporation.

> Mechanisms will be envisioned that would provide licence holders more security of
> access to the resource; multi-year fishery management plans will provide greater
> stability and predictability to harvesting operations. Harvesters themselves will be
> more professional and more dedicated to conservation harvesting and responsible
> fishing practices. They will insist on greater involvement in fisheries management
> decisions. Their operations will be more viable and profitable enough to be able to
> pay for the management services they themselves will choose for their fishery. As
> a consequence, fishers will inevitably demand more responsive, efficient and cost-
> effective management approaches.(Department of Fisheries and Oceans, Policy
> Review 1995)

Although this approach claims to be more responsive to the needs of fishermen or

'harvesters', it is actually a model for corporate decision making rather than community

decision making. The language alone indicates the bias towards professional bureaucratic

ideology. There is no intention here of sitting down on the wharf with some concerned

fishers and adapting the management plans to some unexpected change in resource supply.

That type of flexible negotiation requires trust, authority for decision making, accountability

for the decision and social mechanisms in place to ensure the changes made will be

effectively honoured and not misused. Bureaucracy however, is not set up to operate this

way. Herein lies the friction between community and government. They operate on completely different principles. Government policy based on individualism has a tendency to be misaligned with community and conservation. This is also true within government departments allegedly promoting "grass roots" decision making. Even if a government agency such as the department of Environment represents values more aligned with value rational decision making, its very bureaucratic structure is still premised on the underlying belief that government is necessary for managing self interested rational individuals. This presupposes a hierarchy of control and power that blocks equal decision making and shared power of authority.

Government departments have attempted to fit resource management within a bureaucratic structure that is not in alignment with values or systems characteristic of community and the environment. The underlying belief perpetuated by the "tragedy of the commons" theory presupposes humans are not to be trusted. As indicated in chapter one, mistrust is a fundamental part of communication barriers and problematic decision making. Coastal zone management which requires integrated decision making and shared power in the decision making process, has to overcome the government biases that perpetuate mistrust.

Government agencies however, are forcing coastal communities to become aligned with bureacratic biases. The above policy statement implies a vision that will force communities to adopt the principles of bureaucracy. In theory, were we all to believe in the set of values perpetuated by government, we would be capable of efficient decision making. It is highly questionable whether these decisions could be sustainable however, given the

premise of these values. Nature will never fit the principles of bureaucracy. Our natural resources, despite all our technology and our regulated decision making, operate through a system of chaotic cycles. We have learned through our failed attempts at scientific predictions that cycles in nature change rapidly and somewhat unpredictability. Traditional communities learned to adapt to the irregularity of nature and interestingly enough these adaptations involved close human relationships and adaptive technology. Both of these successful solutions to uncertainty are being ruled out by bureaucracy, or the broader model of instrumental rational decision making.

Human relationships are the binding ingredients for decision-making. When the connections are loose, when there is mistrust or blocks imposed by different mental models, decisions are rarely made that please all participants. The difference between the ideology of bureaucracy and that of community places an immediate barrier to decision making processes. Furthermore, the structure of bureaucracy manifests a break down of relationships within the government agency thus further debilitating government employees from effectively operating with the public.

Perhaps it is time to realign the structure of government and the patterns of decision making to better fit value rational decision making. It is becoming more and more apparent that the assumption of instrumental rationality is incomplete. We are social creatures dependent on the environment for our survival and dependent on one another for security and support. The current bureaucratic ideology needs to be balanced with the principles of community and communication. The tragedy of the commons I argue, is that we have not acknowledged the value of communication patterns and "community" as being necessary

for sustainable resource management. Hardin was premature in his assumption that the community was dismantled in his commons scenario. We will look at this further in the next chapter.

CHAPTER III

COMMUNITY PATTERNS IN DECISION-MAKING

3.0 Introduction

In chapter II we examined the underlying assumptions of the "Tragedy of the Commons" theory and traced the origins of these assumptions back to historic debates over the "natural state" of human behaviour. The premise behind this analysis is that twentieth century government policy has the tendency to use arguments for human behaviour that were presented and disputed in the 17th, 18th and 19th centuries. The 20th century degradation of the environment and slow erosion of rural communities gives new evidence that resource decision making based on the belief that economic systems are separate from social and ecological systems is ineffective for sustainable resource management. Economic theory has attempted to identify humans as being disengaged from a broader social and

environmental matrix. This belief in "rational economic man" gives the illusion that there

is no limit to growth, that production can carry on to infinity and scarcities will be managed

by the government. As we have seen however, the government with its bias towards

instrumental rational decision making, is in a difficult position to protect the "externalities"

or by-products of economic policies based on rational choice theory. The cycle of social

crisis and environmental crisis is directly related to the inability of government

administrative bodies to control economic policies which are based on growth rather than

sustainability.

> Putting it straight, one can say that the process of economic growth was
> accompanied by three major problems: The externalization of costs to society (social
> cost problem), to future generations (inter-generational cost problem) and to nature
> (environmental cost problem). When the accumulation of such externalities exceeds
> certain thresholds, it leads to severe consequences: social upheaval, inter-
> generational conflict and environmental degradation (Simonis p.9).

In this chapter we look more closely at the issue of the embedded economy. The

embedded economy is one in which economic interactions are confined to boundaries, often

socially and environmentally defined. Embedded communities demonstrate the possibility

that humans make decisions based on value rationality as well as instrumental rationality.

Furthermore, these community mechanisms for decision making still exist despite the belief

that community has been "lost". To better situate the embedded community concept,

the loss of community thesis will be examined first. Despite the belief that modernisation

has completely differentiated the market from the polity and culture of communities

(Polanyi 1944), we will demonstrate how this is not true for all communities. The

implication of this evidence is that policy assumptions which negate the importance of the

social exchanges within communities and patterns of communication, are not adequate for

sustainable resource management. Furthermore, the underlying premise that these

relationships are nonexistent is unacceptable. The evolution of modernity has not been a

smooth transition into a differentiated economy. In fact, the incomplete understanding of

human behaviour has greatly contributed to the problems of modernisation.

> The mistakes of modernisation theory were two-fold. The first was to see
> differentiation as a relatively smooth evolutionary process. The second was to
> assume there was only one such pattern, that represented by post war America and
> the American combination of a market economy, political democracy and a rule of
> law (Holton 1992, p 35).

Rational choice theory neglects the history of traditional communities that were built

on trade and mechanisms of exchange more bounded by human relationships than capital

and commodities. History and anthropology show that economy in many cultures and

traditions is embedded within social relationships. Human actions in embedded

communities are bound by the values and norms that have been inscribed so deeply as to

affect behavioral motivations.

> He does not act so as to safeguard his individual interest in the possession of material
> goods; he acts so as to safeguard his social standing, his social claims, his social
> assets. He values material goods in so far as they serve this end (Polanyi 1944, p.7).

Embeddedness refers to the economic transactions which are nestled into a complex

web of social relations and reflect the shared values of participating individuals (Polanyi

1944, Granovetter 1985). Through various processes of socialization, the collective group

influences the behaviour of individuals and inversely, the individuals influence group

behaviour. Reciprocal exchange is the binding agent for group cohesion (Gheradi and

Maserio 1990).

Examining embedded community interactions helps to illustrate the broader matrix of everyday life patterns into which economic patterns fit. These processes of socialization are essential for trust, communication and collective action. As well, social patterns are in many cases responsible for the way in which individuals relate to their natural environment. The places where people sociali. are a fundamental part of a shared identity (Pocius 1991). The argument presented in this chapter is that patterns in decision making processes within embedded communities, demonstrate a set of values which influence human behaviour that are more oriented towards value rational decision making than instrumental decision making. The fact that human relationships are important for many communities demonstrates that government policies based on a rational choice perspective need to be re-thought when applied to these communities. Furthermore, embedded communities can teach a great deal about sustainable life patterns that maintain vital economic systems within a broader social and ecological framework.

3.1 The Loss of Community Thesis

Hardin's "Tragedy of the Commons" theory is symptomatic of a broader theoretical debate that has been longstanding in the field of social science and social anthropology. Hardin's theory demonstrates the potential behaviour of humans when there is a breakdown of community or a loss of community. The loss of community thesis is rooted in the belief that communities have undergone immense changes since the period of industrialization and the development of urban centres. Followers of the thesis have a tendency to blame

modernisation and capitalism for the changes in lifestyles that perpetuate individualism, mistrust, disloyalty, a lack of a sense of belonging and a lack of group cohesion. Ferdinand Tonnies was the first major theorist to define the loss of community thesis in his work entitled "Gemeinschaft and Gesellschaft"(1957). Tonnies argued that the progress of industrialized society takes place at the expense of traditional communities. Pre - industrial life, according to Tonnies , was defined as the Gemeinschaft community which was comparable to the community of a living organism. People made decisions based on "natural will" and relations were closely tied through the bonds of kinship, long established friendships, customs, habits and rituals. Tonnies perceived a pattern of consensus decision making based on kinship, residence in a common locality, and friendship. Furthermore, people rarely moved away and therefore had a long history with their surrounding environment and society.

Tonnies defined the Gemeinshcaft communities as being homogeneous and stable. People in his studies were generally found to share the same ethnic identity, religion, language and originated from the same ancestral stock. Furthermore, shared values and rules of conduct were found to be enforced by the institutions of the church and family. People shared a sentimental attachment to traditional ways of doing things that were special to their community and locality. Their communities operated on dense, complex networks of interaction between people who knew each other well, through interrelated marriages and the common values all seemed to share.

Industrial society was defined by the term Gesellshcaft, meaning association. Tonnies characterized industrial society by its "rational will". Relations between people are

governed by principles of contract and exchange delivered through mechanical interactions rather than "natural" ones. Tonnies perceived that individuals relating with one another only for the purpose of calculated self interest. He found relations to be impersonal with a definite loss of neighbourly love and the virtues of community life. Tonnies perceived the collapse of community was based in the values of industrialization: the rational pursuit of individual profit generates a fragmentation of the bonds of community.

Karl Polanyi, an economic historian writing in the 1940's, believed strongly that industrialization resulted in the break down of embedded traditional economies. He viewed capitalism as an enemy to the person-in-community and predicted that communities, if any remained, would be torn apart by the free market and the advancement of technology. Polanyi examined European history for indicators of the demise of community and traced the root of the problem back to the 17th century, the beginning of the enclosure of common property. The idea of enclosing the commons appealed to lords and nobles who were capable of earning more profits from pasture land than from tillage. The growing wool industry demanded more sheep which eventually led to an enormous depopulation of peasants and their homes. These activities were a fundamental part of the French and eventually Industrial revolution.

> Enclosures have appropriately been called a revolution of the rich against the poor. The lords and nobles were upsetting the social order, breaking down ancient law and custom, sometimes by means of violence, often by pressure and intimidation. They were literally robbing the poor of their share in the common, tearing down the houses which, by hitherto unbreakable forces of custom, the poor had long regarded as theirs and their heirs'. The fabric of society was being disrupted; desolate villages and the ruins of human dwellings testified to the fierceness with which the revolution raged, endangering the defense of the country, wasting its towns, decimating its population, turning its over burdened soil into dust, harassing its people and turning them from decent husbandmen into a mob of beggars and thieves

(Polanyi p.35).¹⁴

Polanyi was suggesting that capitalism erodes community bonds of cohesion because it disrupts an embedded system of reciprocity that traditionally was re-enforced by economic trade by means of bartered exchange rather than capital for profit. The peasant communities in medieval periods were established as an exchange of labour and husbandry for room and board. Dissolving this relationship into a capitalist commodity meant translating land into money and labour into wages, thus the embedded community is dismantled. Furthermore, the land and people are no longer subject to communal norms. The assumption classical economists made was that capital could lead to the improvement of humankind given its capacity to expand natural limits on productivity represented in land and labour. Freedom of choice and private property could potentially unleash innovation and invention from the pre-industrial structures of traditionalism. Polanyi believed it was at the expense of community relationships and the misuse of land that these aspirations were achieved.

More recent studies on communities with a political economy perspective, argue that uneven development in rural areas dependent on farming, fishing and forestry was the result of semi-proletarianization of the domestic mode of production. What this means is that people who survived traditionally at a level of subsistence or used a combination of activities to provide work for themselves, have been forced, by the capitalist mode of

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¹⁴It is significant that Hardin's analysis uses a commons land scenario that has already been converted to pasture. It may be postulated that by 1883, the time of Hardin's commons example, a century of community upheaval had preceded on that very piece of land and furthermore that land may have previously been farmed sustainably by several peasant families.

production, into working for wages. The consequential break down in traditional life patterns gives way to a dependency on social welfare and assistance money which leads to an overall sense of insecurity and fear. Furthermore, the industrial corporations , typically multinational, take advantage of low wage expectations in rural communities(Burrill and McKay,1987). The debate continues as the loss of community thesis continues to be tested, but the underlying premise is still defensible: the pursuit of individual gain can potentially break bonds of group trust and therefore perpetuate the loss of group cohesion. Any loss of group cohesion contributes to the break down of communication and community.

Polanyi, Marx and others foresaw the break down of communities as an immediate result of capitalism. Although their insights remain significant, it is perhaps an overstatement that communities are so vulnerable that community cohesion no longer exists. If this were true, the assumption that humans act as self interested individuals would be more defensible. Evidence shows however, that communities are still an element of 20th century society and furthermore, the embedded community maintains an added dimension of resilience.

The loss of community occurs when principles of instrumental rational decision making and individual self interest are dominant. As we have seen in chapter two, classical economic arguments assume a loss of community , when in many cases the loss has not occurred completely but is perpetuated by the very policies set in place to manage a misconceived perception of a lack of community resource management. In other words, government policies b d on the tragedy of the commons may act as a self fulfilling prophecy.

Communities that maintain strong socialization patterns and communication linkages, have an advantage in their rapid transfer of information and their encouragement of interpersonal trust. These linkages are characteristic of embedded communities and represent value rational decision making processes not accounted for by government policies.

3.2 The Concept of Embeddedness

Karl Polanyi determined analytical categories for economies that were different than industrialized market economy transactions. The purpose of his analysis was to explore the role of economy as it relates to the structure and function of society. His reflections are significant for understanding community economic development and collective action in general.

> For any economy of record, what is the place of economy in society? How are the arrangements for acquiring or producing goods related to kinship, politics, religion and other forms of social organization and culture? Since all human communities require the sustained provision of goods and services and all make use of natural resources, human co-operation and technique, what are the structural rules for combining resources, co-operation and technique to provide material items and services in a repetitive fashion? What are the institutionally imposed incentives to participate in economic activity?(Polanyi 1944, p.xiiv)

The values and norms maintained by embedded communities can enhance as well as inhibit individual goal seeking (Granovetter 1985, Portes and Sensenbrenner 1993). The effect of embedded community networks however, demonstrates the interdependence and connectiveness between community members despite the virtue of the goals being sought. Economic sociologists have used the term "social capital " to describe the expectations for

action within a group or collectivity that affect the economic goals and goal seeking behaviour of their members. Portes and Sensenbrenner in their analysis of immigration patterns of Embeddedness, distinguish four types of economically relevant expectations for collectives:(1) Value Introjection (2) Reciprocity Transactions (3) Bounded Solidarity and (4) Enforceable Trust. These expectations are characteristic of the kinds of social capital social networks and relationships generate. In many cases these expectations deliver advantages for the collective that would not otherwise be realized by the individual operating on their own.

Value Introjection

Value introjection is the first source of social capital derived from moral ideals that are reinforced by social obligations and reinforcing behaviours. Emile Durkheim and Max Weber both argued that ethics and moral obligations were necessary for maintaining order in society. Durkheim studied the movement of moral action and suggested that all moral actions have two sides: 1) the positive attraction to an ideal and 2) characteristics of obligation or constraint to maintain the pursuit of the ideal.

> One can understand nothing of the rules of morality which govern property, contract work etc. if one does not know the economic causes which underlie them; and conversely, one would arrive at a completely false notion of economic development if one neglected the moral causes which influenced it (Durkheim(1893) in Giddens 1971, p.69).

Values are learned through socialization and represent identifiable characteristics of a community or collective. Norms of behaviour or symbols, translate values into activities in everyday life patterns. In a study of Focaltown Newfoundland, Cohen, (1975) found that

he could easily identify a number of traditional: neighbourliness; providing for ones family; honesty ; good work ethic; good work skills for self sufficiency; ability to hunt and fish; humility (Cohen 1975)

Value introjection also implies informal rules or codes of conduct. Durkheim called this the "noncontractual elements of contract" (Portes and Sensenbrenner 1993) In Taylor's (1987) analysis of an Irish fishing settlement, illegal salmon fishing in the off season was governed informally by the community who were collectively poaching salmon. Using a rotation system and informal rules regulating gear type, the locals managed to control access. Through kinship information sharing and "tradition" the community managed the fishery without formal contracts or procedures. This method was perceived as "natural" and cooperation was an assumption of behaviour, a code of unwritten ethics. When a community member was found to be breaking the "code", rather than punishment, the community ignored the behaviour.

> I witnessed no direct confrontation, but rather an enormous amount of pointed whispering gossip in public and household. The transgression was not repeated. In this case, the offenders behaviour was not so much unfair as unnatural. Salmon ,they reason, "brings out the greed in a man", but that is a natural selfishness balanced by an equally natural cooperativeness. The offender was thus "unbalanced". No one, however is perceived as having the authority to directly reprimand or punish the offender in such cases, and such incidents seem to be either forgotten or remembered only reluctantly. Instead, the rule is remembered as applying without constraint and without infraction. Cooperation, in this instance, is perceived as merely the "natural " expression of local behaviour (Taylor, 1983 in McCay and Acheson 1987, p.299).

This example illustrates the social capital gained by the community ideal being perpetuated by obligation.

Reciprocal Transactions

Social capital arising from reciprocity occurs over time after people accumulate credit with each other as one does something for someone in exchange for something of equal value later on. This form of exchange creates an ongoing pattern of obligation.

> ...Individuals in social structures with high levels of obligations outstanding at any time have more moral social capital on which they can draw. The density of outstanding obligations means, in effect, that the overall usefulness of the tangible resources of that social structure is amplified (Coleman 1988,p. s103).

Polanyi concluded from his analysis of primitive and archaic economies that two modes of transaction were widely employed: (1) reciprocity and (2) re-distribution.

> Reciprocity and re-distribution take a variety of forms which have in common that underlying social relationships are the impetus for labour, land, and produce transactions. Reciprocity and re-distribution express the ways in which social organization relates the economy to its contextual society (Polanyi 1944, p.116).

Where reciprocity and re-distribution dominate over market exchange, the economy is considered to be embedded within those transactions defined by social relationships, particularly obligations to cultural values and behavioural norms.

Fikret Berkes (1987) in his study of Indigenous management mechanisms of the Cree Indian fisheries in Northern Canada, observed the role of reciporcity as being part of the indirect effort control mechanism for fisheries management. The James Bay Cree fishers do not consciously conserve fish stocks. In fact, many of their practices are designed for efficient exploitation yet their method of management is effective for maintaining healthy fish stocks. The sustainability of the Cree fishing practices is more linked with cultural values and norms than with a deliberate conservation management strategy. There are rules against waste and boastful behaviour and fishers practice their skill bearing in mind a

traditional respect for nature and animal spirits. It is a rule that one eats what one catches and if one has caught more than they or their family can use, than it is given to community members. These rules and others are enforced by social pressure shared by the community. These culturally derived procedures are the central management behaviours that maintain the fishery. There is no incentive to catch beyond ones' need. This becomes a principle. A subsistence fishery is maintained by cultural norms that embeds the economy into everyday life patterns.

> The key to the management of a subsistence fishery such as that in Chiasibi may be that the harvest is linked to needs. A family group that needs 10kg/day of fish appears in many cases to be able to obtain that amount regardless of the seasonal fluctuations of fishing success, any excess catch ends up being given away; there is little incentive to accumulate a surplus. Thus a subsistence fishery has a built-in self limiting principle (Berkes 1987, p. 85).

Bounded Solidarity

The emergence of a collective identity often arises when people are faced with a common adversary. The boundaries of community are often defined more by what people are not, such as "outsiders". In Cape Breton Nova Scotia, a region with a rich cultural identity, people not from there are commonly identified as CFA's...."Come From Awayers".

Research on the inter-organizational networks within cooperatives in Italy, identifies solidarity and trust as essential components for cooperative development networking. Establishing a shared identity facilitates communication and problem solving. The sense of "likeness" contributes to the self-organization necessary for competitive mangement (Gherardi and Masiero 1990).

Identity is commonly associated with place, a geographical location. This is evident from the cultural solidarity practices of many immigrant cultures within North America. The re-enactment of cultural beliefs or practices are often stimulated when groups feel threatened or marginalized.

> The salience of many cultural practices and their reenactment after immigration do not come about spontaneously, but usually result from the clash with the host society and they are, in this sense, an emergent product. The fundamental source of solidarity is still situational, since it is the reality of discrimination and minority status that activates dormant home customs (Portes and Sensenbrenner 1990,p.1130).

Enforceable Trust

Social capital is generated when individual actions are subsumed by collective expectations that lead to long term goals better for everyone. Kearney, in his study of the Bay of Fundy herring fishery in the late 1970's, observed enforceable trust as a significant reason for the success of co-management. Intense competition between different groups of harvesters and poor prices were identified as causes contributing to significant management problems. Using the principles of comanagement, harvesters, processors and government advisors worked out a management plan which was unprecedented at that time. Part of the plan was a mutually enforced mechanism for policing boat quotas. This was particularly challenging for the larger highliners that were used to higher quotas.

> A key principle of this new regime was mutual restraint for the benefit of all. Many fishermen, especially the highliners, would have to practice much self-restraint in the hope that benefits from doing so would far outweigh the advantages of going one's own separate way. Given the importance of self restraint, it was crucial that no one get away with "cheating" on their boat quotas. Otherwise, this sense of mutual restraint could easily dissipate, along with the new management and marketing system (Kearney 1984, p. 177).

The various aspects of Embeddedness are reinforced by networks, relationship ties such as family, shared values and a common background. Moral economists are noted for their argument that capitalism acts to demoralize community cultures through processes of individualization.

> State formation, capitalism and colonialism, the moral economists hold, harm peasant welfare, for they increase inequality and stratification and force more and more peasants into isolated and atomized positions without the insurance and protection of their traditional institutions (Popkin 1979. p.7).

The elements of embedded social capital as outlined above are interrelated and often occur simultaneously in community strategies affecting collective behaviour. The break down of institutions that reinforce collective behaviour can threaten the values maintained by a collective. In some cases, an external threat can stimulate a strengthening of bounded solidarity, in other cases however the inconsistency or variability of group values leads to increased vulnerability of group cohesion.

The break down of traditional institutions raises the risk of vulnerability for many embedded communities. The question of security for individuals is paramount for determining the pattern of decision making an individual will fall adopt. Moral economists argue that risk is minimized by the community ties which will accommodate individual failure through reciprocity or re-distribution. Political economists argue however, that in a deteriorating situation, individuals become cautious about protecting the welfare of others and are more inclined to invest money in their own short term needs rather than long term investment (Popkin 1979). The variations in risk management for individuals and communities are dependent on the mechanisms used to enforce values. Group interactions

that reinforce behavioural norms operate to stabilize the foundation necessary for group cohesion. Community resource management strategies based on traditional patterns of communication and socialization demonstrate ways in which embedded communities make decisions and problem solve. The web of interrelations helps to reduce risk and uncertainty as well as maintain community order. The necessity for fair and level decision making in communities also requires long term resource management strategies that will ensure a resource supply for years to come.

3.3 Embedded Community Resource Management

The reduction of risk has long been attempted by fishermen and their families in the practice of a livelihood so vulnerable to the environmental uncertainties of weather conditions and the economic uncertainties of supply and demand. Patterns of behaviour in the fishing industry have traditionally relied on social relations to reduce risk. Anthropologists studying the kin relations in fishing crews note that the stability of the crew is strengthened through family connections. The stability of a crew is essential for the safety and effectiveness of a vessel. It is critical that crew members are compatible and are familiar with the same norms of behaviour (Acheson 1981).

Common values and norms, although susceptible to conflict and inconsistencies, are essential for collective action. Case studies in fishing anthropology literature demonstrate the necessity for collective action to reduce risk and uncertainty. Acheson in his studies of the Maine lobster fishery, documented how informal norms enforced by the bounded

solidarity of fishermen helped to define and protect territorial arrangements not recognized by government administrators. At the time of Acheson's research, Maine laws did nothing to restrict the entry into the fishery nor did they do much to limit fishing effort in the lobster industry. Informal norms however operated to perform both of these management needs.

Local fishermen using enforced sanctions, ensured any new-comer respected the values and norms of the respective 'harbour gang' depending on the community the new-comer was from. Furthermore, informal territories determined where an individual could fish. In some areas of Maine the territories are rigidly defended and entry into the fishery is highly limited. Access rights depend on a fisherman's age, length of residency and status within a harbour gang. The ability to define fishing boundaries has the outcome of reducing risk as well as allowing for local conservation measures. It is significant that none of these benefits can occur as the result of the behaviour of one individual. It requires the unanimous agreement of a collective group (Acheson 1975).

The definition of territory is significant for community boundaries and a sense of collective identity. It is important to understand property rights as a social relation. Our relationship to ourselves, our community and environment expresses the ongoing social processes for everyday living. Identifying with cultural values and norms allows for a sense of belonging. This is important for a sense of security and well being.

> The sense of a primacy of belonging, greater than kinship, but more immediately than the abstraction we call 'society'. It is the arena in which people acquire their most fundamental and most substantial experiences of social life outside the confines of the home. In it they learn the meaning of kinship through being able to perceive its boundaries - that is by juxtaposing it to nonkinship; they learn friendship; they acquire the sentiments of close association and the capacity to express or otherwise manage these in their social relationships. Community, therefore, is where one learns and continues to practice how to be "social"(Cohen

1985, p.15).

The practice of being "social" is reinforced daily in embedded communities where information exchange and communication is an ongoing element of decision making. During lobster season for example, it is common for fishermen to compare catches and locations. This information exchange is invaluable for determining daily fishing strategies and effort. The problem solving mechanisms implemented by fishers within an embedded community setting, can demonstrate a wide variety of innovative methods for dealing with the uncertainties of the resource and at the same time be conserving the resource. Patterns of social interaction actually work to control access and manage the fishery. These mechanisms are effective because of the web of relations that connect individuals to one another through their history and their geographical place, their homes. The vulnerability of these mechanisms however, is that they are not formally defended by government administrators who design policy and legislation. As soon as security of tenure or any other informal right is challenged by formal institutions, the mechanisms lose their strength and the ability to enforce informal regulations becomes increasingly more difficult. Decrease in supply also contributes to a break down in traditional management strategies. When stocks are low, the tendency to break community sanctions increases.

Davis' case study of the small boat fishery in South West Nova Scotia (1977), illustrates a long history of fisher families that recognize their community as part of their identity and use this to their advantage for decision making. This particular case study is significant because it identifies a system of management capable of enduring the uncertainties of the natural environment such as weather conditions, seasonal stock

variation, and species diversity. These uncertainties increase however as the supply of fish declines and government policy interventions increase. Traditional resource management mechanisms have difficulty competing with the formal government management regulations which have effectively undermined the sustainability of the small boat fishery. The underlying assumptions of government policy are aligned with those of technologically oriented corporations operating for maximum profit. These motivations affect decision making within government policy divisions that operate to weaken and dismantle the very social connections necessary for effectively regulating the fishery. Without trust mechanisms supported and re-enforced by local fishermen, mistrust prevails and the tragedy of the commons scenario begins.

The three communities Davis identifies in his case study contain their own government whart'which is significant for the demarcation of community boundaries as well as fishing territories. These boundaries also define social and economic relationships that accompany a fisherman to his respective territory.

> With the exception of the offshore small boat fishery, most of the fishermen moor their boats and fish out of the port located within their respective communities. In fact, much of the sense of community and community solidarity is derived from (and reinforced by) the social and economic links established among men fishing out of the same port (Davis 1984,p.4).

Two categories of fishing can be identified in these communities: the offshore and inshore, however, both sectors use fixed gear technology. Although the two types of fisheries differ in capital investment and the scale of production activity, several approaches used to minimize risk and uncertainty are similar in principle. Weather conditions have to be respected, thus requiring seasonal switches in gear type and species caught. This allows

for flexibility however and adaptation is one skill used to accommodate nature.

The offshore fishermen change from "fine gear" longline used for fishing haddock, medium sized cod, cusk and hake, to "cod fish gear" which is heavier gauge line and larger hooks, depending on the season and location. Captains and crew have to demonstrate skill and knowledge in order to minimize risk. The potential for losing gear and personal injury increases with lack of experience.

The adaptive technology requires careful planning and strategy for success. This contributes to an overall respect for those more experienced or skilled. This in turn lends to a greater respect for the ocean . Perhaps these variables contributed to the general opposition of gill netting when introduced in 1975. Davis does not give details but does say that by 1980 the gillnetters were gone.

> By 1980 all of the captains " gill nettin" had disposed of the gear and returned to summer longlining as a consequence of the intensity of intra-harbour opposition to the use of this technology (Davis 1984, p.139).

Although the specific reasons for this opposition are not mentioned, this collective influence on individual behaviour demonstrates the effects of moral regulation. Values held by the community re-aligned behaviour to bring the fishery back to a community standard. This is an example of social capital via value introjection.

The nearshore fishery also requires flexibility for fishing gear and species, depending on the time of year. Lobster fishing generates the most income however, its season is limited and lobsters are very unpredictable as to when they feed or move. The summer months along the South West shore are suitable for handlining using fine gear or cod fish long lines, depending on the varying success of either type. In this way, skill, knowledge, flexibility

and adaptability are necessary for a successful outcome.

> A definitive character of the small boat fishery is this switching back and forth among gear types and among fishing strategies. The offshore fishery is much more specialized than the inshore sector, but economic survival in each fishery requires flexibility to alter strategies in response to opportunity (Davis 1984, p.140).

The use patterns demonstrated in this case study indicate a definition of territory and boundaries that operate to limit access Although government management systems impose regulations intended for common property, the use patterns of the fishermen suggest they use informal regulations to limit access to definable units. What is particularly interesting in this case study is the correlation between territorial boundaries and economic efficiency. It makes sense that boats from one wharf stay in close proximity to that same wharf to save time and fuel, therefore not imposing on the next communities' territory. This not only demonstrates sensible decision making, it also shows consideration for environmental conditions of the resource. This is also demonstrated in the decision making process for gear type and location. Knowledge of the resource enables fishermen to make decisions that best suit the type of fish and the distribution depending on the location.

> Drift hand lining for haddock occurs in an area that is rarely fished with long line because of the "spottiness" of the ground. Moreover, many cod fishing handliners anchor their boats on "spots" Which are micro-environments known to be favourable habitats for cod (Davis1984, p.143).

The rights of access to these fishing grounds are defined by principles linking historical kinship ties to present day relations. The system of property relations is embedded within the social relations of the community. Fishermen hold legitimacy to the fishery not only through kinship ties but by experience and security of tenure. This is upheld and reinforced by the position of fishermen. Similarity of position in terms of shared needs,

further contributes to legitimacy which in turn facilitates group solidarity and trust. Social

capital is gained in this example through enforceable trust.

> Each fisherman knows that he has legitimate access claims as a consequence of his
> affiliation with the port and harbour centred group of men who occupy a like
> position (Davis p.147).

Legitimacy is reinforced when threatened by outsiders or dissuaders. Similar to

Achesons' Maine lobster case study previously cited, the tactics for enforcing moral

regulations are used only when shared values are threatened and members of the group act

together to constrain illegitimate behaviour. Such group solidarity is further bound by

extensive channels of communication. Information transferred between fishermen allows

for better decision making and the refinement of fishing strategies. This information is

transferred in such a way that individuals protect their secret methods yet converse on

general observations. In this way the innovation of the individual is not sacrificed but

preserved in order to maintain a competitive advantage. This skill of communicating neither

too much or too little information is linked to the importance of fairness and respect for

others. Even though individuals may differ on technique, it is important that no one is

perceived as having an unfair advantage. This would undermine legitimacy and work to

unravel trust and group cohesion necessary for enforcing moral regulations.

> The need to apply extreme sanctions seldom arises, but an understanding that they
> will be applied, if necessary, is usually sufficient in controlling exploitive activities.
> This understanding is implicit in the rules that fishermen learn to follow as they
> acquire the technical and practical knowledge associated with their occupation.
> Fishermen learn from early training that they are never to haul another fisherman's
> traps, nets and line unless explicitly requested or given permission. It is commonly
> understood that failure to follow this rule will result in the wholesale destruction of
> the transgressor's gear. Moreover, this understanding is reinforced through local
> folklore which contains examples of what happened when a fisherman broke the

rules (Davis 1984, p. 149).

Despite the successful management mechanisms of the small boat fishery, there is an unavoidable reality that other harvesters are not managing the fish supply with the same longterm interest. There is an overall sense of powerlessness when faced with the consequences of the offshore industrial fishing effort , which is widely assumed to be responsible for the rapid decline of fish stocks (McCay 1978). The decline in fish populations activates government intervention which in turn imposes blanket regulations and policies on communities previously operating with locally adapted mangement rules. The Government policy assumptions entrenched within the "tragedy of the commons" theory, applies inappropriate measures to "rationalize" what they perceive is an open access resource. Licensing programs, fish quotas and season restrictions are examples of federal Department of Fisheries and Oceans'(DFO) mechanisms for resource conservation management. The small boat fishery requires flexibility as part of its strategy for conservation management. DFO policies reduce the ability for fishers to vary technologies suited to conditions. The decision-making power of fishers is enormously reduced because of inappropriate restrictions. This reduction in power leads to insecurity and uncertainty which further erodes community management mechanisms as individuals attempt to meet their basic needs.

The perceived difference in values between small boat fishers and DFO officials further perpetuates problematic decision making. Meetings held in fishing communities for the purpose of outlining new policies and regulations, resulted in an angry protest by several fishers. The government responded by reopening access to licenses which then resulted in

a rush to secure access.

> ...as a result of the wave of protest, the federal government reopened access to licenses long enough for the unlicensed fishermen to obtain their permits. Now, practically every small boat fishermen is licensed to fish herring commercially as a consequence of government's initial failure to differentiate among the variable, local-level conditions. Moreover, the experience reinforced the fishermen's belief that the government is attempting to regulate them out of the fishery by threatening their flexibility through forced specialization. Feeling powerless to affect policy in its formative stages, most Port Lameron Harbour small boat fishermen have responded to DFO regulatory initiatives by pursuing a strategy of obtaining as many licenses as possible (Davis 1984, p. 159).

Severe decline in fish stocks exposes the small boat fishery to two primary

vulnerabilities: 1) The exploitation of species outside the inshore zone and 2) the lack of

control over operating costs and fish prices. Both of these variables contribute to a sense of

powerlessness that is perceived to be perpetuated by government intervention.

> The small boat fishermen are convinced that their fishing efforts are incapable of deleteriously affecting fish stocks. They blame stock depletion on government - supported offshore industrial fishing. Given the perceived relation between offshore industrial fishing and government action, they feel powerless to affect, in any meaningful way, the character of either the offshore effort or its impact upon their livelihoods (Davis, 1984 p. 150).

The perceived lack of government fairness or legitimacy undermines any faith or

trust in government imposed regulations. This perpetuates an overall sense of powerlessness

given the small boat fishermens' vulnerability to fish closures. At a time of crisis, fishermen

feel they have no one to turn to. This demonstrates an enormous distance between the

decision making process of the Federal Department of Fisheries and that of small boat

fishermen. The underlying assumptions of bureaucratic decision making help to erode

community decision making structures. Government attempts to "rationalize" the fishery

demonstrate: 1) an ignorance of indigenous property rights by assuming open access 2) a

disregard for socio-economic and political divisions 3) support for vertical integration 4) a disregard for fishermen's skill, experience or knowledge of the resource 5) provision of subsidies that further erode traditional methods for limiting access such as apprenticeship. and 6) a misunderstanding of competitive human behaviour.

The tendency of government to "rationalize" the fishery has imposed assumptions that have little to do with community needs for flexibility and local moral regulations. Consequently, these government regulations have increased the problems in the fishery and continue to increase uncertainty of an already endangered fishery. The accumulation of uncertainty creates an increased sense of powerlessness which works to unravel trust and community cohesion. The real tragedy of the commons is that government has helped to erode the very social mechanisms needed for sustaining capitalism within the boundaries of social and ecological values. Government policy has helped to dismantle community life patterns that could be our answer for future sustainable decision making frameworks.

It has been argued this far that government policy neglects the significance of community values and strategies that have traditionally been effective at managing resources sustainably. Understanding community values and patterns in decision making is not at all obvious to the outsider. Furthermore, the perceived differences, between rural community and government bureaucracy establishes an immediate barrier for communication. Community defense are raised under threatening conditions therefore when government officials hold meetings in rural communities there is often a heightened sense of friction. Community values and boundaries are not explicit. It takes an "outsider" quite some time to learn the complex patterns of communication, the unexplicit values, the unwritten rules

of conduct and complex symbols that all contribute to a way of life, a shared way of being.

These patterns are further complicated by the variability between the relationship of the

individual to the community and the relationship between the community and other

communities. Cohen describes this complexity:

> The boundary represents the mask presented by the community to the outside world;
> it is the community's public face. But the conceptualization and symbolization of the
> boundary from within is much more complex. To put this another way, the boundary
> as the community's public face is symbolically simple; but, as the object of internal
> discourse it is symbolically complex. Thus we attribute gross stereotypical features
> to whole groups; but, for the members of those groups such stereotypes applied to
> themselves as individuals would almost invariably be regarded as gross distortions,
> superficial, unfair, ridiculous....In the public face, internal variety disappears or
> coalesces into a simple statement. In its private mode, differentiation, variety and
> complexity proliferate (Cohen 1985, p.74).

The complex boundaries and interfaces within embedded communities ensure an

identity and a way of doing things that bind people to predictable life patterns. A sense of

belonging, a sense of like-mindedness and an over all sense of confidence transcend routines

and personal social interactions. These are significant needs after one takes care of the basic

physiological requirements of food shelter and water. The need for safety, to belong, self

esteem and self actualization are the ascending needs on Maslow's hierarchy (1954).

Embedded communities have the integrated pattern of relationships necessary for meeting

these needs.[15] The surrounding environment is included within the relationships, patterns of

socialization are further symbolized through the process of meeting these higher needs. It

is in this way natural resources become part of the social patterns of life and therefore

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[15] I would like to qualify that Embeddedness does not assume the perfect community. It is also a reality that
family violence, illegal drug use, discrimination are also issues to be dealt with in many embedded communities. The
point I'm making is that socialization patterns can not be dismissed by way of rational choice theory

inseparable as an economic utility.

Pocius, in his study on Calvert Newfoundland (1991), describes patterns of social interaction that are affected by the natural environment as well as socialization patterns that affect resource management. Calvert is a small community where spaces and their visibility are essential to the meaning of everyday life. Clusters of houses are connected by paths and narrow winding roads. There is no apparent order, just connections between spaces; meadows, gardens, lawns, paths, wandering sheep and grazing cattle. Much of the land in Calvert and the surrounding area, is considered to be public land. Although it would appear to be unmanaged as a commons, there exists a more complex system of management.

> The nature of Calvert's land has to do with whether it is public or private, but more important, it relates to the social relationships that are associated with certain landscape categories. Land is not simply private or common, for some spaces can be used in different ways: public land can become private, personal property can have public uses (Pocius 1991, p. 108).

Management of the commons is dependent on spatial and temporal circumstances. The concept of the commons is merely a type of management. Resources themselves are not managed, it is the space that is worked or not worked which dictates the label of space. Pocius calls this "web-of-use-rights". Essentially, when someone invests time and labour into the land, the community respects this and acknowledges the worked over area as being private. This is true for gardens especially. Work rituals signify the use of the land and serve as a symbol boundary for protected space. The use of fences often physically demarcate boundaries of land in use. It is the responsibility of the "owner" to keep livestock out of the private space, which otherwise range freely. Fences do not signify ownership however, they only identify space in use. When the need of the space is exhausted, the space returns to the

commons.

Work is also a time for socializing. Spaces are very visible in Calvert given the low lying heath vegetation. Any activity usually attracts the attention of a watching neighbour which often results in conservation, the sharing of produce, or help offered for a difficult task. Land use is an integral part of the culture.

Culturally embedded ties to the land were more obvious after the government resettlement plan in the 1960's and 70's. People became so angry at the loss of community identity, the issue rose to political debate causing defeat for the party in power (Pocius 1991). The plucking of people from their homes and memories evoked a province wide nostalgia for a place to belong. Pocius suggests this formed the basis for many folklore and cultural resurgences still popular today in Newfoundland.

Belonging to Calvert is a constant exchange and sharing of spaces. People's doors are left open to one another, spaces are organized for the connections and linkages to other people and special places. Every place is named as is every outstanding landscape feature, lake, pond, path, gully. knoll, hill, river and stream. These names are not written or recorded on signposts, but are learned experientially from those who are familiar with the area. Landmarks, acting as boundaries, are known only by those who know the landscape. Spaces of familiarity divide the landscape into unstated territories. Discussions about these areas are frequently focused upon in social gatherings, indicating close observation of what occurs in each space.

Even coastal areas are divided territorially. Coastal features in line with specific landscape features serve as landmarks only visible to those who know where to look.

Knowledge of the land comes from the social relationships associated with certain landscapes.

Social relationships are also crucial for the sharing of resources. Rights of use to the commons are shared equally, use rights are only acceptable if everyone agrees. Public resources including berries and game, require knowledge and skill but do not depend on a lengthy preparation process and are therefore public. Some areas of the commons are reserved for certain people if they have poor land capability in their immediate surroundings. Pocius gives an example of a family with poor wood supply around their home, so the community acknowledged their need and now allows them to cut wood from a community space. The investment of labour is a sign of territory and is respected if all agree.

Standards of behaviour are essential for respecting work and resource supply. Calvert fishermen have devised a systems management strategy that gives everyone equal access to the fishery with no preferential treatment. Every year a public draw for fishing berths is held in Calvert. Such a system keeps the fishing territories as property of the community and lessens the incentive for private gain. Furthermore, the responsibility for the resource is spread to the whole community.

> People in Calvert continue to both live and work next to one another - kept close by
> values that have been important for a number of generations: values that emphasize
> proximity over privacy, hospitality over seclusion (Pocius 1991, p.155).

Acknowledged symbols for boundaries, intimate knowledge of Calvert spaces and a respect for each others needs maintain an equal division of resources. The social norms of shared space and the constant reaffirmation of social relationships works to bind families and neighbours forming mutual obligation networks and a mutual dependency on

community members. The sharing of space, with fair and agreed upon use rights, helps to maintain a balance of resource use rather than self interested exploitation. Furthermore, knowledge and experience of the land and coastal waters instills a connection that transforms place into identity and a sense of belonging. There is a very real relationship with the place in which you belong, especially if it feeds you, your family and your neighbours.

3.4 Conclusion

The argument presented in this chapter is that communities function on many levels , on every level however, the patterns of communication and everyday activities contribute to the overall community identity and connections with the natural environment. The origin of these values vary , change and fluctuate depending on the circumstances and the players. Community Embeddedness hosts value rational as well as instrumental decision making. In the examples given, community mechanisms are designed however, to ensure fair and level decision making. In many cases fair decision making means respecting one's neighbours and surrounding environment in which one lives. This inevitably leads to conservation of natural resources because there is an incentive for maintaining equal shares for everyone on an on going basis. The degree to which a community can prevent self interested rational behaviour plays an important role in the ability to manage resources sustainably. The informal arrangements designed to prevent over- access to a resource however, can be undermined by the legally enforced government policies designed to do the same thing. The lack of legal support for informal access control mechanisms leads to an erosion of community

management schemes.

It is understandable however, that government is unaware of the complex community boundaries and unwrit ⋯ ⁝. ulations that bind human behaviour. Communities share this information through patterns of socialization and everyday living. Often these rules are only learned experientially, thereby ensuring "outsiders" don't intrude. These protective mechanisms are often most evident when communities feel threatened and therefore make it extra difficult for government officials to perceive the root of conflict or dispute. It is also in time of crisis that communities with strong group cohesion attempt to strengthen ties through a re-assertion of tradition. These selected stories or rituals from the past are often relevant to contemporary issues and are used to rebind community ties with linkages from the past to present and in to the future (Cohen 1985). These cognitive maps or models, help re-orient a community identity an reaffirm community values through the symbols of the past.

Values, cognitive maps, mental models all are aspects of structures that influence decision making. The underlying assumptions orient one another either in alignment or opposition. The symbols of language, rituals, patterns of living all contribute indicators of an individuals' underlying "world view". Shared views or values reduce the barriers for communication and therefore increase trust between individuals.

It is argued here that rural communities, particularly highly socialized ones, operate with different underlying assumptions than do government representatives. The underlying assumption of the "tragedy of the commons" reduces community ties because it is designed on the fundamental premise that humans are not to be trusted. For this reason, government

imposes rigid structures on communities irregardless of the mechanisms that are already working to manage resources sustainably. The values, beliefs, and assumptions of government agencies are symbolized by their infinite supply of legislation, rules and regulations which effectively represent the government bias of mistrust. These assumptions, policies and beliefs are in direct conflict with community based management mechanisms. As we have seen, government assumptions often neglect the complexities of community and the interconnectedness between people and the places to which they belong.

Much can be learned from the communities that maintain intricate patterns of communication. As noted by ACAP coordinators, communication is critical for group participation. The Case studies presented in this chapter, demonstrate the advantages of embedded community linkages. It is beyond the purpose of this chapter to discuss the problems of embedded communities. What is significant however, is that communities have ways of resolving resource use conflicts that are often ignored by government policy makers. Many community mechanisms are designed for fairness and assume individuals respect one another and their surrounding environment. If we could carry this lesson forward, we will have learned a great deal about effective coastal zone management decision making.

Another important lesson from these case studies is the importance of territory for communities. The broad and ambiguous concept of "coastal zone management" may be ineffective for community based management. People need to feel connected with their place before they feel protective of it. Coastal management decision making could possibly be more effective if it was designed for community regions already defined by people and their boundaries of community.

CHAPTER IV

REVERSING THE TRAGEDY: COASTAL COMMUNITY COLLECTIVE ACTION

4.0 Introduction

As the previous chapter demonstrates, the concept of integrated coastal zone management is meaningless if decisions are made in isolation from coastal communities. The elements of communication necessary for shared decision-making are inextricably linked to the values or assumptions individuals or groups carry consciously or unconsciously throughout the decision making process. The previous chapters have demonstrated how different values contribute to different decision making objectives. I have argued that the underlying values and assumptions of government policy contribute to objectives and outcomes that are very different from the underlying values of community. Community,

meaning, communicative relationships established through common experiences and common environments.

The patterns in government decision making have assumed individuals make decisions in isolation and for the benefit of their own good. This assumption leads to the need for laws, structures of enforcement and the administration of policies and regulations. This contributes to a fragmented decision making process that is inflexible, inefficient and costly (Benello 1989).

As we have now witnessed in the fishing industry, these underlying assumptions have contributed to an unsuccessful policy making process. Many coastal communities in Atlantic Canada are experiencing severe economic, environmental and social crisis.

> Fishermen, especially those based inshore with fixed gear, had been saying for some time that there was a resource crisis, whose dimensions are now beyond even their most dire predictions. Some fisheries, such as shellfish, continue to thrive, but the industry as a whole is in crisis, and a great many of Atlantic Canada's coastal communities are threatened with collapse. We face a disaster of monumental proportions (Cashin 1993).

Coastal zone management, to be sustainable, can not be separated from the issues, values and concerns of coastal communities. With the economic base of many coastal communities being rooted in the fishery, the issues evolving from fisheries management need to be integrated with coastal zone management decision making. The term "sustainable development" has to be carefully monitored within decision making processes. Truly sustainable decision-making follows the principles and values necessary for long term life quality which respects the needs and limitations of social and ecological systems. This is distinctly different than growth predicated on quantity through economic expansion.

Much confusion could be avoided if we would agree to use the word "growth" to refer only to the quantitative scale of the physical dimensions of the economy. Qualitative improvement could be labelled "development"...growth of the economic organism means larger jaws and a bigger digestive tract. Development means more complete digestion and wise purposes (Daly 1989).

Embedded communities are more aligned with qualitative development. The patterns of decision making in highly socialized, embedded communities are already integrated with economic, social and ecological issues. In fact, the issues are inseparable from oneanother. Decisions are influenced by where a person lives, how they earn their living and how this fits with their neighbours and family. These interconnections work to maintain community values, collective trust and shared decision making.

Sustainable economic development can build on these networks that already exist in many rural communities. Recent experiences with sustainable economic development focus on communication, networking and community decision making processes. (see Lewis 1994, Mark 1994, Nozick 1992, Pardy 1992, Roberts, Bacher and Nelson 1993)

Practical experience has demonstrated that new approaches are needed for resource management. The decisions required for sustainable resource management are however, inseparable from the economic, social and ecological systems that create a complex web of relationships within communities.

Coastal communities in Atlantic Canada are facing an enormous challenge to overcome the impact of the fishery crisis. This challenge can only be met with strong community groups that are closely linked to community members as well as influencing agencies outside of the community.

Bridges need to be built between senior levels of government, within departments,

between educational authorities and jurisdictions and within the business community of this region. All those involved must understand the mission, know why each organization was created and its interrelationship with others, both horizontally and vertically in the total scheme (Pardy 1990).

The "coastal zone" as defined by policy makers and resource managers can not be protected, conserved or managed without an understanding of the people and their perceptions of their surrounding environment. Understanding the patterns of decision making within communities lends insight to the associated values and underlying assumptions. Understanding values is an opportunity for building bridges and expanding community linkages. Encouraging people to exchange information, share ideas and views is the basis for community (Peck 1987).

The basis for understanding community values however, is rooted in the establishment of boundaries. Community boundaries, as the previous chapter demonstrates, can be symbolized in a number of ways. The difficulty with embedded communities is the invisibility of community boundaries. In other words, it is not obvious what the community norms, values and boundaries are unless you are embedded within the community web of relationships. This presents a challenge for shared decision making processes that attempt to integrate several group representatives whose origin of values appear to be different. These subtle elements of communication can block a decision making process because people can not be sure what values each representative is bringing to the proverbial table.

Government policies and management practices over time have contributed to a significant amount of mistrust from the general public. The values government represent are symbolized by their expertise bias and fragmented decision making process. These

qualities are characteristic of values aligned with rational economic choice. As outlined in the previous chapter, sustainable resource management has to be more aligned with value rational decision making. The purpose of this chapter is to illustrate through a window an embedded community case study, the need for integrated decision making that is based on value rational principles. Furthermore, it will be shown how coastal zone management is inseparable from the socio-economic issues which manifest many of the very issues and problems coastal zone management attempts to resolve.

In Sambro Nova Scotia, the community faces the challenge of maintaining the embedded relationships characteristic of its people while attempting at the same time to forge ahead with new innovative solutions to a threatened economy. Sambro is a small fishing community which has maintained its identity despite the growing pressures that threaten to fragment and disintegrate a sustainable community culture.

Sambro is a case in which coastal zone management cannot be separated from everyday living practices. The fishery and coast line are primary to the way people earn a living and spend their time. The shared experiences and opportunities to share information, constantly re-affirm one's place within the community. Communication is central to shared values and shared decision making. Any barriers present within the communication process will evolve into barriers further along into the decision-making process on which sustainable resource management depends.

4.1 Sambro Nova Scotia: Community Survival

Sambro is a small community approximately 25km. West of Halifax. It has a long history of fishing since it was first settled in the late 1770's however, Sambro was not settled in large numbers until 1821 by English Methodists, presumably loyalist refugees.[16] The livelihood of fishing has greatly contributed to the family ties that keep generations close together through times of change. The inshore fishery was highly dependent on the family unit for carrying out the numerous tasks. The division of labour was clearly defined between fathers, sons, brothers and mothers, daughters, sisters. Tasks varied with the seasons and all family members were required to help. One elderly resident recalls the hard work her family did to help "land the cod".

> "When the men came back from fishing, we knew they had a good catch when they signalled for another dory to take on more fish. I can still remember my father waving a pitch fork slowly from side to side while my two younger brothers scrambled for the oars to row out and meet him. The women would go on the fish flakes to prepare for 'spreading the fish' as they called it. Drying fish was women's work. It was hard work, spreading out every fish so it would dry. If ever it threatened rain we would stop what ever we were doing and take in all the fish off the racks."(Interview, 1994)

Almost one hundred years later, Sambro has increased in population and families have diversified their means of making a living. Life, with all its technological advancements is very different than it was at the turn of the century. This community however, is not as different as one would expect. 1991 Statistic Canada dwelling counts

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[16]"Churches By the Sea" Halifax Herald(May 15, 1954)P A N S Mg 9 vol 44 # 152

lists 405 homes in Sambro, only four times the 1900 number[17]. Many of the homes are occupied by ancestors of the original families that first settled the community, evident from the persistence of the original family names such as Gray, Garrison, Smith, Henneberry, and Gilkie. The close proximity of houses and shared lots are characteristic of the closeness between families and neighbours in Sambro. The limited area for building and housing development also contributes to growth limitations and a nucleated settlement pattern. The population of Sambro has not changed significantly for a number of years yet the growth rate for the surrounding District is close to 11%.[18]This can be seen in the increasing number of subdivisions and new homes being built within close proximity to Sambro.

Until recently, the community of Sambro has maintained a low percentage of unemployment. Climatic conditions and locational advantages of the Sambro harbour have contributed to a year round fishery. Close proximity to Halifax has also provided alternative employment options. Recent unemployment figures for the District however, indicate that the District in which Sambro is situated, maintains an overall unemployment rate of 10.7% which is higher than the Western Halifax County rate of 9.7 % but lower than the provincial rate of 12.7 %.[19] Although it is difficult to determine from these numbers what the actual unemployment rate is for Sambro, personal communication with residents indicate these employment figures are representative of the community since the recent closures in the

[17]Population Counts for Census Subdivisions and Unincorporated Places By Census Division and Census Consolidated Subdivision, 1991 100% data. Atlantic Provinces, Statistics Canada - Cat. No. 93 307.

[18]Halifax County Statistical Profile, Halifax County Municipality, Department of Planning and Development, Policy Division, 1994

[19]Statistics Canada, Census of Canada 1991 and Halifax County Statistical Profile, Halifax County Municipality Department of Planning and Development, Policy Division, 1994.

fishery.

Over 100 fishermen in Sambro hold fishing licenses. This comprises the main economic activity and stability of the community. The majority of Sambro boats are fixed gear: 15 handline, 15 long line and two Danish seiners. Two groundfish draggers also run out of the harbour, however Sambronians in general are proud of their inshore heritage and many openly disapprove of the dragger net technology.

One local fisherman and processor described the fishery as a sustainable system built on the inshore. There is much pride in the community associated with the history of the Sambro fishery. Stories and folklore are numerous that remind the community that their foundations are based on their ancestors' ability to fish the sea without taking more than their fair share.(Interview, 1994)

The recent closures to fishing grounds (1993) have significantly changed the economic outlook for Sambronian families dependent on the fishery for a livelihood. The two locally owned fish plants: Sambro Fisheries and B & J Fisheries have had to close frequently, lay off employees and struggle to buy enough fish to keep the plants running just to cover overhead costs. This has intensified the need for fishermen to exploit themselves as a cost saving mechanism. Fishermen are tending to reduce crew size and bait their own trawl instead of hiring women or students. Although this saves immediate costs, the extra time and labour expended to save costs often cuts down on fishing time.

The impact of the fisheries crisis is slow moving and difficult to isolate however, and many families are having to adapt. One outcome is that more people are having to find work outside of the community, particularly women. One local woman who used to be more

actively involved in the community, commented that she felt more isolated now that people

have to spend so much time travelling and taking care of business outside the community.

Many fishermen's wives are upgrading their clerical skills and working in retail businesses

in Halifax. The women seem more actively involved in retraining than fishermen due to the

variation in education levels. Many wives have commented about their worries for the

future of their families given that their husbands know no other way of making a living.

Traditions of mutual support such as shared child care between families however, help to

alleviate the numerous stresses. One woman felt that the "old ways" were coming back with

the crisis, such as increased family support and self provisioning through hunting, gardening,

and berry picking. One woman explained it this way:

> "When you don't have money you usually have time, and when you have time you
> can do the old things like picking blueberries for blueberry grunt. It's a good thing
> some of us still know how to make it."

Referring to the old ways is common throughout Sambro. People still remember and

maintain their connections to the past and apply them to the future. In a presentation to the

Sambro Elementary school children during Ocean's Day, one local fisherman spoke of the

lessons taught to him by his father and grandfather about fishing sustainably. He described

the dories and the handlines that were used for inshore fishing and how technology has

changed the old philosophy of "catching what you need to survive", in favour of "catching

what you need to make a lot of money". The children listened intently because they

recognized the names of their own ancestors. They too were part of the history and the

future. These connections made the message meaningful for them.

The total impact of the fishery crisis is impossible to calculate, however an overall

feeling of uncertainty seems to be growing and penetrating the community. The local United Church Minister feels that the signs of depression are growing in her congregation as people continue to question their future. The anxiety of uncertainty was further demonstrated during a student role playing exercise with the theme of resource use conflict. The local Elementary School grade five/six class expressed their fear of their uncertain futures through drama and dialogue. Many students were worried they would have to move or that they would not be able to find work when they were older. Although it was discouraging to see such young people so impacted by the fishery crisis, another side to the crisis became evident. The school children were motivated to think of alternative solutions that fit within their community. Many children expressed their concerns about maintaining the environment despite the temptation to exploit it for money. Within this process of discussion and drama, the children were able to name special places they would protect. It was significant that they used traditional names only local people would recognize. Many of the children referred to particular places within the "backlands", an area of crownland traditionally used by the community for hunting, fishing and firewood. Using their history together with their contemporary education, the class could identify appropriate solutions for resource conflict that fit with the values of the community.

The idea of the "backlands" being special to community people is well established throughout the surrounding communities that are adjacent to this crown land region. Many local residents interviewed for a study of landscape interpretation revealed significant amounts of knowledge and information demonstrating their intimacy with the land. The following description indicates the year round use and extensive knowledge of the

landscape.

"Soon as the ice was off the lakes, around the 25th of April you'd be back... to clean up the camp and then bait fishing hooks with worms and minnows and then soon the insect life started through until the middle of June you'd be in every weekend. Then when the blackflies come on you'd take a break for three weeks 'til the black flies finished their heavy breeding period. Then around the dry period around the end of July you'd go back dry fly fishing. If you got early rains in September, the sea trout would come up early for their fall breeding and you'd go back and wet fly fish 'til the end of September. And while you're fishing you'd see what ducks had matured and where they're feeding and you'd walk from lake to lake to see where the deer were grazing and where their browse was and the tops of bushes being ripped off to indicate they were in a certain area. And then fishing season would close. The ducks and partridge season open on the 4th of October. While you were travelling the area, you'd be keeping a keen eye 'cause deer season opened on the 25th of October. So you'd be marking where they were leaving their markings and ripping bushes...right up 'til the end of deer season, into the first week of December. Then everyone took a break up until Christmas and then it was time to go rabbit hunting. Rabbit hunting finishes around the 20th of February. There'd be about a two month period where it would be slack"(Manuel 1992,p.447).

Many of the local residents interviewed had extensive knowledge and understanding of the habitats and ecosystems within the "backlands" landscape. Experiences from travelling through the trails had instilled a sense of the ecology. Eighty percent of the survey respondents felt the backlands were special and unique (Manuel 1992).

The idea of a "special place" was also expressed as a sense of home. People were very much aware of their family ties and the generations that had travelled these woods before them. In addition to sentimental value, people also expressed concerns about potential change or destruction to their special area.

"I guess to me its just that I was born and brought up here and I'm familiar with it and I know the place so well in there that I feel at home in there. I've been all over the place hunting and fishing and so forth but I never feel at ease as I do in there'cause I know every lake, pond and brook and it's just a different feeling."

"Parts of the area where your grandfather settled or whatever and a place where he made spruce bedding. Where he laid there - it is still there. Which I got a feeling

someday maybe in a few of these spots maybe I'll put a few bushes there and say my grandfather lay there... if some development comes in here and blasts that rock, that is gone, the memory is gone."

"I mean, I've been used to it, it's there and a lot of people may be looking at it as if it will always be there. But there's things happening now that would make you think otherwise, a few big subdivisions and that kind of thing... I mean, I use it and I've always enjoyed the area...so it has always meant quite a lot to me."

The strong identification with the "backlands" as illustrated by these quotations, indicates the significance of natural spaces within the definition community values. The fact that each community has a distinct area defined informally, further establishes the value spaces can hold for community identity. Furthermore, the sharing of these spaces indicates people have the ability to recognize and value the attachment individuals have to their surrounding spaces. This relates to the illustration of community embeddedness in the previous chapter. Community values and boundaries are established through shared experiences and the spaces through which those experiences take place.

The embeddedness of Sambro is characterized by interconnected families, shared spaces, shared identity and shared lifestyles. The connections constantly reaffirm relationships that stimulate community vitality. Before the crisis, local businesses supported baseball teams, scholarships, local fairs and church suppers. There was a history of volunteering that originated from church groups and expanded into school boards and community councils. Adapting to the impacts of the fishery crisis however, has meant sacrificing many of the reciprocal transactions characteristic of Sambro. There has been a significant reduction in the number of volunteers and community events. This has a great deal to do with the threatened economy.

Many of the small businesses in Sambro are in some way connected to the fishery. The policies and proposals put forward by the Federal Department of Fisheries however, are aligned with large corporate industry interests which can effectively wipe out local fishing enterprises characteristic of the Sambro fish plants and inshore fishery operations. Despite the evidence that suggests small local business enterprises are more sustainable, large corporations are selling the idea that the fishing industry can only be viable through the implementation of rational economic policies. This is justified by looking at the "net economic benefits", rather than the long term sustainability of integrated community decision making. In fact, corporate industry blames the inefficiencies of the fishing industry on the social objectives of previous fisheries policy objectives.

> Many policies and programs of the 1970's and 1980's trace their origin to sustaining employment, providing a basis for securing income transfers and protecting the interests of communities. These actions are understandable in the social context of the fishery, but as governments know, such measures serve only to constrain technological innovation, operating efficiency and flexibility, and provide incentives for overcapitalization, economic waste and excessive fishing pressure. If we have learned no other lesson in the 1980's, surely it is that competitive fishing, employment maximization and economic viability are largely incompatible in the fisheries context (Fisheries Council of Canada 1994, p.13).

The government policies corresponding to rationalization objectives have initiated programs and strategies designed to reduce the numbers in the fishery and to distribute allocation uniformly throughout the industry. Two programs are of particular concern for Sambro: The Groundfish Adjustment Strategy(TAGS) and the proposed introduction of Individual Transferable Quotas (ITQs). Other recent policy proposals are of concern as well such as the cost recovery program which will charge user fees to fishermen. Most of these programs are imposed on fishermen and their families without negotiation nor consultation.

[20] The negative impacts of such poor decision making procedures have already been felt in Sambro. Individuals receiving the compensation package have not been participating in retraining programs yet will lose their money if they act as crew even for short periods. This has resulted in a low supply of crew members for boats that are still able to go fishing. Other problems have arisen due to inequitable distribution of funds. Reports back to the local community development association have indicated that people who baited trawl in the same fish plant are getting paid significantly different amounts of money. Furthermore, this discrepancy is often based on gender.

The impacts of government policy and regulations only serve to intensify the feelings of uncertainty within Sambro. The bias for rational economic decision making continues to thwart sustainable community resource management mechanisms. People continue to feel helpless and lost and the overall feeling of uncertainty percolates throughout the community.

One initiative that has helped alleviate the uncertainty to a degree, was the establishment of the District Five Community Development Association. This originated from a community meeting held to discuss the "future of the fishery with no fish". The local United Church Minister recognized the need for community action and posted a sign for a community meeting to discuss the fishery crisis. On December 9, 1992, close to 50 Sambro residents attended a meeting to talk about their future. The outcome was an elected community economic development committee with the responsibility of researching the

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[21] It is significant that government can impose such programs without the consultation of community organizations or fishermens' Associations. The government often sites the lack of organization or the lack of "one voice" as reasons for the lack of consultation, however when fishermen's Associations ask for policies or legislation that will make them stronger, the government resists. The recent request for mandatory dues legislation for fishing Associations has undergone much resistance within the Provincial Department of Fisheries

options for diversifying the local economy. One of the local fish plant owners was elected as chairperson and the remaining members were representative of fishermen, fishermens' wives, local business, the local school, youth groups, and community members at large. The group began regular bi-monthly meetings and soon incorporated themselves as The District Five Community Development Association. The evolution and experiences of the District Five Community Development Association illustrate the number of difficulties an organization has to overcome when barriers in communication enter the decision making process. The Association is attempting to address coastal zone management through an integrated approach to sustainable development, however differing values in the decision making process greatly restrict community based decision making and project implementation.

4.2 The District Five Community Development Association

The District Five Community Development Association was originally made up of residents from Sambro concerned about the crisis in the fishery. The chairperson, having attended many meetings in the fishing industry and wanting to avoid similar conflict, initiated a policy of consensus decision making. It was decided that everyone in attendance would have a turn to speak as they went around the circle. In general the group followed an agenda and went around the circle for each issue and had a vote of agreement at the end. The vote was only held when the group had already reached consensus. In the words of the chairperson:

"It makes no sense that we would go away with bad feelings. We have to wake up tomorrow and face each other anyway, so why not work it out while we're here and keep on being good neighbours."

Other rules of conduct agreed to by Association members were: membership was open to anyone who was living in District five, all those who attended meetings would have an opportunity to speak, any correspondence sent on behalf of the Association would be reviewed first by the Association members. These rules were agreed to in principle however, nothing was written down.

The initial meetings were attended by a government employee who was interested in the group and invited by a friend who lived in the community. His expertise was in the field of economic development and his advice was listened to with respect. Under his advice, the first task was to undertake a needs survey in order to determine what the employment status and level of capabilities were in the community. He was very supportive of the group and felt confident the government would immediately assist the Association. Upon this advice, a proposal outlining a needs and resources survey was written and sent to the Provincial Department of Economic Development. Follow-up phone conversations revealed that the department was undergoing reorganization and could not be of assistance for some time. It was advised however, that new government policy was going to require complete community representation and a strategiceconomic plan before funds could be distributed for a needs survey.

Given the conditions set by the N.S Department of Economic Development, the District Five Development Association hosted a community planning workshop to increase community participation and to generate a set of economic initiatives that the Association

could then use to establish a strategic economic plan. On March 5, 1993, a day long planning workshop was facilitated by an economic development "expert". Attendance was low however, and those who did attend were not from Sambro but from surrounding communities in District Five, as well as several "oberservers" from the United Church Presbytery. The Development Association was immediately concerned about poor community representation and attempted to cancel the meeting however, this was disputed by several of those attending. The meeting continued but the final goals for economic development were not representative of the interests of the fishing community. Instead, they represented the interests of a number of "outsiders". The list of community development goals were in order of priority: (1) Aquaculture (2) Eco-Tourism (3) Highway Development (4) Composting Station (5) Artisan Development.

Despite the mixed feelings about the planning workshop, Association members were optimistic that government assistance would arrive with the soon to be written strategic plan. An unexpected outcome of the planning workshop however, was the attendance of new members who were at the planning session. These people were not from Sambro nor were they very sympathetic to the fishery crisis. They were representatives of the artisan community and had difficulty with the Associations' process. One individual began to attend meetings regularly and was so insensitive to the other Association members that attendance began to drop off. This point marks the first example of the importance of shared value systems. The association up until that point, was operating largely on a trust system. Communication networks were well established between members and decisions were made rapidly with confidence. This efficiency was immediately severed upon the arrival of an

individual not sympathetic to the same value system. As a result, the Association experienced severe set backs and growing pains at the cost of several months work and wasted time. An Association member explained it this way:

> "He wasn't from here and he had ideas of his own that were not in the best interest of the community. He was so out for himself he couldn't even see who he was trampling on. What the worst thing was, was that he made some of our best people feel worthless and no good because he could talk and dress fancy. He has hurt us and our efforts to do some good for everybody."

The Association had to do extensive damage control to regain the confidence of the community as well as contact people from the government. Of particular concern was the shaky relationship between Sambro and the N.S. Department of Natural Resources, Parks and Recreation Division. The Association chose to focus on the development of Crystal Crescent beach, a nearby undeveloped provincial park, as an initial boost to the local economy. It was widely known however, that relations were historically poor with the Parks staff due to an incident of vandalism over a decade earlier. An attempt to maintain permanent washroom facilities at the beach was ruined by a local youth who set the facility on fire with dynamite. Since that time, the community had to bear the reputation of being incapable of maintaining park facilities. Communication with Parks planners indicated their continued concern. They requested full community representation and assurances that a beach park would be welcomed by the community. Once again the Association hosted a community meeting in September 1993, this time for the specific purpose of discussing the proposed beach park at Crystal Crescent beach and issuing a community questionnaire. Over 60 members of the Sambro community attended. People discussed various issues and concerns but the strong message was "do it right and we'll support you 100%."

The overwhelming support elevated the Associations' optimism and a meeting was held in the Fall of 1993, with Parks planners to discuss appropriate future action. Although the planners were interested in working with the community, they made it clear that Parks staff would be responsible for the design and construction of the facility. This was incongruent with the Association's vision to employ as many local people as possible. Furthermore it would be up to the Association to find close to one and a half million dollars to build the facility. It was also made clear that written permission would have to be attained by the Parks manager to officially initiate discussions about the park. Once again the Association was frustrated by the delays and complexities of government decision making. The fisheries crisis was providing both the need for employment and the opportunity for innovative solutions yet the government process was imposing protocall that would unnecessarily stymie a local development initiative. As explained in chapter one, the tendency for bureaucracy to fall into patterns of organizational inertia has severe consequences for community based solutions.

The tendency for bureaucracy to perpetuate an individualism bias was demonstrated further through the actions of the Halifax County regarding economic development. In the summer of 1994, the Western Halifax County Council was initiating community economic development through the formation of Regional Development Area structures. It was proposed that the Regional Development Area(RDA) would be divided into Local Area Development Associations(LADA) that would compete for government funding. Since the District Five Development Association was relatively new, they were not considered as one of the LADA's. Furthermore, this proposed economic structure was the result of the

Provincial Department of Economic Development reorganization and all applications for project funds now had to go through the LADA's and RDA's. The hope for a community needs survey was dwindling. In addition to this news, a possible project with another government department was stymied because all community development activity was to be frozen until the RDA was in place. Much time and energy was wasted by various association members who attempted to act as bridges between the Community Development Association and the RDA. The result was public participation burn-out and an overall feeling of frustration and helplessness.

On a more positive note, the District Five Community Development Association was called to participate at regular Coastal Community Network meetings.(see Chapter one) This helped to inform the Association on the latest fishery issues and concerns as well as issues pertaining to coastal zone management and economic development. Of particular concern was the announced TAGS program : The Groundfish Adjustment Strategy. The Federal government in an attempt to reduce the numbers in the fishery was providing funding for retraining and community green projects for people who wanted to get out of the fishery. Although there were a number of concerns regarding the administration of the program, it was apparent that many coastal communities were taking advantage of the opportunity to combine coastal zone management with economic development. Several coastal parks proposals were being initiated and implemented through TAGS funding.(pers. com. Chris Trider) Despite the progress made on the Crystal Crescent Park proposal however, the Provincial Parks Division was not responding to requests for action. The District Five Community Development Association saw another opportunity for sustainable development

and coordinated with the Department of Fisheries to design a mapping project for coastal zone data. Complications with the TAGS administration however, prevented the project from going.

By the Spring of 1994, the lack of hands-on activities was beginning to discourage the Association members. Furthermore, the Fisheries Council of Canada(FCC) released its vision for a privatized vertically integrated fishery that would further the uncertainty for small coastal communities dependent on the fishery.(Fisheries Council of Canada 1994)

The District Five Community Development Association responded by hosting a community information meeting which served two purposes: it made the community more aware of the severity of the fishery crisis and it made the community aware of how dependent they were on one another for fighting the government and large industry. It was at this meeting that a respected community leader stressed how important community ties were at this time. This was particulary important for a community quota proposal , the first ever for Nova Scotia, that Sambro fishermen recognize the need to stand by one another. The chairperson of the Association ended the meeting in this way:

"This is it everybody, either we stand together now or divided we fall."

The community quota proposal was designed by local fishermen and the two processing plant owners. Based on a community fishing history, trip limits and a hail-in system, the fishermen could maintain better control of their quota and increase the flexibility of fishing times throughout the month. The proposal was only accepted after long deliberation from the Federal Department of Fisheries and Oceans. It is believed the only

reason they passed it was because of the fishery crisis and the good relationship maintained between one senior official and one of the fish plant owners. The quota has only been in operation for two months. As of August 1995, there seems to be good participation with all Sambro fishermen following the rules and no quota overflow. In fact, fishermen are deliberately underfishing their quota to prove they can fish sustainably. One fisherman explained it this way:

> "We all know that DFO wants to see us fail, but we're going to prove them wrong. We want to save our families and we know what we have to do. We know DFO is dangling ITQ's over our heads. If this fishery goes ITQ's we're finished."

Meanwhile the development association is playing an active role in co-management workshops organized by the Coastal Community Network and keeping abreast of TAGS, and RDA initiatives. In fact, one of the Association members was recently hired as staff on the RDA board due to his experience with the District Five Community Development Association. The Association did finally get financial support for a needs survey and employed five people from the community for four months in the spring of 1995. A proposal for Crystal Crescent Beach has also been completed with a vision for full community ownership. The Association wants full management responsibility and control of the park. Furthermore, they envision the park as a year round facility. The proposal incorporates sustainable development criteria with particular sensitivity for the coastal landforms. Also important is the idea of re-constructing the original village of Cootes Cove that housed the first settlers of Sambro. It is important to the Association that community history and values be incorporated into the design.

Another recent Association initiative was the first Sambro Ocean's Day celebration

held in June 1995. Association members worked together with the local elementary school children, to clean up shoreline garbage around the community. Other activities included video footage of longlining and group artwork with a local painter. The day was completed with a family barbecue at Crystal Crescent beach. These activities were a learning and a sharing opportunity that further tightened the community commitment to take charge of their future.

The immediate goal of the Association is to get community feed back about the completed needs survey and the Park proposal. After which, work will begin on matching community needs with existing community resources. Progress is already being made on funding sources for the Park development.

4.3 Lessons Learned From Community Decision-Making

There is no question that differences in values and perceptions contribute to group conflict and poor decision making. The number of barriers the District Five Development Association has had to navigate around is indicative of the enormous number of agonies community groups have to contend with before sustainable community development can occur. Given the literature and cases presented thus far, the Sambro case study serves as an opportunity to explore six critical aspects of coastal zone and fishery management decision-making.

    (1)   The negative impacts of bureaucratic biases

    (2)   The significance of community boundary and the   delineation of territory

(3)   The importance of bounded solidarity for community esteem

(4)   The need for shared values for shared decision-making

(5)   The need for community decision making to affect government policy

(6)   Opportunities For Change: Women, Communication and   Re-embedded
        Values

I will focus on these six aspects with more detail and explanation.

The Negative Impacts of Bureaucratic Biases

There are many examples in the experiences of the District Five Development Association that can illuminate the dangers of government "expertise". The request for a "Strategic Action Plan" from the Department of Economic Development, with no further explanation, advice or assistance, was extremely difficult to understand. It seemed that the Association would have to hire an "expert" to complete a plan. This would stymie progress because the Association had no funds at that time. This same department then lost a copy of the submitted needs survey proposal for a period of 8 months with no explanation. Meanwhile other government officials tried to help by assuring the Association that money was coming. This was not only untrue but also prevented the Association from following up on the proposal.

Other examples of the individualism bias include the activities of the Halifax County Economic Development Committee. Their vision of community development was in keeping with industrial commissions and increased business development. Upon meeting

with the District Five Community Development Association, one representative of the committee told the Association "it was time they stopped looking for government money and became more self reliant". This same individual balked at consensus decision making. It is important to note that this individual greatly upset many of the Association members.

Also related to government individualism biases, was the adverse affects of The Groundfish Adjustment Strategy (TAGS). The unequal distribution of allowances and the accompanied confusion regarding community projects, contributed to a great deal of community anxiety. Furthermore the Association wasted time on project proposals and answering questions about a government program. Again, a misunderstanding of community dynamics greatly contributed to wasted money and confusion.

Bureaucratic bias and slow administration processes are also responsible for various delays and difficulties with the Crystal Crescent Park proposal. The hesitancy of government to allow for community based management is an enormous barrier for communities to overcome in their attempts to become self reliant and independent. This pattern of withholding power on behalf of bureaucracy is also evident from the hesitancy for approval of a community quota system and the lack of government assistance available for strengthening community Associations, fishermens' Associations or otherwise.

The Significance of Community Boundary and the Delineation of Territory

Sambro is located at the end of a road loop that extends East from Herring Cove through the communities of Ferguson's Cove, Bear Cove, Portuguese cove, Duncan's Cove,

Ketch Harbour, to Sambro and then turns West through Harrietsfield returning to Spryfield. The spatial pattern this creates is significant for the continued closeness of Sambro and its distinctiveness from surrounding communities. The fishery crisis affects mainly those living in Sambro and Ketch Harbour, however the Association felt for planning purposes that they should consider all of District Five as the community. District Five encompasses the communities mentioned above. As the Association began to call community meetings it became apparent that there was an underlying problem with attempting to speak for all of District Five. The Association wrote letters to other organizations within the district, hoping for greater representation from the area. People, although interested, responded with the claim that they were too busy with their own organizations. As an alternative, the Association members attempted to keep informed of the other groups by attending various meetings. This proved to be very time consuming.

The question of territory became evident when the Association called an information meeting regarding the Fisheries Council of Canada Vision document. Only those families immediately involved in the fishery in Sambro and Ketch harbour were in attendance. The values and concerns expressed by Sambronians are distinctly different from the surrounding communities. Although this is obvious in some ways, in other ways it raises an important issue for coastal zone management. If only the resource users feel connected to the resource, who is going to participate in community based coastal zone management when the fishing families have had to move due to vertical integration and resource privatization? This point was made further in the recently completed needs survey report. The communities not dependent of the fishery in District Five had significantly less to say about fishery issues

The immediate question is how do we make everyone living in coastal communities feel that coastal zone management is their problem too?

The question of territory and community boundaries remains a concern for the District Five Community Development Association. It is a constant worry that people of differing value systems for surrounding communities will try to scuttle the progress the Association has made thus far. It remains undecided whether or not the best approach is to try to meld the value systems in District Five over time, or to change the name and focus on Sambro only. Again this is a difficulty because some of the Association members presently live in surrounding communities. Territory is significant however, and plays a role in motivating interest and participation.

The Importance of Bounded Solidarity for Community Esteem

One of the most memorable signs of solidarity initiated by the Association, was the unanimous vote to stop the privatization of the fishery. A room filled with Sambronian fishing families determined not to allow ITQ's (Individual Transferable Quotas) come to their community, was an impressive feeling of unity. People expressed a sign of commitment to a way of small community living, business integrated with family and sustainable technology. What was also significant was the lasting effects this meeting had for the community quota proposal and the commitment of the Association to stand up for shared decision making and community control.

The esteem and confidence generated by the community meeting gave the

Development Association a much needed boost of morale. There are other small but significant incidences where the Association received community support. In its early stages, the Association held a lobster supper as a fundraiser. Due to inexperience and bad timing seasonally, the Association only broke even financially. Despite the lack of attendance however, several fishing families attended and paid high prices for a lobster dinner that they would not otherwise have purchased, but wanted to support the Association.

The Need For Shared Values For Shared Decision Making

The initial members of the Association were like minded and elected from the community. The decision for an open door membership policy was decided so that the group always functioned on the premise of fairness and openness. Initially this was fine, the shared values and mutual respect felt by group members contributed to dynamic and energized meetings. People frequently felt positive at the end of a meeting. This demonstrates once again the power of solidarity.

Once the meeting was attended by individuals from outside Sambro and of differing value systems, the conflict began. The difference in values were illustrated by differences in problem solving and a disrespect for various Association members. For example, the Association decided to work towards park development on Crystal Crescent beach. The next meeting, only two weeks later, the individual of different values, announced he had corresponded with Parks and set a meeting date. Furthermore he had organized a beach committee asking experts from the community to take part. When several Association

members expressed an interest on being on the committee, the aforesaid individual protested and stated that the Association was trying to control everything. Later that month at a meeting held in a committee members' home, the same individual referred to an Association member as "an illiterate who doesn't have the manners to remove his cap." This not only upset the other members but caused several to leave the Association. Conflicts between this individual and the Association reduced credibility between the Association and the Parks Division as well as with other community members. This spiralled into a feeling of mistrust that still haunts the Association.

The difficulty of shared values is exacerbated by the influx of new residents to District five and the tendency for people to range in their own territory. The community of Sambro perpetuates this somewhat by referring to others as "outsiders". The division in District Five is somewhat alleviated by the Sambro Elementary school. The school provides neutral ground where people have their school children in common.

The opportunities for "neutral " ground are important for reducing barriers between community territories and perceived differences in values. It is significant that the Association chair is very involved in minor hockey and talks to many people outside of Sambro through this venue. This is also true for baseball and soccer. Activities that take the focus from rigid community boundaries and incorporates shared values are important for melding together community members. Events such as Ocean's Day and other celebrations also provide this opportunity.(see Aronoff, 1993)

Local history can also play a role in broadening community boundaries as well as instilling a sense of pride for those that have been in the community for generations. This

is significant for the connections one maintains to one's place and the motivation one has to take care of it. The Association recognizes this value and views the restoration of Cootes Cove as a contribution to this ideal.

Shared values lead to fair and equitable decision making. If however, values are not explicit, it is crucial that they be made so in the decision making process. If the Association had written down their policies and articulated their approach they may have avoided the pain and confusion that occurred as a result of different values. This approach may be extended further to governments requesting signatures for intent or signed agreements of action. This forces all parties to commit to the same value system and understanding.

The Need For Community Decision-Making to Affect Government Policy

The most recent Federal Fisheries Policy objectives are closely aligned with the corporate industry vision for the future fishery. These approaches are neither sustainable nor fair to the people historically dependent on the fishery. Furthermore, these policies are not practical when considering community economic development. More families will be forced to move or live off the ever decreasing social net. This has enormous implications for coastal zone management. If people with a history in coastal communities are forced to leave or sell property, the problems of restricted public access to coastal property, the construction of tourist facilities on dunes, the lack of public participation will all increase because the resource users no will longer live beside the resource. The invested interest will

be lost.

When a community such as Sambro designs a successful alternative to the privatized fishery model, there should be an avenue for this to affect policy assumptions. There has to be greater power in the decision making process, for communities to bargain with. Or alternatively, communities have to recognize the power they already have.

Decisions being made by communities have traditionally worked, as the case studies in this paper have illustrated. The control mechanisms become undermined when unsupported by legislation. It is important that community decisions are supported legally. If the legislation does not exist then alternatives should be found to ensure that policies reflect community needs. In order for this to occur, communities will have to develop highly credible decision making systems that are both fair and legitimate. This may require a formalization of procedures however, it should be done in such a way that community members are not isolated from the process but a vital part of it.

Opportunities for Change: Women, Communication and Re-embedded Values

The traditional divisions of labour within the Sambro fishing families have changed significantly with the fisheries crisis. More women are employed outside of the community than ever before, many of whom have upgraded their education and moved altogether from the community. It is difficult to conclude whether or not the crisis is responsible for the out-migration of women, however suffice to say that many fishermen's wives are advancing their education while several fishermen remain without a high school certificate. Education

level is often related to self esteem and self confidence which in turn affects one's ability to participate in group meetings and associations. It is evident in Sambro that women comprise the majority of the volunteer groups and community Associations. This rate of participation is often because women have a higher education level and greater self confidence. It is also attributed to the reality that many fishermen are away for long periods of time and can not commit themselves to regular community meetings.

With the added pressures of the crisis and economic uncertainty however, many women have returned to work or have recently entered the work force. This has significantly reduced the availability of volunteers. Despite this reality however, government "public participation" initiatives continue to demand enormous amounts of volunteer time. This furthers the argument that government management strategies are out of touch with the realities of coastal communities. Roles are changing.

The role of women within Sambro has traditionally been the backbone for sustaining community values and family values. At one time this was re-enforced through the church, via church suppers, local church groups and auxiliaries as well as regular church attendance. Values and priorities have shifted somewhat however, and the church is no longer the focal point for the community. Nevertheless, the informal networks and communication patterns known to the women of Sambro still work to maintain many of the information systems that re-enforce community norms and standards. With increased levels of education, more modern "world views" of women's rights, and traditional skills for networking and transferring information, women are capable of contributing significantly to the process of sustainable decision making.

Good information exchanges and well established communication networks are fundamental for community survival. One local woman who has recently upgraded her computer skills, has taken over the local newspaper. Her knowledge of the community history, her family connections and reputation all contribute to the success of the paper. She knows what people want to read, she is aware of current issues and concerns and as well, she is friends with many of the local businesses who advertise in her paper. This is an example of a woman who is using her embedded ties within the community to gather information and apply her own education and skills in such a way as to re-distribute the information so that people are better informed and able to communicate about current community issues and events.

The paper is also an avenue to re-embed old community values via history and folklore. Stories about the old dory races or the values fishermen had in the "old days" have resurrected reminders of close community ties and the importance of family. Other values maintained by the editor are made explicit through editorials regarding environmental issues, with particular reference to coastal zone management. As a member of the District Five Community Development Association, many of the current issues regarding resource management and economic development discussed in Association meetings are turned into key newspaper articles. In this way, communication loops and information exchanges are initiated.

Increasing communication linkages is necessary for re-embedding community relationships that are not otherwise included within the tight-knit Sambronian socialization patterns. The stories and articles written in the local newspaper provide insights for the

broader community of District Five. Articulating community values through historical

vignettes and articles on environmental issues allows for a greater understanding of the

values represented by the community. Furthermore, the paper acts as an avenue for response

and community reaction.

The opportunities for change are not restricted to women, however there is a real

need for community leadership and action. It appears that the women in Sambro have an

advantage in their leadership capabilities given their history of group participation and their

increased levels of education. These qualities contribute to good communication skills

which can only enhance the established networking system amongst the Sambro women.

4.4 Conclusion

This case study demonstrates the complexity of community based management and

public participation. The value systems developed throughout communities are indicative

of the "world views" that people bring to the decision making process. These value systems

change depending on many variables. The important and crucial point for coastal resource

management is that ways are found to bring as many people as possible to the common value

system that recognizes the importance of coastal communities and their dependence on a

healthy coastal ecosystem for survival. This value can most be revered by those who live

in coastal communities. This is not just fisher families but everyone. People have to feel,

see and experience their own connection to the coastal environment before they will work to protect it. This is the challenge for coastal zone management. Opportunities for sustainable decision making exist within the established networks of communication patterns characteristic of embedded communities. It appears that women may be a focal point for improved community leadership and participation. It is essential to also recognize however, that economic crisis reduces the numbers of available participants in many cases. This demonstrates the importance of knowing and understanding community decision making patterns. If proposals for coastal zone management and fisheries management ignore the details such as volunteer availability, shared decision making will never progress.

This case study demonstrates how shared values work to facilitate decision making and inversely, differing values lead to mistrust and communication barriers. Communication networks are essential for building trust and reducing barriers in the decision-making process. Additionally, community boundaries are defined more rigidly when people feel threatened or mistrusted. It is typical that government decision-making processes only work to perpetuate mistrust and thereby elevate the need for communities to define their own boundaries. This vicious cycle contributes to an increase in mistrust and therefore an increase in communication barriers. Integrated coastal zone management that is implemented by coastal communities will have to establish good communication linkages that work to reduce barriers and increase trust between community members and government representatives. For this to occur however, government representatives will have to become more aligned with value rational decision making and communities will have to be nurtured in order to re-embed sustainable values. Until barriers and boundaries

are reduced, natural resources will continue to be overexploited in the interests of corporate profit and hierarchial decision making, both of which have proven to be environmentally and socially unsustainable.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

The main thrust of this thesis is to argue for the need for coastal community based resource management. While government has been developing "action" oriented programs such as ACAP, they have not succeeded in bringing the resource users - the people dependent on the ocean for a livelihood- to the decision-making process. This is not surprising given the underlying values bureaucracy uses to build policy. Policies designed for instrumental rational decision making are better aligned with large corporate industry agendas than with small scale sustainable community management initiatives.

The political process that accompanies decision making in government contributes even further confusion to policy agendas, which we have only just touched on briefly in chapter one. The point to be made however, is that community based management is our

best opportunity for sustainable resource decision making. The barriers in communication between government agencies and the differing values between bureaucrats and people in coastal communities such as Sambro, perpetuate mistrust.

The increase in mistrust is directly related to an increase in boundary setting as different groups feel threatened. Government culture is such that it is continuously having to justify its actions. We identified common bureaucratic behaviours in chapter one and concluded that government agencies are defensive of their actions in order to be perceived as legitimate. This process blocks clear and honest communication. Bureaucrats are pre-occupied with protecting their own cultural identity. The political process prevents government from becoming more aligned with community values because of the political risk of losing favour with powerful corporate industry representatives.

As we have seen in chapter three, culture is symbolized and defined by boundaries. Government agencies, just like any cultural group, define their boundaries in terms of legislative jurisdictions, laws, normative behaviour and underlying values. Government culture is different than community culture however, in two fundamental ways. Bureaucracy defines its boundaries explicitly through legislation, policies, written rules and regulations. This rigid and explicit definition of boundaries is related to the underlying values of instrumental rational decision making. As we outlined in chapter two, the "tragedy of the commons" theory which depicts these values, assumes humans can not be trusted. The increase in mistrust perpetuates the perceived need for rigid boundary setting.

Highly socialized communities as we illustrated in chapters three and four, define boundaries less explicitly. Boundaries are symbolized through experiences and shared

community living patterns. The boundaries are protected by their very invisibility. If one is not part of the communication network within the community, one is outside of the local information exchange and therefore not able to understand the local ways of doing things. Thus the term "outsider". The boundaries of highly socialized communities are understood internally or implicitly rather than explicitly. This is related directly to value rational decision making which is founded on trust and respect for one's social and ecological surroundings As trust increases, the barriers for communications decrease, thus networks are complex and integrated throughout the community.

As we have seen however in chapter four, the invisible boundaries of embedded communities contribute to their vulnerability. Implicit values and decision making based on trust is highly susceptible to exploitation. Although communication patterns are clear when individuals share the same values, when differing values are imposed upon community based decision-making processes, it is difficult to defend the invisible community boundaries. This explains the vulnerability of community based fishery management. Without legal enforcement or formalized agreements, traditional informal rules and regulations are dismissed or over ruled by rigid government boundaries.

This is further illustrated in the experiences of the District Five Development Association. The initial decision making process was rapid, efficient and effective because all those in the association shared the same community minded values. The attendance of individuals with different priorities in their values and an insensitivity to community boundaries created communication barriers, mistrust and damaged the over all decision making process.

The significance of these findings is the demonstration that community based management is capable of being more sustainable than government management, if value rational decision-making is strong enough to maintain instrumental decision-making within the boundaries of the community interest. As we have demonstrated in chapter three, embedded communities still maintain essential parts of the value rational decision-making framework. As we have also seen however, government imposed decision-making structures work to destroy and dismantle value rational decision-making because bureaucracy is pre-programmed with instrumental rational values based on mistrust. This alignment is also congruent with capitalist values inherent to many large corporate sectors. For sustainable coastal zone management, government alignment has to be reversed.

For shared decision-making and truly sustainable coastal zone management to occur, government decision-making has to come into alignment with value rational decision-making. This requires a fundamental shift in the underlying values of bureaucracy. The myth of the "tragedy of the commons" must be exposed or disposed of, community action has to build and grow in order to influence political sensitivities.

The recent trend towards "co-management" and "partnerships" may be an opportunity for communities to formalize value rational decision-making. New legislation and government policy recommendations are advocating resource management implementation be done by way of integrated management plans through cooperative agreements between "interested persons and bodies with other ministers, boards and agencies of the government

of Canada".[21]

Co-management agreements are contracts signed by government agencies and organizations that define roles and responsibilities for resource management implementation. Experiences with co-management have shown that fair and legitimate decision making is fundamental to the success of co-management initiatives (Barrett and Okudaira 1995, Berkes 1986, Jentoft 1989, McCay 1980).

Roles and responsibilities have to be defined explicitly, with resource users being designers of the implementation strategy. Unless all resource users respect the decision making process, management mechanisms will be ineffective. Co-management is one opportunity for resurrecting traditional community management strategies and formalizing the once invisible community boundaries.

The definition of territories, the understood rules of conduct and respect for the resource and the patterns of communication necessary to enforce community based management can be formalized by signed agreements. This is currently being demonstrated in the Sambro community quota system outlined in chapter four.

Co-management, although an opportunity for fair decision making, is not a panacea for community based management. For it to be successful, there has to be strong organizations or associations that have accumulated decision making power within the government/political framework. Without the leverage of decision making power, government will not be easily convinced to realign its underlying values. Collective action

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"The most recent coastal zone management legislation, the Ocean's Act, is in its firs reading stages in the House of Commons Bill C-98 outlines management mechanisms which use contracts and inter-agency agreements to implement integrated management plans.

and community re-building has to grow simultaneously with co-management processes. The broader community has to see the importance for community based management and be prepared to support it. What has to occur is a broad based demonstration of the belief in value rational decision making. For communities to achieve this, community values have to be made more explicit. Community boundaries have to be made visible and trust has to be elevated by increasing communication and socialization patterns. In this way, barriers can be removed, people can better recognize their shared values and thus community support, esteem and respect can grow. This is the climate that builds solidarity which is a significant tool for influencing political decision making structures.

There are several approaches that can be used to increase community solidarity. What is crucial however, is that values that unite individuals are focused on rather than those that alienate them. During a community development workshop in Sambro, people articulated many shared values that were inherent to their community such as the ocean, the wilderness, caring people, extended families and good schools. These values represent the elements that communities can re-embed, celebrate and promote through any mechanism available that will get people talking, listening, learning and sharing. Collective celebration has proven to renew concepts of identity and build on existing social relationships and community organizations(Aranoff 1993).

There is an opportunity for women in their capacity for networking and creating communication linkages and their inherent connection to family values to guide their communities and take a leadership role. Recent coastal community based organizations such as the women's group Fish Net, are against the continued alignment of government

policy with unsustainable corporate industry. One Fish Net member expressed it this way:

> "I see us helping our husbands fight for their survival in the fishery, and I see us fighting for the survival of our families and communities."(The Sou Wester, September 1, 1995)

The re-building of community and the creation of strong community organizations requires shared values. Sustainable decision-making necessitates value rational decision-making that maintains the broader community interests throughout the decision-making process. Nonetheless, instrumental rational decision-making is also necessary for individuals to meet their needs. In communities, these values are co-existent yet prioritized so as to maintain trust and respect within the community.

Although perfect communities do not exist, this paper argues that community based coastal zone management is the best opportunity we have for sustainable resource management. For this to take place however, several obstacles must be overcome.

It is important for coastal communities to receive support during this time of crisis rather than increased government imposed regulations which only contribute to community dismantlement. Government imposed decision-making frameworks and structures are not aligned with the more intricate and understated community means of decision-making. In answer to the question, posed in the introduction, what a sustainable decision-making framework for coastal zone management looks like: it looks like a thriving coastal community with everyone working and living locally. It looks like a community where people are proud and appreciative of their 'place' and maintain strong, fair decision making processes through an organization that symbolizes fairness and legitimacy. It looks like a community that has prioritized its values. Economic transactions are embedded within the

broader sustainable community values.

BIBLIOGRAPHY

Atlantic Coastal Action Program (ACAP) Vol.I Sharing the Challenge: A Guide For Community Based Environmental Planning, (Environment Canada, 1992)

Vol.II Sharing the Challenge: Community Environmental Profile: A Work Book For Use In ACAP Project Areas.(Environment Canada, 1992)

Acheson, James M. "Preface" Social and Cultural Aspects of the New England Foundation. University of Rhode Island, University of Maine Study of Social and Cultural aspects of Fisheries managment in New England Under Extended Jurisdiction.(University of Rhode Island,1980) pp. iii-xii.

Acheson, James M., "Anthroplogy of Fishing", Annual Review of Anthropology 10, 275 -316, 1981.

Acheson, James M., "The Lobster Fiefs Revisited: Economic and Ecological Effects of Territoriality in maine Lobster Fishing, " in B.J McCay and J.M Acheson (eds.), The Question of The Commons. (Tucson: University of Arizona Press) pp.37-65, 1987.

Angel, John ," Who Should Manage the Fishery" presentation to the Fisheries and Coastal Seminar Series March, 1994.

Aranoff, Marilyn "Collective Celebration as a Vehicle for Local Economic Development: A Michigan Case." Human Organization 52,4 p. 368-379, 1993.

Bannister, Ralph K., "Orthodoxy and the Theory of Fishery Managment: The Policy and Practice of Fishery Management Theory Past and Present." Masters Thesis (Saint Mary's University, 1989).

Barrett, Gene and Tadashi Okudaira, "The Limits of Fishery Co-operatives? Community Development and Rural Depopulation in Hokkaido Japan." Economic And Industrial Democracy, 16,2:201-32,1995.

Beanlands, G.E., "Coastal Problems In Canada: A Case Study Approach" Paper presented at the Shore Management Symposium Sponsored by the Canadian Council of Resource and Environmental Ministers.(Victoria B.C.,1978.)

Benello, George C., "Economic Behaviour and Self Management: Some Governing Principles" in George Benello, Robert Swann, Shan Turnball, Building Sustainable Communities, (New York: Boot Strap Press, 1989.)

Berger, P.et al, Homeless Mind : Modernisation and Consciousness, (New York: Random House, 1973.)

Berkes, Fikret, "Local Level Management and the Commons Problem" Marine Policy 10, 3:215-229, 1986.

Berkes, Fikret, "Common Property Resource Management and Cree Indian Fisheries in SubArtic Canada." in B.J McCay and James M. Acheson, The Question of The Commons. (Tucson: University of Arizona Press, 1987.)

Bernstein, Brock B. , Bruce E. Thompson and Robert W. Smith, "A Combined Science Management Framework for Developing Regional Monitoring Objectives" Coastal Management 21:185-195, 1993.

Burrill, G. and Ian McKay, People, Resources and Power: Critical Perspectives on Underdevelopment and Primary Industries in the Atlantic Region. (Halifax: Gorsebrook Research Institute, 1987.)

Cashin, Richard, Charting A New Course: Towards The Fishery of The Future. Report of the Task Force on incomes and Adjustments in the Atlantic Fishery. (Ottawa: Fisheries and Oceans Communications Directorate November ,1993.)

Christiansen - Ruffman, Linda and Barry Stuart, "Actors and Processes in Citizen Participation: Negative Aspects of Reliance on Professionals"paper presented to the annual meeting of the Canadian Sociology Anthropology Association May,1981.

Cohen, A. P., The Symbolic Construction of Community,(London: Routledge,1985.)

Cohen, A.P.,"The Definition of Public Identity: Managing Marginality in Outport Newfoundland Following confederation" Sociological Review, 3(1),p.93-119, 1975.

Coastal Zone Canada Association, Coastal Zone Canada '94: Cooperation in the Coastal Zone : Conference Proceedings (Halifax: Coastal Zone Canada Association, Volume 2)

Coleman, James S .Social Capital in the Creation of Human Capital" American Journal of Sociology. 94: s95-s120, 1988.

Dale, Norman, Assessment of the Need for Coastal Zone   Management for Nova Scotia, (Deputy Ministers Committee on Land Use Policy, 1979.)

Daly, Herman "Sustainable Development: From Concept and theory Towards Operational Principles" in Population and Development Review,(Hoover Institution Conference Proceedings, 1989.)

Davis, Anthony "Property Rights and Access Management in the   Small Boat Fishery: A Case study From SouthWest Nova   Scotia" in Arthur Hanson and Cynthia Lamson (eds) Atlantic Fisheries and Coastal Communities Decision Making Case Studies. Dalhousie Ocean Studies Program   1984.

Department of Fisheries and Oceans, Atlantic Licensing   Policy Review, Consultation Document, (Minister of Supply and Services Canada, May 1995.)

Elster,Jon, Solomon Judgements: Studies in the Limitations of Rationality, (Cambridge University Press, 1990.

Environment and Economic Committee on Sustainable Coastal zone Management, Working Paper, (Provincial Department of Environment, 1992)

Environment Canada, Atlantic Unit, Water Management Service, Coastal Zone, Proceedings of a Seminar held at Bedford Institute of Oceanography, Dartmouth, N.S. (Ottawa: Environment Canada 1972)

Feeny, David and Fikret Berkes, Bonnie J. McCay and James M.   Acheson, "The Tragedy of the Commons: Twenty Two Years Later", Human Ecology 18, 1: 1990.

Fisheries Council of Canada, Building A Fishery That Works: A Vision for the Atlantic Fisheries,(Ottawa 1994.)

Flood, Sharon , Chris Cocklin and kevin Parnell, "Coastal   Resource Management Conflicts and Community Action at   Mangawhai, New Zealand" Coastal Management 21,2, p.91-111: 1992.

Foresta, Ronald A., "The Administrative Face of National and Historic Preservation" Applied Geography 6, pp.309-324: 1986.

Gamble, D.B. and J.C. Day, "Coastal Zone Management in British Columbia" in Coastal Management 18, pp110-141: 1990.

Gherardi, Silvia and Attilio Maserio, "Solidarity as a Networking Skill and a Trust Relation: Its Implications for a Cooperative Development" Economic and Industrial Democracy 2, 4, 553-574; 1990.

Giddens, Anthony, Capitalism and Modern Social Theory: An Analysis of the Writings of Marx, Durkheim and Max Weber,(Cambridge University Press, 1971)

Godschalk, David R. "Implementing Coastal Zone Managment   1972-1990" Coastal Mangement 20,pp.93-116: 1992.

Granovetter, Mark "Economic Action and Social structure: the   Problem of Embeddedness" American Journal of Sociology, .91, 3, 9:481-510,1985.

Grube, G.M.A.(trans.) Plato's Republic (Hackett Publishing co. Indianapolis, 1974)

Habermas, J "Towards A Communication Concept of Rational   Collective Will Formation" Ratio Juris 2(2):140-152, 1989.

Hale, Syvia M., Controversies in Sociology: A Canadian   Introduction, (Toronto:Copp Clark Pitman Ltd. ,1990.)

Hardin, G , "The Tragedy of the Commons". Science 162:1243-   1248, 1968.

Harrison, Peter and Michael Parkes, "Coastal Zone Management   in Canada", (Coastal zone Management Journal Vol. II   No.1/2, 1983)

Hildebrande, L.P., Canada's Experience With Coastal Zone Management,(Halifax Oceans' Institute of Canada, 1989.)

Hobbes, Thomas ed. Michael Oakeshott, Leviathan, or The Matter Forme and Power of A CommonWealth Ecclesiastical and Civil,(London MacMillan Publishing 1962.)

Holton, Robert J., Economy and Society, (London and New York: Routledge 1992.)

Innovation Associates, Systems Thinking: A language for   Learning and Action - Particpant Manual, (Framingham Massechussetts 1993.)

Institute of Public Affairs, Dalhousie University, Shoreland: Its use, Ownership, Access and Management, Proceedings of a seminar held at Amherst, N.S. (Halifax: Institute of Public Affairs, 1972).

Jentoft, Svein, "fishermen's Co-Management. Delegating Government responsibility to fishermens' Organisations", Marine Policy, April:137-154:1989.

Jentoft, Svein and Anthony Davis, "Self Sacrifice: An Investigation of Small Boat Fisher Individualism and Its implications For Producer Cooperatives" Human Organization vol.52 no. 4 1993.

Johnston, D.M., Paul Pross and I. Mc Dougall, Coastal Zone: Framework For Management in Atlantic Canada,(Halifax:Institute for Public Affairs. Dalhousie University 1975.)

Kearney, John F., "The Transformation of the Bay of Fundy Herring Fisheries 1976-1978: An Experiment in Fisherman- Government Co-Management." in Arthur Hanson and Cynthia Lamson (eds)Atlantic Fisheries and Coastal Communities Decision Making Case Studies. (Dalhousie Ocean Studies Program 1984.)

Kinsey, D.N., "Lessons From the New jersey Coastal Managment Program" Journal of the American Planning Association.51, 3:330-336, 1985.

Lamson, Cynthia and Arthur Hanson,eds. Atlantic Fisheries and Coastal Communities: Fisheries Decision Making Case Studies , (Halifax: Dalhousie university Ocean Studies programme 1984.)

Lewis, Mike, "Community Economic Development: Lessons From the Trenches, Directions For the Future." paper submitted for the International Institute for Sustainable Development, Employment and Sustainable Development meeting, (Winnipeg Canada, June 1994.)

Lees, J.R and M.Mayo, Community Action for Change, (London: Routledge and Kegan 1984)

Lowry K.et.al. Federal State Coordination in Coastal Management: A Study of the Federal Consistency Provisions of the CZMA. Unpublished sea grant study (Honolulu:University of Hawaii,1988.)

Manuel, Patricia Marie, " A Landscape Approach to the Interpretation, Evaluation and Management of Wetlands" unpublished,Phd. thesis,(Dalhousie University, School for Resources and Environmental Studies, 1992.)

Mark, Sandra, " West End Community Venture: An urban Community Organization on
the Path to Sustainability" paper submitted for the International
Institute for Sustainable Development, Employment and Sustainable
Development meeting, (Winnipeg Canada, June 1994.)

Maslow, A. H., Motivations and Personality, (New York: Harper and Row 1954.)

McCay, Bonnie, "Systems Ecology, People Ecology and the Anthropology of Fishing
Communities" Human Ecology ,6 ,4: 1978.

McCay, Bonnie, "A Fishermen's Co-operative Limited: Indigenous Resource
Management in a Complex Society" ,Anthropological Quarterly, .53, pp.29-38:
1980.

McCay, Bonnie and James Acheson (eds) The Question of the Commons: The
Culture and Ecology of Communal Resources. (Tucson:The University of
Arizona Press, 1987.)

Mill, John Stuart,(ed. Oskar Piest),"Utilitarianism" 1861,(Bobbs-Merrill Educational
Publishing 1957.)

Miller, Byron, "Collective Action and Rational Choice: Place, Community and the
Limits to Individual Self-Interest" Economic Geography, 1,68: 1992.

Nisbet, Robert A., The Sociological Tradition,(New York: Basic Books 1966.)

Nova Scotia Round Table on Environment and Economy, Sustainable Development
Strategy for Nova Scotia., (Halifax, 1992.)

Nozick, Marcia, No Place like Home: Building Sustainable Communities,(Ottawa:
Canadian Council on Social Development, 1992.)

Owens, D.W. "Coastal Managment in North Carolina: Building A Regional Consensus"
Journal of the American Planning Association51(3):322-329, 1985.

Pardy, William, "Building the Base: an Excercise in Economic Development " in
Commerce, 3, 1, March 1992.

Peck, Scott, The Different Drum: Community and Peace Making, (New York:
Touchstone, 1987.)

Pocius, Gerald L., A Place to Belong: Community Order and Everday Space in Calvert
Newfoundland,(Montreal and Kingston: McGill-Queens Press 1991.)

Polanyi, Karl, The Great Transformation,(New York:Rinehart,   1944.)

Popkin, Samuel L., The Rational Peasant, (Berkeley: University of California Press
    1979.)

Portes, Alejandro and Julia Sensenbrenner, " Embeddedness and   Immigration: Notes
    on the Social Determinants of Economic Action" American Journal of
    Sociology,98,6,pp.320-350, May 1993.

Roberts, Wayne, John Bacher, and Brian Nelson, Get A Life: A Green Cure For Canada's
    Economic Blues, (Toronto: Get A Life Publishing House, 1993.)

Rousseau, Jean Jacques,(ed. Lester G. Crocker), The Social Contract and Discourse on
    the Origin of Inequality, (Washington square Press 1967.)

Sanderson, S.K. "The State of the Evolution of Capitalism " Macro Sociology 2nd
    ed. (New York:Harper Collins 1991.)

Sabatier, P.A. "Top Down and Bottom Up Approaches to   Implementation Research: A
    Critical Analysis and Suggested Synthesis" Journal of Public Policy 6(1):21-48,
    1986.

Schumacher, E.F., Small is Beautiful: A Study of Economics as if People Mattered,
    (Blond and Briggs: London 1973)

Simonis, Udo Ernst, Beyond Growth:Elements of Sustainable Development,(Berlin:
    Sigma Rainer Bohn Verlag, 1990.)

Sorenson, J.C. State-Local Collaborative Planning: A Growing Trend in Coastal
    Management,(Washington D.C. Office of   Coastal Zone Management 1978.)

South West Nova Fixed Gear Association, "Let's Fis it", (South West nova Fixed Gear,
    March 1995)

Taylor, Lawrence, " The River would Run Red With Blood : Community and Common
    Property in an Irish fishing settlement" ,in B.J McCay and J.M Acheson (eds.),
    The Question of The Commons. (Tucson: University of Arizona Press) pp.37-65,
    1987.

Tonnies, F., (1887) Community and Society,(New York:Harper   and Row, 1957.)

Van Dusen, Katrina and Anne C. Johnson-Hayden, The Gulf of   Maine, Sustaining
    Our Common Heritage,(Maine State Planning Office 1989.)

Walters, Carl, "Uncertainty, Resource Exploitation, and   Conservation " Science 260, pp.17-36 April, 1990.

Weber, Max, Economy and Society, (New york, 1968.)