

# ***Between the Land and the Sea***

***The Social and Economic Importance of Wharves and Harbours  
in Nova Scotia***

## **Coastal Communities Network**

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January 2004

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# Acknowledgements

Special thanks to our funders, ACOA, Rural Secretariat and the Department of Fisheries and Oceans, who not only contributed financially but were also a very active part of the Advisory Committee.

Special thanks to our Advisory Council members who spent many hours going over maps, charts and data. Without their input and guidance, it would have been impossible to complete this study. Thank you!

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# REPORT SUMMARY AND CONCLUSIONS

## Project Objectives & Activities

The objectives of this project as set out by the Nova Scotia Coastal Communities Network (CCN) were:

- To assess the role that marine harbours and infrastructure plays in the economic health of coastal Nova Scotia.
- To demonstrate the extent to which the stability of coastal communities depends on the economic activity generated by harbours and wharves.
- To determine if wharf rationalization initiatives are justified in terms of the net savings to government balanced against the economic and social costs to communities that may be incurred.

The ultimate purpose of this project is to generate information, analytical tools and strategic approaches to assist the Coastal Communities Network in its work with communities and governments to make policy decisions that are in the best interest of the communities.

The project encompassed six elements:

1. Analysis of policy and budgetary trends in the Department of Fisheries and Oceans – Small Craft Harbours (DFO-SCH).
2. Identification and description of harbour dependent communities and the generation of detailed socio-economic information on a community-by-community basis.
3. Development of a database with graphic presentation tools to make the socio-economic information available to coastal communities and to facilitate the ongoing analysis and communication of important socio-economic trends.
4. A provincial profile or situational analysis of the coastal regions of Nova Scotia to describe trends for population, employment, industrial production and other factors and to assess the contributions of harbour dependent communities to the economic and social development of the province.

5. Conduct of case studies covering a representative set of harbour dependent communities to assess the impacts of DFO-SCH policy and budgetary changes, including the ongoing devolution of responsibilities to harbour users.
6. Facilitation of a stakeholder workshop to review the research outcomes and to develop an action plan to use the findings and tools generated by the project to pursue the goals and objectives of the CCN.

The main findings of the research and consultation components of the project are presented in this document in four sub-reports:

1. Description of DFO-SCH policies and budgetary trends and analysis of the implication for Nova Scotia coastal communities;
2. Summary of findings from harbour case studies;
3. Analysis of demographic and economic trends in coastal communities;
4. Report from the Strategic Planning Workshop.

## Summary of Policy Analysis

A comprehensive review of DFO-SCH policy and program documents makes clear that several years of budget restraint have resulted in a situation where many wharves are not adequately maintained. This in turn translates into unacceptable levels of risk for users and their vessels.

In response to this situation the SCH Branch has pursued a strategy of transferring ownership of recreational harbours and low activity fishing harbours to community-based groups, reducing their own inventory to those harbours that are essential to the commercial fishery, and expanding private sector involvement in the management of core harbours. The goal is to keep core fishing harbours open and operating at an acceptable standard within available resources.

The harbour authorities system was introduced in 1987 to involve fish harvesters directly in harbour management. Under the system SCH retains ownership of core fishing harbours and leases them to representative user groups. The non-profit harbour authorities then take on most responsibilities for the daily operations and

maintenance of the harbour. If a community shows no interest, and the facilities are deemed to be unsafe, the harbour is slated for demolition or total divestiture.

The original vision was for harbour authorities to take over all operating costs by 2001 but SCH has since had to revise this objective. Many authorities have not become financially self-sufficient or are still not fully effective on an organizational level. DFO-SCH has found that the authorities have widely varying abilities to generate revenues depending on the extent of industry involvement and the value of local fisheries. Most of the authorities, at best, cover operating costs and have no money for capital expenditures. In part because they do not own the facilities and cannot use them as collateral they have limited access to other sources of capital. In some harbours there are problems with volunteer burnout and conflicts among user groups.

The current SCH 2002 to 2005 business plan calls for inventory reductions of up to 50% of all harbours and client partnerships for 100% of core harbours. Greater efforts will be made to improve the management abilities and financial independence of the harbour authorities. One specific problem is that it costs money to close down inactive harbours and DFO-SCH currently lacks funds for further divestitures.

After substantial cuts in the mid-1990s, the 2002/03 SCH spending level at \$96.8 million is the highest since the early 1990s. However, engineering experts employed by the Branch have stated that an additional \$50 million is needed annually to maintain the integrity of core harbours. DFO-SCH policy documents clearly recognize that the current and projected levels of spending on maintenance and major capital renewal are not adequate to maintain the asset base. Currently, 21% of the most active harbours register substandard performance ratings according to SCH criteria.

The experts indicate that the level of ongoing reinvestment needed to meet ongoing replacement and maintenance costs for marine structures should normally be set at between 4.0% and 4.2% of total asset replacement value. The following table shows that SCH expenditure rates in 1999 were well below that standard both nationally and in Nova Scotia. (The reinvestment rates will have improved somewhat since that year.)



<b>REINVESTMENT RATES - 1999</b>			
<b>Area</b>	<b>Replacement Value of Current Harbour Assets - 1999</b>	<b>Expenditures on Repairs, Maintenance, and Recapitalization - 1999</b>	<b>Reinvestment Rate - 1999</b>
National	\$2.1 billion	\$40.9 million	1.95%
Nova Scotia	\$572.6 million	\$7.8 million	1.36%

The bottom line message is that spending levels are not adequate now to maintain existing core harbours at safe and efficient working levels, and this problem will grow as facilities age and deteriorate through use. This situation can only be resolved through the effective pursuit of one or more of the following four options:

1. Significant growth in the DFO-SCH budget;
2. Closure or complete divestiture from government of more harbours to free up resources to support a shrinking number of core fishing harbours;
3. Substantial increases in user fees;
4. Access to new revenue sources beyond the current user fees and DFO-SCH budget.

## Summary of Harbour Case Studies

Case studies in eight representative communities around the province were used to examine the current condition of wharves and the experience with community-based management of harbours. The purpose of the case studies was not to advance the interests of particular communities but rather to draw out insights that might have relevance for most harbours. One specific goal was to generate evidence of the non-economic benefits generated by wharves in terms of the social and cultural life of coastal communities.

The case studies confirmed the seriousness of the problems identified through the analysis of DFO-SCH policies and programs. While authorities have been successful in maintaining their wharves and covering operating costs there is widespread dissatisfaction with the level of funding available for capital

improvements or expansion and with the delays and red tape involved in accessing new investment dollars.

In the communities studied most wharves and harbour facilities were seen to be well advanced in their useful lifetimes and in many cases substantial repairs were currently needed just to maintain them in safe working order. Almost all the harbour authority spokespersons made clear that their harbours needed new resources to expand wharves or build new ones to accommodate larger numbers of users, increased vessel sizes in the fishing industry and a more diverse range of commercial and community uses.

The case studies confirmed the seriousness of the problem of volunteer burnout and the difficulties in finding new people to take on the responsibilities for harbour authorities. Many of the people who started the first harbour authorities are nearing retirement age. In some communities the harbour authority is blamed for the poor condition of the wharf and this makes membership seem like an unattractive option.

Another difficult issue stems from the fact that the costs of building and maintaining a given type and size of wharf can vary considerably depending on its location and exposure to the elements. Users in small harbours in areas like the upper Bay of Fundy fear that they will lose out in the competition for funding because their cost profile is much higher than that of a port with the same number of boats in a less challenging setting. DFO-SCH officials say that these factors are taken into account and that the system of allocating resources is fair, but some harbour authorities are not convinced.

Safety is an area of growing concern for harbour authorities. In some harbours small boats berth alongside much larger fishing boats and large bulk carriers and there is a perceived risk of collisions in narrow channels with reduced navigational aids. Many fishing wharves are overcrowded with boats rafted up together. This increases the risk of fire or storm damage and that in turn can lead to liability issues and increased insurance costs. In the Bay of Fundy the closure of some harbours now means much greater distances to travel for shelter in bad weather, and some harbours are not accessible at low tide.

When asked about possible solutions to the challenges facing harbours and harbour authorities, the case study participants proposed a number of areas for change:

- Greater integration and coordination among the many government agencies, and different jurisdictions, that have a say in wharf building, maintenance and management;
- More training and mentoring supports from the relevant government agencies to build the capacities of the harbour authorities;
- Assistance with conflict management and access to dispute settlement services;
- The expanded use of the wharves by recreational boaters, whale watching businesses and other non-fishing users to build the user fee revenue base;
- Representation of a broader cross-section of stakeholders on harbour authorities to leverage new sources of support and investment.
- Expanded mutual support among harbour authorities including pooling of resources, bulk buying of goods and services, and mentoring of new authorities.

Regarding non-economic benefits, the case studies provided examples of the centrality of wharves to the well-being of coastal communities. First of all they are centres of activity and key infrastructure for a wide range of recreational activities including swimming, scuba diving, water-skiing, kayaking, canoeing, cruising, sailing, sports fishing, and bird and whale watching. Like gymnasiums, playing fields or rinks, they contribute to the health and quality of life of a wide range of local citizens and visitors. People in coastal communities make quite intensive use of their wharves for their own benefit as well as for commercial developments in tourism and recreation.

Some wharves are fully integrated with harbourfront development projects that add to the attractiveness of the community and facilitate positive contacts between the general public and people involved in fisheries and marine industries. Three of the communities studied used their wharves for substantial festival events in the summer including concerts, dances, picnics, boat tours, dory races and other activities.

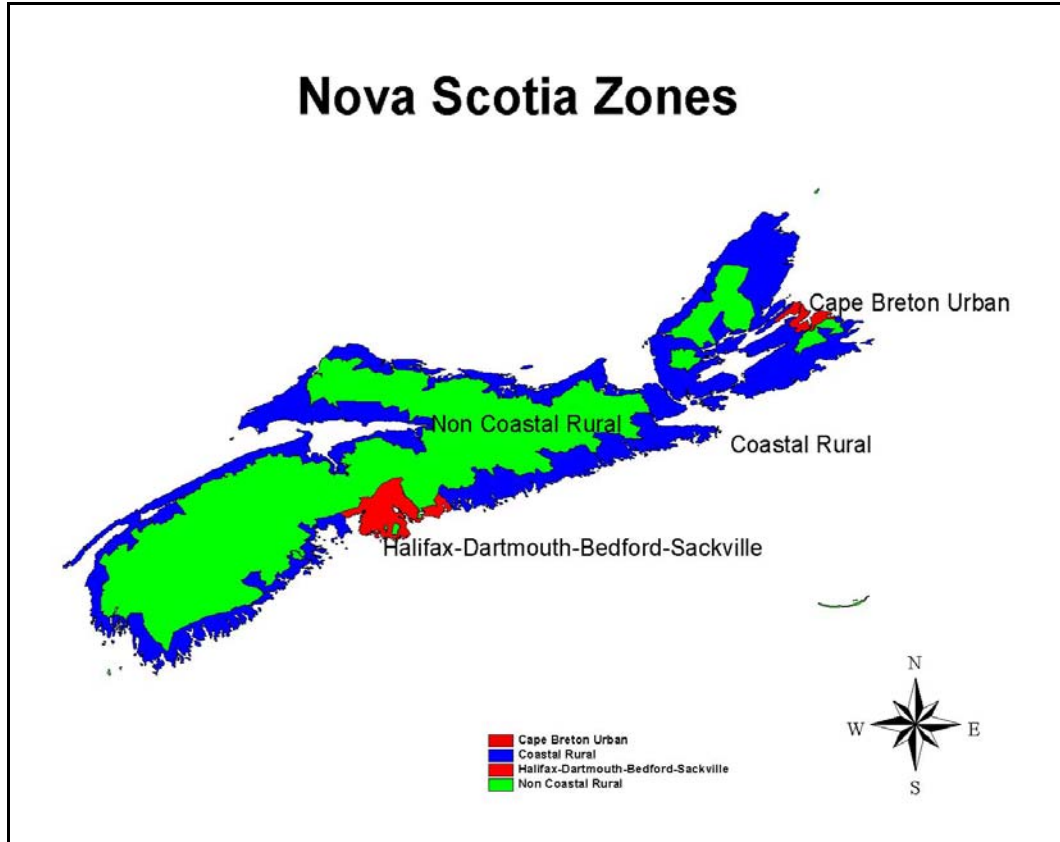
Wharves are important meeting places, and this function has taken on added significance with the expansion of Native fisheries in the province in recent years. First Nations are now operating wharves for their own use and as businesses, and this generates positive relationships with non-Native fisheries people. In one community the local First Nation is a key partner in community efforts to take ownership of the harbour.

In general, then, the case studies confirm and add depth to our understanding of the challenges involved in the management and maintenance of wharves, and of the many significant contributions of harbours to local economies and community well-being.

## Summary of Situational Analysis

A substantial proportion of the work of this project went into the development of a geographical information database. A statistical model of the province was developed using Canada Census data. This data can be broken out in Census Dissemination Areas (CDAs). There are a total of 1,397 CDAs in the province, 984 of which cover areas of the coastline including the cities. In the database the Census information was combined with other data for wharves and harbours, tourism locations, fish landings, aquaculture sites, etc. to create a comprehensive statistical picture of the province. With the database it is possible to draw out information on a community-by-community basis and also to generate and compare aggregate statistics for each of four zones of the province:

- Rural coastal zone (467 CDAs);
- Rural non-coastal zone (413 CDAs);
- Halifax-Dartmouth-Bedford-Sackville urban zone (468 CDAs);
- Sydney-North Sydney urban zone (49 CDAs).



The 467 coastal rural CDAs were divided into 77 “harbour clusters” based on the most readily identifiable harbour communities. These are shown as the dark areas around the coast on the map above.

The database can be updated with each new Census round, and it can be used by the CCN for ongoing monitoring of major social and economic trends impacting on coastal communities. The situational analysis presented below is largely developed through the use of this analytical tool and can be similarly updated as new information becomes available.

The overall population of Nova Scotia, now 907,000, grew less than 1% from 1991 to 2001. This apparent stability belies the very dramatic shifts in settlement patterns within the province, and particularly the rapid urbanization. The following table shows the dramatic changes over the 1991 to 2001 period.

POPULATION CHANGE BY COASTAL, NON-COASTAL AND URBAN ZONES			
Zone	1991	2001	1991-2001
Coastal Rural	268,095	251,650	-6.10%
% Of Total	29.8%	27.7%	
Non-Coastal Rural	294,090	255,539	-13.10%
% Of Total	32.7%	28.2%	
Cape Breton Urban	69,595	62,935	-9.60%
% Of Total	7.7%	6.9%	
Halifax-Dartmouth-Bedford-Sackville	266,960	337,283	+26.30%
% Of Total	29.7%	37.2%	
Province	898,740	907,407	+0.90%

Urban Halifax grew by 26% over the period while urban Cape Breton had a net loss of nearly 10% of its population. The non-coastal rural zone lost more than 38,000 inhabitants (-13%). In this context it is significant that the population of the coastal-rural zone shrank by a more modest -6% and that its share of the total population (28%) is now only slightly less than that of the rural-non-coastal zone.

The apparent stability of the coastal rural population again hides very dynamic changes in settlement patterns within the zone. Out of a total of 77 rural harbour communities around the coast of the province, some showed significant gains in population while many more had losses. The breakdown is as follows:

- Eight coastal-rural communities showed significant growth over the 1991 to 2001 period (i.e., greater than 5%). These included four areas with First Nations and three communities close to Halifax;
- Nine coastal communities spread around the province had slight to moderate growth (i.e., less than 5%);
- Sixteen coastal communities, including the important harbour towns of Pugwash, Yarmouth, Lunenburg and Sheet Harbour, experienced slight to moderate population losses over the decade (i.e., from - .1 to -5%);
- Twenty-five coastal areas show significant declines (from -5 to -10%) over the period, including key fishing ports such as Neil's Harbour, Shelburne, Cape Sable and Wedgeport;
- Twelve coastal areas show very significant population losses (-10.1 to -15%).

This group included harbours that had major groundfish processing plants such as Chéticamp, Louisbourg and Isle Madame;

- Seven communities are identified as facing severe population losses with declines of more than -15% over the decade. These include the key fishing areas of Digby Neck and Canso

This evidence suggests that communities are consolidating and that many people are moving within the province. Census data on population mobility reveals that 124,000 people, or 15% of the total population over 5 years of age, moved into the province or changed their place of residence within Nova Scotia over just the 5 years from 1996 to 2001. Some 56,000 people immigrated from other provinces or countries, while 67,000 people changed communities within Nova Scotia. Of the latter group, over 27,000 people moved into the Halifax area, but at the same time 39,000 Nova Scotians moved to rural communities or changed communities within the coastal and non-coastal zones.

Another important demographic trend is the aging of the population. The overall provincial population is growing older at a significant rate but the age profile in the coastal rural zone is shifting more rapidly than in urban areas. This trend is driven by the out-migration of young people and falling birth rates as well as the older generation growing older. Such changes have particular significance in terms of health care and human services issues, and in terms of future labour force dynamics.

Since 1991 the coastal zone in Nova Scotia has sustained major economic shocks including the groundfish collapse, military base closures and the shutdown of the coal and steel industries. The following table shows changes in the employed labour force in Nova Scotia from 1991 to 2001. It provides substantial evidence that the economy of the coastal zone is much more robust than might have been expected given the major crises of the past decade.

<b>CHANGES IN EMPLOYED LABOUR FORCE, NOVA SCOTIA, 1991 - 2001</b>			
	<b>1991</b>	<b>2001</b>	<b>Change 91 - 01</b>
Coastal - Rural	102,950	98,460	-4%
% Of Total	26%	24%	
Non-Coastal Rural	129,210	110,230	-15%
% Of Total	33%	27%	
Cape Breton Urban	22,715	20,430	-10%
% Of Total	6%	5%	
Halifax-Dartmouth- Bedford-Sackville	134,820	172,950	28%
% Of Total	35%	43%	
Total Nova Scotia	389,695	402,070	3%

The rural coastal region experienced a loss of only 4% in employed people over the decade compared to a 15% decline in the non-coastal rural zone. There was however a substantial recovery in both rural zones in the 1996 to 2001 period with growth rates of +3% and +4% respectively.

The study used the 2001 Census to estimate the employment impacts of harbours and wharves. Examining employment by industry, it was found that 21,000 people work in sectors that make direct use of wharves, and over 37,000 people are employed in industries that benefit significantly from harbours. Together these sectors generated 58,000 jobs in 2001 representing 14% of total employment by industry in the province. It should be noted that these figures do not include the very substantial public sector and private service sector employment that exists throughout the province because of harbour dependent communities and industries.

The report examines specific trends in the fisheries, aquaculture, boatbuilding and tourism sectors and concludes that, after a decade of crises that included the groundfish collapse and the 9/11 catastrophe, all sectors of the Nova Scotia economy that depend on harbours and wharves have experienced growth and continue to show great resilience. As is happening everywhere in the industrialized world, there is ongoing shrinkage in employment in primary industries because of mechanization and corporate consolidation. But there is every reason to believe that the economy of the coastal-rural region will remain strong in terms of overall wealth generation, and that harbour dependent



industries like fisheries, aquaculture and tourism will generate significant numbers of stable and rewarding jobs in the future.

## Conclusions

This project has generated compelling evidence of the importance of harbours as essential to the economic, social and cultural viability of coastal communities in Nova Scotia. It is equally clear that the overall social and economic well-being of the province is immensely affected by developments in the coastal zone. The core argument can be presented in straightforward terms:

- 28% of the population of Nova Scotia lives in rural harbour communities;
- 24% of the employed labour force works in rural harbour communities;
- 14% of the provincial labour force is employed in industries that make use of wharves or benefit significantly from harbours;
- Nearly 70% of Nova Scotia's \$5.7 billion in exports is generated by industries that are predominantly rural-coastal based and rely on a rural-based labour force. The two largest export industries, non-metallic mining and mineral fuels and fisheries, represent 45% of overall exports and depend directly on harbours and wharves.

The foundation of the coastal rural economy continues to be the fishery and related sectors – fish processing, aquaculture, boatbuilding, etc. The fishery itself is structured to a very significant degree by federal government policies that have maintained control of the most valuable licenses in the hands of independent owner operators working out of widely distributed small inshore ports. Two important trends could destabilize the fishery and the coastal communities that depend upon it.

The first is the trend toward consolidation of control over shellfish licenses. Over the past decade the value of these fisheries has steadily increased and fish processors have been buying control of licenses through trust agreements and other under the table arrangements. Many leaders in inshore fishing communities fear that this trend will lead to a further consolidation of the fishery to the larger ports and a substantial decline in incomes and employment for many smaller communities.

The second trend is the increased financial burden of maintaining harbours as government budgets shrink and the existing wharves age and deteriorate. Small

operators are particularly vulnerable if they lose their wharves and have to move to larger ports, or if they have to take on much larger shares of maintenance and repair costs.

The first of these issues – the threats to the owner-operator fishery – is beyond the scope of this study. It is important to note, however, that the former Minister of Fisheries and Oceans, Robert Thibault, announced in November 2003 that the federal government is committed to take steps to close the regulatory loopholes that allow corporate consolidation of inshore fisheries.

On the second issue, the evidence generated by this study does not provide grounds for optimism. We have an increasingly valuable fishery, and significant growth in other sectors that depend on or benefit directly from harbours, but public investment in maintaining and renewing harbour facilities continues to fall below the thresholds for sustainability. This trend is a direct and growing threat to the future viability of many coastal rural communities that already face serious demographic and economic challenges.

Wharves are “bridges” between the land and the sea. The failure to maintain wharves and harbours in the coastal rural zone raises critical issues of public versus private control over access to a diverse range of economic, social and cultural uses of the marine environment. Declining public investment in harbours will add significantly to two serious problems already faced by coastal communities:

- The problem of maintaining critical economic and social infrastructure, including education, healthcare, transportation and communications, as populations decline;
- The need to maintain healthy and viable communities to attract and hold skilled workers in industrial sectors that are essential to the province as a whole.

The efforts by harbour authorities and coastal communities to find the resources to maintain their harbours have significance far beyond the specific needs of local wharf users. As stated throughout this document, harbours are the essential infrastructure of the coastal economy. The inadequate level of public investment in harbour infrastructure is a quiet crisis that is rapidly gaining momentum in the coastal communities of Nova Scotia. It demands much greater attention in current debates about social and economic development priorities for our province.

## Action Plan

Leaders from the Coastal Communities Network and representatives of partner and stakeholder groups for this project participated in a workshop in October 2003 to plan how to respond to the findings of the study. They developed consensus on an action plan to address the issues raised about the sustainability of harbours in the coastal rural region of Nova Scotia. The following are the main elements of that plan.

1. The CCN itself is a coalition of coastal community interests including the fishing industry, the tourism industry, local government and community economic development agencies, and a wide range of community organizations. As it did in initiating this project, the CCN should continue to make harbours and wharves an action priority and provide leadership for its members and affiliates in planning and implementing effective action to find solutions.
2. The CCN needs to develop and promote the use of the database on a continuing basis, share it with partner groups and agencies and provide access to it for community groups.
3. While not ignoring the interests and contributions of other sectors, the CCN should develop and communicate the importance of harbour infrastructure for the many small businesses that are the backbone of the rural economy in Nova Scotia. The message needs to be forcefully communicated that for coastal communities harbours and wharves perform functions equivalent to the major public infrastructure in urban areas such as highways, bridges, airports and industrial parks.
4. There is a need for innovations in government policies and programs to integrate and streamline the management of harbours and wharves. This might involve new agencies or councils to coordinate multipartite decision-making similar to what was done for the TAGS program (DFO, HRDC and ACOA working together through a coordinating committee) and the Sustainable Communities Initiative that was jointly initiated by Environment Canada and DFO. Specific objectives would be:
  - To develop a one-stop shopping approach for harbour authorities dealing with government; and

- To develop more effective policy guidelines and funding strategies to address the fact that costs for harbours vary considerably depending on local environmental conditions including tides, currents, exposure to open seas, etc.
5. Using this report as a basis, the CCN should also undertake a more intensive strategy session through the Rural Communities Impacting Policy process to bring more partners into the process, build greater support on the harbours issue, and develop plans to access funding for follow-up activities.

## Research Challenges

Like any project of this scale, problems and questions arise that are not fully resolved through the research. Four emerging issues deserve further attention by the CCN and its partners on this project:

1. Analysis of Census data provides considerable evidence of the rapid changes in settlement patterns now occurring in Nova Scotia. The dominant trend is urbanization with the Halifax area being the destination for most people leaving rural areas. But at the same time there is considerable movement between rural communities and from urban to rural areas. This research did not have the time or resources to come up with causal factors or definitive analyses of the social and economic implications of these trends in terms of current and future employment, housing and human services, alienation of control over land and public access to coastal waters, etc. Much more work needs to be done to understand the nature and extent of these trends and their future trajectory.
2. A specific research issue arising from the evidence of dramatic changes in settlement patterns in the province is the question of community viability. How much population can a community lose before it becomes socially and economically non-viable, or before local governance and public services are no longer fiscally sustainable? A review of the research literature did not generate any models for assessing the basic viability of communities. Is there a need for new types of social programs to support mobility and adjustment for people living in declining communities? Is there a need for a larger strategy to facilitate the consolidation of viable rural communities and/or to aggressively market these communities as places to live and do business?

3. Another specific issue arising from the examination of changing settlement patterns is the problem of skilled labour shortages in rural communities. It would appear that many people, particularly young people, are leaving rural communities not because there are no jobs available but because there are better-paying and less seasonal jobs in urban areas. The fish processing industry for example, is finding it increasingly difficult to attract and hold skilled workers and is looking at options for importing workers from outside the region. How extensive are these shortages and what impact are they having on community viability and the rural economy? What kinds of policy measures might be effective in addressing this problem?
  
4. Harbour authorities do not currently have an adequate funding base for capital repairs and still depend on shrinking government budgets. In harbours where there is potential for expanding the user base in terms of recreational boating, tourism and other sectors, is there a need for a new model for harbour management that would accommodate the interests of the primary users while bringing more stakeholders into the picture?

# 1.DFO-SMALL CRAFT HARBOURS POLICY OVERVIEW

## 1.1. The National Level

The Small Craft Harbours (SCH) Branch is a division of the Department of Fisheries and Oceans (DFO) responsible for the management of departmentally owned harbours that accommodate commercial fishing vessels and recreational vessels. Mandated in 1973 under the Fishing and Recreational Harbours Act, SCH focuses on maintaining harbours critical to the commercial fishery at an acceptable standard. SCH Program activities include:

- functional direction;
- ongoing infrastructure maintenance;
- repair and replacement;
- program and property administration;
- inventory rationalization;
- technical support;
- local site operations, and
- client liaison and knowledge transfer.

DFO-SCH recognizes that wharves and associated harbour infrastructure are of vital importance to coastal communities. The DFO Capital Plan for Small Craft Harbours 2002/03 to 2004/05 makes the following statement:

Harbours are basic to the business of DFO's primary clients, involving thousands of small-medium marine enterprises and resident communities reliant on marine commerce directly or indirectly.

*Harbour infrastructure protects millions of dollars invested in user business assets, allows safe user operations, prevents coastal erosion and damage, provides local economic development and employment, offers refuge for mariners in distress and for some remote communities their only transportation link.*

*DFO harbours have evolved from their use for the transportation of goods and people between coastal communities to the multi-use "working" harbours of*

*today. At all stages the “government wharf” has been, and remains, an integral part of the economic and social fabric of the community.*

Harbour infrastructure is therefore critical to the social, cultural and economic health of coastal communities, and DFO-SCH clearly recognizes its role and responsibilities in this regard.

By the 1990s the majority of the SCH harbour assets had passed the mid-point of their useful life. This factor, coupled with severe weather in recent years, has resulted in rust out or wear out of many harbour facilities that are critical to the commercial fishery and continues to create unsafe working conditions and user dissatisfaction.<sup>1</sup> Budget constraints and inflating construction costs over the last decade have added to the cost squeeze for SCH. The Department has responded by concentrating its spending on repair, maintenance and replacement of capital on only the most active fishing harbours.

SCH identifies funding inadequacies as a major obstacle to proper harbour operations and clearly acknowledges that deferred repair and budget shortfalls translate...

*.... into unsafe or poor working conditions for users, increased client dissatisfaction and a growing potential liability for the Crown. The potential for public injury, loss of property and income due to degraded assets is high, as is public and political sensitivity associated with limited action. At active fishing harbours, closure or demolition is not a political or an economically acceptable solution.<sup>2</sup>*

## 1.2. The Harbour Authority Strategy

To continue to fulfill its mandate in the face of such serious financial constraints and political pressures, SCH has adopted the following overall strategy:

1. Transfer ownership of all recreational harbours and derelict/low activity fishing harbours to community-based groups;

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<sup>1</sup> Capital Plan for Small Craft Harbours 2002/2003 to 2004/2005. Small Craft Harbours, Fisheries and Oceans Canada, November 15, 2001.

<sup>2</sup> Capital Plan for Small Craft Harbours 2002/2003 to 2004/2005. Small Craft Harbours, Fisheries and Oceans Canada, November 15, 2001.

2. Reduce the SCH inventory to an active core of harbours essential to the commercial fishery and expand private sector involvement in the management of core harbours.<sup>3</sup>

SCH maintains that the goals of inventory reductions and industry partnerships are not to generate SCH program savings but rather to help keep core fishing harbours open and operating at an acceptable standard within available resources.<sup>4</sup>

In 1987 SCH introduced the Harbour Authority (HA) Program to involve fishermen directly in harbour management. It is now being used as a method to address insufficient federal funding resources. The HA Program has evolved into a system whereby SCH retains ownership of “core” fishing harbours and leases them to representative user groups through the non-profit HAs. The HAs then take on most responsibilities for the daily operations and maintenance of the harbour.

Originally, SCH owned, operated, and maintained 1,308 fishing harbours and 825 recreational harbours nationally.<sup>5</sup> Over the last four and half years, the numbers of core and non-core harbours retained by SCH on a national and provincial basis have been as follows:

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<sup>3</sup> Small Craft Harbour Branch Overview. Fisheries and Oceans Canada. Online. Available: [http://www.mar.dfo-mpo.gc.ca/sch/e/sch\\_overview-e.html](http://www.mar.dfo-mpo.gc.ca/sch/e/sch_overview-e.html) Site last visited May 5, 2003.

<sup>4</sup> Study on Harbour Rationalization: Small Craft Harbours. Calhoun Research & Development and PRAXIS Research & Consulting Inc., April 2002.

<sup>5</sup> Study on Harbour Rationalization: Small Craft Harbours. Calhoun Research & Development and PRAXIS Research & Consulting Inc., April 2002.



**Table 1**

<b>NUMBER OF SMALL CRAFT HARBOURS</b>						
<b>As of</b>	<b>National</b>			<b>Nova Scotia</b>		
	<b>Fishing Harbours</b>	<b>Fishing Harbours with HAs</b>	<b>Recreational Harbours</b>	<b>Fishing Harbours</b>	<b>Fishing Harbours With HAs</b>	<b>Recreational Harbours</b>
Oct 1, 2003	1,026	674	259	200	164	1
April 1, 2003	1,031	664	261	202	163	1
April 1, 2002	1,044	638	287	200	161	1
April 1, 2001	1,084	605	334	228	157	6
April 1, 2000	1,129	559	419	249	149	10

Source: Fisheries and Oceans Canada, Small Craft Harbours

It is noted that the majority of SCH recreational harbours are located in the Pacific, Central, and Arctic regions. As part of the 1995 program review, recreational harbours were targeted for divestiture. Many regions, however, have not met the program review targets and consequently many recreational harbours continue to be owned, operated, and maintained by SCH.

The HA Program has been the primary strategy used by SCH to increase financial contributions from the private sector and to reduce the number of operational harbours in its inventory. Communities showing no interest or ability to establish HAs for their harbours, and where facilities were deemed unsafe, were slated for demolition or total divestiture.<sup>6</sup>

DFO's original projection was that the HAs would take over all operating costs by 2001 but SCH has since had to revise this objective. Many HAs are not becoming financially self-sufficient and are not yet stabilized as community organizations.

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<sup>6</sup> Study on Harbour Rationalization: Small Craft Harbours. Calhoun Research & Development and PRAXIS Research & Consulting Inc., April 2002.

### 1.3. Constraints on HAs

Most DFO owned facilities have limited potential to generate revenue and therefore cannot provide an adequate financial base for their HAs.<sup>7</sup> It has been found that simply increasing user fees will not eliminate the funding deficit. A 1994 evaluation of the HA program found that the increased revenues at HA-managed harbours did not cover all costs for the HAs (increased salaries, utilities etc.) making it difficult for them to generate the additional financial surpluses needed to cover their own repair and maintenance costs.<sup>8</sup>

HA viability is also affected by changes in fish landings. Harbours with larger scale fisheries are considered financially viable due to high demand for infrastructure and services making users less sensitive to fees. In areas experiencing decreased landings, harbour use is lowered and less revenue is generated while annual operating costs remain fairly constant. This factor makes it increasingly difficult for HAs in smaller, less active harbours to reinvest in their harbour assets.

*Given these factors, it is still the case that most HAs are unable to address all the maintenance and safety related concerns at their harbours without continuing and substantial federal funding. The HAs in core harbours continue to notify SCH of necessary repairs and those deemed essential are supposed to receive priority attention. Where repairs cannot be readily funded, temporary measures such as barricades and use restriction are implemented.<sup>9</sup>*

DFO-SCH is acutely aware of the political sensitivities with regard to harbour maintenance. A recent departmental report warns that:

*... the limited ability of DFO to resolve unsafe conditions threatens to erode healthy partnerships only recently built. These partnerships hold the key for long-term efficiencies in capital asset management.”<sup>10</sup>*

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<sup>7</sup> Harbours Business Plan 2002-2005: Corporate Services Sector. Small Craft Harbours, Fisheries and Oceans Canada, January 23, 2002.

<sup>8</sup> Study on Harbour Rationalization: Small Craft Harbours. Calhoun Research & Development and PRAXIS Research & Consulting Inc., April 2002.

<sup>9</sup> Capital Plan for Small Craft Harbours 2002/2003 to 2004/2005. Small Craft Harbours, Fisheries and Oceans Canada, November 15, 2001.

<sup>10</sup> Capital Plan for Small Craft Harbours 2002/2003 to 2004/2005. Small Craft Harbours, Fisheries and Oceans Canada, November 15, 2001.

Client confidence in DFO is particularly important because the SCH plans to transfer management and maintenance responsibilities of more active fishing harbours to HAs on a national basis. In Nova Scotia, however, all of the potential harbours have been transferred to HAs. The remaining 36 harbours are deemed as non-core and are not likely candidates for the HA Program.

In addition to financial constraints, the HA Program is expected to experience growing problems with maintaining community and industry involvement in HAs. Since HAs are composed mostly of volunteers with a great deal expected of them, DFO faces the challenge of attracting and retaining partners. Department officials readily acknowledge that signs of volunteer ‘fatigue’ are increasingly discussed at their conferences and consultations.

## 1.4. Current Directions for the HA Program

DFO-SCH reports identify the following as the major impacts of the HA program to date at the national level:

1. A cumulative reduction of 42% of harbour inventory.
2. Partnerships with clients at 70% of active fishing harbours and increased user contributions to harbour maintenance.<sup>11</sup>
3. Approved federal funding of \$24 million over 2000/01 and 2001/02 to continue with harbour divestiture or disposal.
4. The active involvement of over 3,000 volunteers and direct employment for over 500 people.<sup>12</sup>

As of October 2003, more than 80% of SCH sites or 164 harbours in Nova Scotia were managed by HA groups. Approximately 120 harbours have been divested in Nova Scotia.

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<sup>11</sup> Harbours Business Plan 2002-2005: Corporate Services Sector. Small Craft Harbours, Fisheries and Oceans Canada, January 23, 2002.

<sup>12</sup> Small Craft Harbours: A Program Overview. Small Craft Harbours, February 2002.

SCH's Capital Plan for 2002/2003 to 2004/2005 hopes to balance the national funding versus demand equation further by:

- increasing cumulative inventory reductions to over 50% of all harbours on a national basis;
- increasing client-partnerships to 100% of core harbours; and,
- expanded efforts with users and HAs to increase their management abilities and financial independence.<sup>13</sup>

SCH recognizes that while these steps may help address the issue of degraded harbour facilities in the short-term, the funding gap will not be eliminated and more long-term funding solutions are necessary to ensure that harbours operate at an acceptable level and to maintain public safety and user satisfaction. Progress will however be minimal due to the lack of funding for divestiture beyond 2001-2002. This means that unsafe, inactive harbours may increasingly become safety risks for those who choose to use them.<sup>14</sup>

## 1.5. SCH Expenditures for Canada and Nova Scotia

DFO-SCH's total budgetary expenditures cover costs associated with administration, technical support, harbour operation, health and safety, functionality/efficiency, and divestiture/rationalization. A more detailed description of each SCH budget category (A to H) is given in Appendix One.<sup>15</sup>

As depicted in Table 2 and Figure 1, SCH total expenditures declined in the first half of the decade, reached lows in 1997, and have since recovered.

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<sup>13</sup> Capital Plan for Small Craft Harbours 2002/2003 to 2004/2005. Small Craft Harbours. Fisheries and Oceans Canada, November 15, 2001.

<sup>14</sup> Harbours Business Plan 2002-2005: Corporate Services Sector. Small Craft Harbours, Fisheries and Oceans Canada, November 15, 2001.

**Table 2**

<b>SCH TOTAL HISTORICAL EXPENDITURES NATIONAL &amp; NOVA SCOTIA 1992-2002 (IN CHAINED 1997 DOLLARS<sup>1</sup>)</b>			
<b>Fiscal Year</b>	<b>National</b>	<b>Nova Scotia</b>	<b>Nova Scotia as a % of National</b>
1992/93	\$72,003,274	\$14,083,353	19.6%
1993/94	\$76,074,459	\$14,048,513	18.5%
1994/95	\$73,454,944	\$15,043,649	20.5%
1995/96	\$57,719,140	\$10,607,315	18.4%
1996/97	\$55,491,293	\$9,576,360	17.3%
1997/98	\$56,949,170	\$7,381,567	13.0%
1998/99	\$56,585,338	\$9,136,281	16.2%
1999/00	\$61,971,547	\$8,426,982	13.6%
2000/01	\$84,596,503	\$14,964,625	17.7%
2001/02	\$77,585,370	\$15,974,974	20.6%
2002/03	\$89,337,478	\$13,953,126	15.6%
Total for 11 Years	\$761,768,516	\$133,196,743	17.5%
1 Chained (1997) dollar values derived using Statistics Canada Gross Domestic Product (GDP) Indexes, computed annual average. National Income and Expenditure Accounts – 1901.			

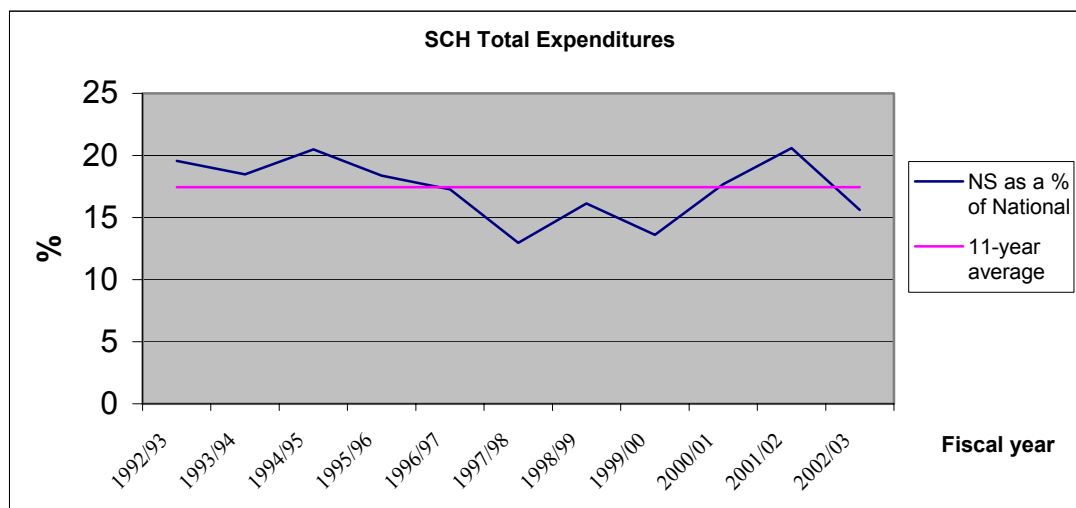
**Source: Corporate Services, SCH Branch Regional Headquarters. Moncton, New Brunswick.**

National expenditures in the early 1990s averaged \$73.8 million (in chained 1997 dollars) with Nova Scotia receiving 18 to 20 per cent of the national budget. The major cutbacks in the DFO budget in the mid-1990s are clearly reflected in lower SCH spending.

By 2000, national spending had recovered to exceed that of the early 1990s. However, as Figure 1 indicates, Nova Scotia's share of national SCH spending

expenditures dropped dramatically below the 11-year average of 17.5% in the 1997/98 fiscal year and remained low until 2000/01. The following graph illustrates the changing relationship between SCH spending in Nova Scotia and at the national level.

Figure 1



SCH spending in Nova Scotia rose to \$15 million in 2000/01 and \$15.9 million in 2001/02 (17.7% and 20.6% of national expenditures respectively), but there is ample evidence elsewhere in this report that the reduced levels of the mid-90s have had significant negative impacts in terms of cutbacks in necessary repairs and maintenance for harbour facilities around the province.

While the 2002/03 national expenditures are at an 11-year peak, the level of funding received by Nova Scotia has dropped below the 11-year average. The highest percentage of national SCH expenditures for Nova Scotia since 1992 was 20.6% in 2001/02. If Nova Scotia had received the same 20.6% in 2002/03 it would mean an additional \$4.45 million, a significant step towards making up the funding gap of the late 1990s. Such an increment would bring Nova Scotia's expenditures to \$18.4 million instead of the actual \$13.9 million (in chained 1997 dollars).

## 1.6. Planned Spending

The Department of Fisheries and Oceans is currently undergoing a comprehensive internal review of all programs and services. Initiated in September 2002, the review

intends to “reallocate resources to the highest priorities and to transform old spending to new priorities.”<sup>16</sup> The Departmental Assessment Phase I, conducted in 2002, reviewed programs representing two-thirds of the Department’s budget and addressed challenges within the Canadian Coast Guard, Small Craft Harbours, the Canadian Hydrographic Services, and the Science Program. The Departmental Assessment and Alignment Project (DAAP) is more expansive and will review all DFO’s activities, involve every sector and region, and explore all options to transform the way DFO delivers programs and services. The Department intends to complete the DAAP in the fall of 2003.

The departmental planned spending<sup>17</sup> for Small Craft Harbours is \$91.3 for 2003/04, \$91.4 million for 2004/05 and \$86.4 million for 2005-06<sup>18</sup>. These figures are close to amounts spent in the last couple of years. In 2001/02 and 2002/03, departmental spending, in current dollars, totalled roughly \$82.5 million and \$96.0 million respectively. The impact of the DAP Phase I and DAAP, however, on these planned spending figures is unknown at present.

## 1.7. Expenditures on Ongoing Maintenance, Repair and Recapitalization

A portion of the national SCH budget is allocated to the ongoing maintenance, repair and recapitalization of the asset base (i.e. SCH budget categories D to G). The majority of these funds are distributed to address safety related issues (Budget Category D). This includes maintenance of the structural integrity of infrastructure and facilities, efforts to address safety hazards (e.g. chronic overcrowding, dredging) and health and legal issues (e.g. labour code).

The historic SCH expenditures for budget categories D through G are given in Table 3. The same pattern of lowered spending in the mid to late 1990s observed in Table 2 is depicted in the following table.

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<sup>16</sup> 2003-04 Estimates. A Report on Plans and Priorities, Fisheries and Oceans Canada, Page 17.

<sup>17</sup> Main estimates, net planned spending, and total cost of programs

<sup>18</sup> 2003-04 Estimates. A Report on Plans and Priorities, Fisheries and Oceans Canada, Page 17.

**Table 3**

<b>SCH HISTORICAL EXPENDITURES BUDGET CATEGORIES D TO G NATIONAL VS. NOVA SCOTIA (USING CHAINED 1997 DOLLARS<sup>1</sup>)</b>			
<b>Fiscal Year</b>	<b>National</b>	<b>Nova Scotia</b>	<b>NS as % of National</b>
1992/93	\$50,036,207	\$10,056,369	20.1%
1993/94	\$48,485,029	\$10,189,982	21.0%
1994/95	\$52,492,451	\$11,199,270	21.3%
1995/96	\$35,217,791	\$6,725,542	19.1%
1996/97	\$36,559,357	\$7,870,892	21.5%
1997/98	\$38,678,600	\$5,815,667	15.0%
1998/99	\$41,143,776	\$7,866,779	19.1%
1999/00	\$47,204,816	\$7,628,066	16.2%
2000/01	\$70,148,939	\$14,151,053	20.2%
2001/02	\$64,929,955	\$14,713,110	22.7%
2002/03	\$76,034,930	\$12,961,885	17.1%
Total	\$560,931,851	\$109,178,615	19.5%
<sup>1</sup> Chained (1997) dollar values derived using Statistics Canada Gross Domestic Product (GDP) Indexes, computed annual average. National Income and Expenditure Accounts – 1901.			

**Source:** Corporate Services, SCH Branch Regional Headquarters. Moncton, New Brunswick, May 22, 2003.

## 1.8. Capital Replacement Value of SCH Asset Base

In 1999, Mulcahy & Associates completed the first comprehensive valuation of SCH assets. Values were calculated using the SCH inventory as of June 1999.<sup>19</sup> Replacement value estimates were based on systemic calculations and do not address

<sup>19</sup> SCH Vision Support Study, Elements 4 & 5, Draft Final Report, Mulcahy & Associates Inc. Prepared for Small Craft Harbours Branch, Department of Fisheries and Oceans, November 1999.



site-specific conditions at local harbours such as environmental costs, administrative costs, channels, basins, and parking and service areas.<sup>20</sup>

Using the Mulcahy estimates, the total estimated replacement value of existing national fishing harbour assets was assessed at \$2.1 billion in 1999. In that year, SCH expenditures on repair, maintenance, and recapitalization of assets totalled \$40.9 million (in current dollars) or 1.95% of the replacement value of assets.

SCH Harbour Operations and Engineering Division has identified replacement values for Nova Scotia's fishing harbours based on the estimates generated by Mulcahy & Associates. Table 4 provides the figures with breakdowns by DFO Areas. The total replacement value of the SCH asset base for Nova Scotia (core and non-core fishing harbours) is estimated to be \$572.6 million.

**Table 4**

<b>1999 REPLACEMENT VALUE ESTIMATES FOR NOVA SCOTIA'S SMALL CRAFT FISHING HARBOURS (IN CURRENT DOLLARS)</b>	
<b>Area</b>	<b>Replacement Value</b>
Gulf and East Shore (Antigonish)	\$47,282,398
NE Cape Breton (Sydney)	68,361,991
SW Cape Breton & Guysborough Co. (Port Hood)	74,338,508
Bay of Fundy & Halifax West (Digby)	122,279,333
South Shore NS (Shelburne)	102,230,452
South West Shore (Yarmouth)	158,100,200
Total	\$572,592,882

**Source: Harbour Operations and Engineering Division, SCH Real Property Management and Environmental Coordination Directorate, Fisheries and Oceans Canada, Ottawa.**

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<sup>20</sup> Harbour Operations and Engineering, SCH Real Property Management and Environmental Coordination Directorate, Fisheries and Oceans Canada. May 3, 2003.

Using the 1998/99 SCH expenditures for Nova Scotia, the reinvestment rate in SCH assets can be calculated for that year. An expenditure of \$7.8 million (in current dollars) on an asset base valued at \$572.6 million represents a 1.36% reinvestment rate.

In summary, the 1999 replacement value and reinvestment expenditures and rates for SCH assets in Canada and Nova Scotia were as follows:

**Table 5**

<b>1999 REPLACEMENT VALUE ESTIMATES AND REINVESTMENT RATES FOR NATIONAL AND NOVA SCOTIA SCH (IN CURRENT DOLLARS)</b>			
<b>Area</b>	<b>Replacement Value of Fishing Harbours</b>	<b>Expenditures on Repairs, Maintenance, and Recapitalization</b>	<b>Reinvestment Rate</b>
National	\$2.1 billion	\$40.9 million	1.95%
Nova Scotia	\$572.6 million	\$7.8 million	1.36%

According to SCH's own calculation of the costs associated with marine facilities, these levels of re-investment are clearly inadequate.

*The appropriate percentage to calculate asset replacement and maintenance costs should normally be set at between 4.0% and 4.2% as derived from industry experience with marine structures (PIANC International Navigation Association, BS Ferries, PWGSC, Marine Atlantic, Transport Canada).<sup>21</sup>*

Moreover, this standard rate assumes that the asset base is either relatively new or has been consistently maintained to an acceptable standard.

## 1.9. Concluding Comments

The SCH program is currently mandated to provide harbour infrastructure and services for the commercial fishery. While there has been a reduction in the number of fishery participants, the demand for core infrastructure has not and will not decrease in direct proportion. In many harbours reductions in fleet size and distribution have only helped to alleviate previous overcrowding. In other cases developments in the fishing industry have created demand for new or larger wharf

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<sup>21</sup> Capital Plan for Small Craft Harbours 2002/2003 to 2004/2005. Small Craft Harbours, Fisheries and Oceans Canada, November 15, 2001.

structures and deeper harbours to accommodate larger vessels in consolidated fleets and expanding midshore fisheries (e.g., the snow crab and shrimp fisheries and new Native fisheries set up under the Marshall program). Current national DFO facilities accommodate approximately 90% of the fishing fleet but the remaining 10% is being displaced to inadequate facilities in lower activity harbours, thereby increasing demand for services.<sup>22</sup>

The 2002/03 national SCH budget is at the highest level since the early 1990s (\$96.8 million in current dollars) due to interim special funding for rust-out (\$40 million over 5 years) and infrastructure repairs at active fishing harbours (\$100 million over five years).<sup>23</sup> This temporary special funding is available due to the priority of safety related repairs and repairs necessary to maintain operational harbours.

DFO Regions receive a percentage of the national budget based on a predetermined formula. The calculations account for factors such as the replacement value of core harbours, fleet sizes, the number of sites managed by HAs, the number of active sites and the number of sites owned by DFO.<sup>24</sup>

Although this increased funding will aid in ensuring harbour safety in the short term, outside experts have advised that an additional \$50 million in the annual national SCH budget will be required to maintain the integrity of core harbours.<sup>25</sup>

A key SCH planning document, *The Capital Plan for Small Craft Harbours 2002/2003 to 2004/2005*, draws the following conclusion about the funding challenge:

The most critical issue is the lack of an adequate stable refresh budget to address ongoing maintenance at core harbours, both to secure basic client service and to

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<sup>22</sup> Capital Plan for Small Craft Harbours 2002/2003 to 2004/2005. Small Craft Harbours, Fisheries and Oceans Canada, November 15, 2001.

<sup>23</sup> Small Craft Harbours: A Program Overview. Small Craft Harbours, Fisheries and Oceans Canada, February 2002.

<sup>24</sup> Small Craft Harbours: A Program Overview. Small Craft Harbours, Fisheries and Oceans Canada, February 2002.

<sup>25</sup> SCH Vision Support Study, Elements 4 & 5, Draft Final Report. Mulcahy & Associates Inc. Prepared for Small Craft Harbours Branch, Department of Fisheries and Oceans, November 1999.

address public safety issues. Currently, 21% of our most active harbours register substandard performance ratings.<sup>26</sup>

The clear evidence of substandard performance of harbours at the national level indicates that SCH is not succeeding in fulfilling its responsibility regarding harbour maintenance and operations, and other internal SCH documents refer to that low performance as “alarming”.<sup>27</sup>

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<sup>26</sup> Capital Plan for Small Craft Harbours 2002/2003 to 2004/2005. Small Craft Harbours, Fisheries and Oceans Canada, November 15, 2001.

<sup>27</sup> Study on Harbour Rationalization: Small Craft Harbours. Calhoun Research & Development and PRAXIS Research & Consulting Inc., April 2002.

## 2. FINDINGS FROM HARBOUR CASE STUDIES

It was the intention of this project to complete case studies for ten harbours of different types around the province. By the end of the project, after considerable effort, only eight case studies were completed, and reports from case studies are presented in Appendix Three. Lessons learned from these case studies, and from a separate study of the Saulnierville harbour, are presented in summary in this section.

The harbours studied are characterized as follows:

**Table 6**

<b>CASE STUDY HARBOURS</b>		
<b>Harbour</b>	<b>Location</b>	<b>Principal Characteristics</b>
1. Harbourville	Bay of Fundy - Kings County	<ul style="list-style-type: none"> <li>▪ Divested by DFO-SCH to province</li> <li>▪ Community seeking to take ownership and carry out improvements</li> <li>▪ Diverse and growing users – fishing, recreation and tourism</li> </ul>
2. Digby Neck	Bay of Fundy - Digby County	<ul style="list-style-type: none"> <li>▪ Three small community harbours</li> <li>▪ Diverse and growing users – fishing, recreation and tourism</li> <li>▪ Operated by separate harbour authorities</li> <li>▪ Major capital repairs underway</li> </ul>
3. Saulnierville	Bay of Fundy - Digby County	<ul style="list-style-type: none"> <li>▪ Medium-sized inshore fishing port managed by harbour authority</li> <li>▪ Major capital developments underway</li> </ul>

<b>CASE STUDY HARBOURS</b>		
<b>Harbour</b>	<b>Location</b>	<b>Principal Characteristics</b>
4. Clark's Harbour	Southwest Shore - Shelburne County	<ul style="list-style-type: none"> <li>▪ Large and thriving inshore fishing port</li> <li>▪ Large wharf facility operated by harbour authority</li> <li>▪ Substantial repairs and upgrading underway</li> </ul>
5. Liverpool	South Shore - Queens County	<ul style="list-style-type: none"> <li>▪ Larger multi-user port with inshore and offshore fishing fleets, aquaculture sites, ship-building and pulp and paper mill</li> <li>▪ Harbour authority operates inshore fishing wharf while other wharves and marina are privately operated</li> </ul>
6. Sheet Harbour	Eastern Shore - Halifax County	<ul style="list-style-type: none"> <li>▪ New wharf facility owned and operated by First Nation</li> </ul>
7. Big Bras d'Or	Cape Breton – Victoria County	<ul style="list-style-type: none"> <li>▪ Smaller inshore fishing wharf operated by harbour authority</li> <li>▪ Expanding recreational users</li> </ul>
8. Englishtown	Cape Breton - Victoria County	<ul style="list-style-type: none"> <li>▪ Small wharf divested by DFO-SCH to private ownership by local fish harvesters</li> </ul>
9. Pugwash	Northumberland Strait – Cumberland County	<ul style="list-style-type: none"> <li>▪ Small commercial port with fishing fleet and large bulk carrier vessels</li> <li>▪ Fishing wharf managed by harbour authority</li> <li>▪ Growing user pressure on inadequate facilities</li> </ul>

## 2.1. The Social and Cultural Benefits of Harbours and Wharves

The title of this report refers to the idea of wharves as bridges between the land and marine environment without which many activities on the ocean would not be possible. This notion applies as much to social, cultural and recreational activities as it does to fishing and other economic sectors.

One of the main purposes of the case studies was to generate information about the non-economic impacts of wharves and the social and cultural benefits they generate for the life of the surrounding communities. In every case study there were examples given of such contributions, and all the interviewees were positive about this aspect of the facilities they managed. The following are among the key benefits that were identified:

## **1. Boating and Recreational Activities**

Recreational activities on the water – swimming, scuba diving, water-skiing, kayaking, canoeing, cruising, sailing, sports fishing, bird and whale watching, etc. -- are a rapidly expanding element in the quality of life for all citizens in Nova Scotia. We advertise the province to tourists as “Canada’s Ocean Playground” because there is so much to do on the water if people have access to it. Our own citizens are the first and most frequent participants in these activities and they benefit in terms of health and physical fitness, exposure to nature, and expanded awareness of ecological issues. We might also include in this consideration a wide range of educational and research activities that depend on access to the marine environment through our harbours.

The case studies reveal that wharves are the essential infrastructure for many of these activities, and people who live in coastal communities make full use of them for their own benefit as well as for related commercial developments in tourism and recreation. While fishing industry people express some ambivalence about the growing number of actual or potential users for wharves, community leaders are generally in favour of expanding usage and ensuring access to harbour facilities.

## **2. Harbourfront Development Projects**

In three of the harbours considered the communities have undertaken harbourfront development projects with public walkways and commercial development along an extended piece of shoreline. Wharves become integral components of these developments and provide opportunities for passers-by to observe fishermen at work and to interact with them on an informal basis.

### **3. Harbour Festivals**

In three of the communities examined harbour festivals in the summer are major events in the social and cultural life of the community. The festivals include music concerts, picnics, craft fairs, boat tours, dory races and other competitions, dances and special events for children. The festivals can go on for two or three days with major social get-togethers each night and sports activities during the day. In other communities the whole town has a summer festival that makes use of wharves, key examples being the Lunenburg Folk Festival, Chester Race Week, and Privateer Days in Shelburne. Another harbour authority supports an annual mackerel fishing tournament that raises substantial funds for local charities.

### **4. Interactions with First Nations**

Wharves have become important meeting places for Native and non-Native communities around fisheries, aquaculture and other marine activities. In Sheet Harbour a First Nation operates the wharf where many non-Native fishermen have berths and, in the process, the two communities have developed good communications and cooperation. In Harbourville the local First Nation is a key partner in community efforts to take ownership of the harbour. In Digby Neck and Shelburne County Native and non-Native fish harvesters are working side by side in their fishing operations.

## **2.2. Problems in Harbour Management**

The following are the principal issues identified from the case studies regarding problems with the state of wharves facilities and the effectiveness of the current management system.

### **1. Limitations of the Revenue Base for Harbour Authorities**

Most of the harbour authorities contacted reported that their revenues from user fees were adequate to cover ongoing operational and administration costs, but did not cover larger scale capital investments. This situation varied depending on the size of the wharf, number of users and perhaps the wealth of local fisheries. The more typical situation, however, would seem to be that well-managed harbour authorities are self-



sustaining on an operational level but are still dependent on government for major repair, expansion or rebuilding projects.

Information from the case studies corroborates the findings from the analysis of DFO-SCH policies and programs in this report. Most wharves and harbour facilities are well advanced in their useful lifetimes and in many cases substantial repairs are needed just to maintain them in safe working order. It is a daunting challenge, therefore, to find the resources to expand wharves or build new ones to accommodate larger numbers of users, increased vessel sizes in the fishing industry and a more diverse range of commercial and community uses.

## **2. The Capital Funding Process**

Most of the harbour authorities spoke about bureaucratic hurdles and lengthy delays in accessing funding for major repairs and capital projects. They readily and frequently acknowledged the importance of political support from elected officials in these decisions.

DFO-SCH has established policies and procedures to use rigorous criteria to evaluate and prioritize requests for harbour improvement spending. Most stakeholders recognize the need for such an approach to bring fairness and consistency into the decision-making, but many are not sure that the rules are applied evenly. The danger is that going through proper channels may come to be seen as a bureaucratic run-around. There is a need to rebuild the credibility of the whole system through greater transparency and streamlining of procedures.

## **3. Volunteer Burnout**

A theme that emerged from most of the case studies was the problem of volunteer burnout and the limited number of new people willing to take on the onerous responsibilities that come with membership on harbour authorities. In some cases the people who started the first harbour authorities are nearing retirement age and they are having difficulty finding committed people to replace themselves. It appeared that these trends already contribute to low levels of activity in some authorities.

The most negative situations are perhaps found in harbours where the authority has had difficulty accessing the money needed for major repairs and renovations. In three of the case study communities the researchers were told that wharf users were

dissatisfied with repairs done to the wharf under limited budgets and were taking out their frustrations on the members of the harbour authority. Such situations may make it difficult to recruit new members for what are seen as thankless and stressful jobs.

#### **4. Insufficient Allowance for Varying Costs of Facilities in Different Settings**

An adequate and safe wharf is just as essential for a 38' lobster boat fishing 300 traps as it is for a 65' mobile gear vessel that has to unload many tonnes of frozen-at-sea fish. The costs of maintaining a number of local wharf facilities spread over a lengthy coastline for small fleets of inshore vessels may seem prohibitive when compared to the efficiencies of a large centre with high volume landings. When the smaller wharves are also expensive to build and maintain because of local conditions the economics of the situation may seem even more unsustainable to the outside observer.

To build a wharf of a particular capacity may cost considerably more in one location than it will in another depending on local tide conditions and the degree of protection from the sea. Wharves located in sheltered bays or coves may have to withstand the effects of winter freeze-ups or may require frequent dredging. While DFO-SCH officials say that these factors are taken into account, members of harbour authorities continue to believe that the system penalizes communities where wharf construction and repair is more expensive because of conditions beyond the control of the users.

It would appear that fish harvesters generally accept the requirement to pay user fees for access to wharves, and local harbour authorities seem to be quite effective in collecting these revenues from all users and investing them back in the shared facility. However, harvesters in smaller ports fear that they will be expected to pay much higher fees if their wharves are relatively more expensive to maintain due to factors beyond their control. Their greatest worry is that they will be abandoned by government altogether not because they do not have viable fishing enterprises operating out of the community but because their costs to gross earnings ratios are not competitive with other harbours.

#### **5. Safety and Insurance Concerns**

Interviewees identified a number of safety concerns arising from inadequate facilities and tight budgets. In mixed use harbours where inshore and offshore fishing vessels and large bulk carriers are passing through narrow channels, and where the number of

navigation buoys has been reduced, there are concerns about the increasing risk of collisions. Some wharves are overcrowded with boats rafted up together, and this increases risk of fire or storm damage. In the Bay of Fundy the closure of some harbours now means much greater distances to travel for shelter in bad weather, complicated by the fact that most of the harbours are not accessible at low tide.

With increasing number of tourists, recreational boaters and sports fishing activities, the harbour authorities are also concerned about the increasing costs of liability insurance and the possible need to restrict access to the facilities for this reason. It is clear from the case studies that wharves are integral to the life of coastal communities and ways need to be found to ensure that the public continues to have access under safe conditions and without excessive costs to the commercial users.

## **2.3. Solutions**

Interviewees for the case studies identified a number of possible changes to improve the functioning of harbour authorities.

### **1. One-Stop Shopping**

The most frequently mentioned area for improvement in the management of harbours from the community point of view was the need for greater integration and coordination among the many government agencies that have a say in wharf building and maintenance. Harbour authorities describe having to go through delays and frustrations in their efforts to get funding and regulatory approvals from different federal and provincial departments. They frequently identified the need for a one-stop shopping approach with some new structure to coordinate the many different government agencies they have to deal with.

### **2. Capacity Building**

Members of harbour authorities frequently mentioned the need to build the capacities of their organizations through training and more active support from the relevant government agencies. Training in management skills, financial administration and conduct of meetings were identified as priorities. Interviewees also mentioned the idea of having mentors to provide ongoing advice and guidance to harbour authorities.

### **3. Dispute Resolution Services**

There were a number of examples given by interviewees of conflicts among wharf users and community members that undermined the effectiveness of harbour authorities. Management of wharves sometimes requires decisions that benefit some users more than others, and such outcomes may be more frequent when budgets are tight.

Some interviewees suggested that training in conflict management and the provision by DFO-SCH of arbitrators and other dispute settlement experts would help harbour authorities to deal with situations of conflict in more positive and constructive ways.

### **4. More Diversified Uses to Generate Revenues**

Several of the smaller fishing harbours are promoting the expanded use of the wharf by recreational boaters, whale watching businesses and other non-fishing users. The harbour authorities are able to generate revenues from these activities to supplement contributions from the fishing industry. However this approach may create competition for use of wharf space, parking spaces and other facilities unless improvements are made to accommodate the new users. It is also important that there be agreement on this strategy among the primary users to avoid conflict and recriminations.

### **5. Broader Participation in Harbour Authorities**

Stakeholders in harbour communities are generally aware of the importance of the harbour facilities to the local economy and to the social and cultural life of the community. One option to strengthen harbour authorities is to invite participation by representatives of a broader cross-section of stakeholders, including recreational boaters, tourist operators, First Nations groups, recreation councils, conservation groups and agencies of local government.

This strategy is somewhat controversial among people currently active on harbour authorities, particularly leaders in the fishing industry. Many want to maintain the priority on the fishery and worry that this goal will be compromised if other interests gain a more significant say. On the other hand, they recognize that a broader coalition of interests focused on the harbour may generate more leverage to attract new

resources to develop the facilities. The key may be to find the right balance between representation of industrial and other users.

## **6. Cooperation among Harbour Authorities**

While no operational examples were provided, spokespersons for harbour authorities raised the idea of separate authorities in a local area getting together to pool resources for administration and services to save money and improve coordination. They might, for example, be able to provide a full-time job for one person to administer two or three wharves, or they might benefit from bulk purchases of building supplies, insurance services or boat fuel.

Interviewees also suggested that when new harbour authorities are set up they should receive mentoring and support from established authorities, and there should be programs to get harbour authorities together to share best practices and learn from each other.

### 3. PROVINCIAL OVERVIEW

#### 3.1. Demographic Trends & Settlement Patterns

##### 3.1.1. County Level Population Trends

The following table shows population changes for Nova Scotia counties over the 1991 to 2001 period.

**Table 7**

<b>POPULATION CHANGE BY COUNTY AND REGION FOR NOVA SCOTIA, 1991 - 2001</b>					
	<i>1991</i>	<i>1996</i>	<i>2001</i>	<i>% Change 1996-2001</i>	<i>% Change 1991-2001</i>
Central Core					
Halifax Reg. Mun.	330,846	342,966	359,183	4.7%	8.6%
Hants County	37,843	39,483	40,513	2.6%	7.1%
Kings County	56,317	59,193	58,866	-0.6%	4.5%
Colchester County	47,683	49,262	49,307	0.1%	3.4%
Total	472,689	490,904	507,869	3.5%	7.4%
Share	53%	54%	56%		
Southwest-Valley					
Lunenburg County	47,634	47,561	47,591	0.1%	-0.1%
Yarmouth County	27,891	27,310	26,843	-1.7%	-3.8%
Shelburne County	17,343	17,002	16,231	-4.5%	-6.4%
Annapolis County	23,641	22,324	21,773	-2.5%	-7.9%
Digby County	21,250	20,500	19,548	-4.6%	-8.0%

<b>POPULATION CHANGE BY COUNTY AND REGION FOR NOVA SCOTIA, 1991 - 2001</b>					
	<i>1991</i>	<i>1996</i>	<i>2001</i>	<i>% Change 1996-2001</i>	<i>% Change 1991-2001</i>
Queens County	12,923	12,417	11,723	-5.6%	-9.3%
Total	150,682	147,114	143,709	-2.3%	-4.6%
Share	17%	16%	16%		
<b>Mainland Northeast</b>					
Antigonish County	19,226	19,554	19,578	0.1%	1.8%
Cumberland County	34,284	33,804	32,605	-3.5%	-4.9%
Pictou County	49,651	48,718	46,965	-3.6%	-5.4%
Guysborough County	11,724	10,917	9,827	-10.0%	-16.2%
Total	114,885	112,993	108,975	-3.6%	-5.1%
Share	13%	12%	12%		
<b>Cape Breton</b>					
Inverness County	21,620	20,918	19,937	-4.7%	-7.8%
Victoria County	8,708	8,482	7,962	-6.1%	-8.6%
Cape Breton Reg. Mun.	120,098	117,849	109,330	-7.2%	-9.0%
Richmond County	11,260	11,022	10,225	-7.2%	-9.2%
Total	161,686	158,271	147,454	-6.8%	-8.8%
Share	18%	17%	16%		
Nova Scotia	899,942	909,282	908,007	-0.1%	0.9%

Source: Census, Statistics Canada

Three broad conclusions arise from this information:

1. Overall population in the province is stable with less than a 1% growth over the decade and a slight decline in population in the 1996 to 2001 period.
2. Despite the overall stability, settlement patterns within the province are shifting dramatically. The central core of the province (HRM and Hants, Colchester and Kings counties) is expanding significantly, while all other counties with the exception of Antigonish are losing population.
3. In most of the counties that lost population the largest proportion of the change happened in the second half of the 1991 to 2001 decade, suggesting an accelerating rate of decline in those areas.

Halifax Regional Municipality and the immediately surrounding counties are gaining in population while all other regions are losing. The Cape Breton region shows the greatest decline, while individual mainland counties such as Guysborough and Queens have very high rates of depopulation.

Urbanization – the pattern where people are *pulled* into the major cities by the greater economic opportunities there – is one possible explanation for these trends, but there are others. Factors such as the fisheries crisis, the closure of the steel and coal industries in Cape Breton and the fact that higher proportions of youth are finishing high school and going on to post-secondary training, may be *pushing* people away from rural areas. Falling birth rates and the general aging of the population may also be factors.

### 3.1.2. Coastal, Non-Coastal and Urban Zones

For the purposes of this study a special database has been developed using Census Statistics Canada Dissemination Areas that makes it possible to analyze population and other trends for specific areas and clusters of areas (i.e., “zones”) in the province. Table 8 provides an overview of population trends for four zones.



**Table 8**

<b>POPULATION CHANGE BY COASTAL, NON-COASTAL AND URBAN ZONES</b>					
Zone	1991	1996	2001	1996-2001	1991-2001
Cape Breton Urban	69,595	67,900	62,935	-7.30%	-9.60%
% Of Total	7.7%	7.5%	6.9%		
Coastal Rural	268,095	261,990	251,650	-3.90%	-6.10%
% Of Total	29.8%	28.9%	27.7%		
Halifax-Dartmouth-Bedford-Sackville	266,960	320,875	337,283	5.10%	26.30%
% Of Total	29.7%	35.3%	37.2%		
Non-Coastal Rural	294,090	257,205	255,539	-0.60%	-13.10%
% Of Total	32.7%	28.3%	28.2%		
Province	898,740	907,970	907,407	-0.06	0.90%

Source: Census Statistics Canada

The Coastal Rural zone includes all the areas of the province that border the coast, i.e., all coastal communities, except the major urban areas. Over a quarter of a million people live in the coastal zone. It lost 6% of its population over the 1991 to 2001 period, and shrank from 30% to 28% as a proportion of the total population.

The Non-Coastal Rural zone includes all areas of the province, including Cape Breton, not bordering the coast and not part of major urban areas. The population of these areas is now 255,539 people, and it lost 13% of its population over the 1991 to 2001 period. It appears, however, that this loss of population slowed considerably in the second half of the decade.

The Cape Breton Urban zone includes North Sydney, Sydney and New Waterford, and it is seeing the most dramatic population loss – nearly 10% over the two Census periods, most of it in the 1996 – 2001 period.

In stark contrast, the Halifax-Dartmouth-Bedford-Sackville urban zone has grown by a quite remarkable 26% over the period, the most significant growth occurring in the 1991 – 1996 period. As evident in Table 7, HRM as a whole grew steadily over the

decade, suggesting that growth over the 1996 to 2001 period was more pronounced in the rural parts of the Region than in the urban core. This in turn may reflect the trend to “urban sprawl” whereby new commuter communities proliferate the rural areas surrounding larger metropolitan centres.

This data suggests that, taken as a whole, the coastal rural zone is not experiencing as dramatic a loss of population as might have been thought on the basis of the county level analysis.

### 3.1.3. Migration Patterns

In thinking about these changing settlement patterns it is useful to consider the extent to which population changes result from movement within the province or from immigration from outside. The following table looks at the population over the age of five in Nova Scotia in 2001 and describes how many were “migrants”, i.e., people who were not living in the same Census Sub-Division, or in Canada, five years earlier.

**Table 9**

<b>NOVA SCOTIA 5-YEAR MOBILITY STATUS, 2001</b>							
	<b>Total Pop</b>	<b>Migrants</b>	<b>Migrants % Total</b>	<b>External</b>	<b>Intra Provincial</b>	<b>Inter Provincial</b>	<b>Intra- Provincial as % Total Migrants</b>
Cape Breton Urban	62,885	3,245	5%	160	1,395	1,660	43%
Coastal Rural	243,780	26,330	11%	1,665	16,330	8,035	62%
Hfx-Dart-Bed-Sack	296,990	58,460	20%	5,895	27,300	24,995	47%
Non-Coastal Rural	238,360	36,465	15%	1,570	22,550	12,150	62%
<b>Province</b>	<b>841,985</b>	<b>124,470</b>	<b>15%</b>	<b>9,280</b>	<b>67,575</b>	<b>52,965</b>	<b>54%</b>

**Source: 2001 Census, Statistics Canada**

Table 9 reveals that 124,000 Nova Scotians, 15% of the total population over five years of age, were migrants in the 1996 to 2001 period. Of these over 9,000 were immigrants from outside Canada and nearly 53,000 had moved to Nova Scotia from other provinces. Perhaps most interestingly, there were over 67,000 people who had changed communities within Nova Scotia.

The drawing power of the Halifax urban area is evident. 64% of immigrants from outside Canada and 47% of people moving in from other provinces were residing in the city. Over 27,000 people, or 40% of intra-provincial migrants, had moved into the city from other parts of Nova Scotia.

However, it is also apparent that the rural areas are drawing population within the province. Some 39,000 Nova Scotians migrated to rural communities and 62% of migrants living in rural areas were people who had moved from one community to the other within the province. These trends must reflect to some extent an urban to rural shift that is running counter to the predominant urbanization tide, but the data does not allow us to be more specific.

This information on migration adds to the general picture of great dynamism in settlement patterns within the province.

### 3.1.4. The Community Level Trends in the Coastal-Rural Zone

The following table divides the coastal-rural zone into 77 harbour clusters centred on one or more identifiable coastal community, and describes the population changes for each. In the table the communities are sorted according to the degree of change. When interpreting this table it is important to remember that for very small communities the arrival or departure of only a few people can generate a significant percentage change. (For example, in Pleasant Bay the net loss of 122 people between 1991 and 2001 resulted in a 32 % fall in population.)

**Table 10**

<b>POPULATION CHANGE BY COASTAL COMMUNITY, 1991 - 2001</b>					
<b>Harbour Community Cluster</b>	<b>1991</b>	<b>1996</b>	<b>2001</b>	<b>Change 1996-2001</b>	<b>Change 1991-2001</b>
<i>Significant Growth: &gt;5%</i>					
Chezzetcook Lawrencetown	14,770	16,325	18,139	11.1%	22.8%
Eskasoni	2,620	2,930	3,179	8.5%	21.3%
Whycocomagh	950	1,085	1,136	4.7%	19.6%

<b>POPULATION CHANGE BY COASTAL COMMUNITY, 1991 - 2001</b>					
<b>Harbour Community Cluster</b>	<b>1991</b>	<b>1996</b>	<b>2001</b>	<b>Change 1996-2001</b>	<b>Change 1991-2001</b>
Antigonish Harbour	820	920	955	3.8%	16.5%
Prospect-Peggy's Cove	5,715	6,115	6,160	0.7%	7.8%
Pomquet-Tracadie Afton	2,300	2,325	2,477	6.5%	7.7%
St. Margaret's Bay	5,055	5,255	5,411	3.0%	7.0%
Harbourville Halls Harbour	5,070	5,465	5,426	-0.7%	7.0%
<b><i>Slight to Moderate Growth: .1 to 5%</i></b>					
Musquododoboit-Clam Harbour	4,645	4,805	4,869	1.3%	4.8%
West LaHave Green Bay	2,715	2,625	2,814	7.2%	3.6%
Tatamagouche	1,425	1,470	1,470	0.0%	3.2%
Woods Harbour-Shag Harbour-Bear Point	2,640	2,720	2,704	-0.6%	2.4%
Blomidon Scots Bay	11,585	11,805	11,765	-0.3%	1.6%
Tancook-Chester	4,200	4,215	4,260	1.1%	1.4%
Northport-Amherst Shore	1,575	1,685	1,590	-5.6%	1.0%
Tor Bay - Port Felix	950	895	958	7.0%	0.8%
Port Maitland-Cape St. Marys	2,025	2,000	2,042	2.1%	0.8%
<b><i>Slight to Moderate Decline: .1 to 5%</i></b>					
Blandford Peninsula	2,660	2,415	2,648	9.6%	-0.5%
Pubnico	2,805	2,785	2,781	-0.1%	-0.9%

<b>POPULATION CHANGE BY COASTAL COMMUNITY, 1991 - 2001</b>					
<b>Harbour Community Cluster</b>	<b>1991</b>	<b>1996</b>	<b>2001</b>	<b>Change 1996-2001</b>	<b>Change 1991-2001</b>
Arisaig-Cape George	960	965	946	-2.0%	-1.5%
Minas Basin South	12,525	12,605	12,336	-2.1%	-1.5%
Baddeck-West Bras d'Or Lake	2,645	2,680	2,604	-2.8%	-1.6%
Pugwash	1,945	1,920	1,896	-1.3%	-2.5%
South Bras d'Or Lake	575	580	560	-3.4%	-2.6%
Creignish-Judique	1,560	1,440	1,517	5.3%	-2.8%
Minas Basin North	5,405	5,230	5,242	0.2%	-3.0%
Riverport-East LaHave	2,355	2,310	2,278	-1.4%	-3.3%
Yarmouth	12,355	12,175	11,941	-1.9%	-3.4%
Wallace Malagash	805	760	774	1.8%	-3.9%
Port Lorne	6,390	6,510	6,143	-5.6%	-3.9%
Lunenburg	5,040	4,935	4,837	-2.0%	-4.0%
Merigomish Lismore	1,760	1,785	1,684	-5.7%	-4.3%
Mabou	3,060	3,000	2,927	-2.4%	-4.3%
<b><i>Significant Decline: 5.1 to 10%</i></b>					
Inverness Margaree	3,165	2,995	2,995	0.0%	-5.4%
Meteghan	4,400	4,270	4,154	-2.7%	-5.6%
Bay St. Lawrence	610	590	575	-2.5%	-5.7%

<b>POPULATION CHANGE BY COASTAL COMMUNITY, 1991 - 2001</b>					
<b>Harbour Community Cluster</b>	<b>1991</b>	<b>1996</b>	<b>2001</b>	<b>Change 1996-2001</b>	<b>Change 1991-2001</b>
Sheet Harbour	3,830	3,815	3,610	-5.4%	-5.7%
Port Hawkesbury	4,940	4,735	4,653	-1.7%	-5.8%
Cape Negro-Barrington Passage	3,210	3,155	3,019	-4.3%	-6.0%
Cape Sable Island	3,530	3,450	3,312	-4.0%	-6.2%
Monastery-Havre Boucher-Aulds Cove	2,325	2,325	2,172	-6.6%	-6.6%
Big Pond - East Bay	4,840	4,915	4,503	-8.4%	-7.0%
Pictou	20,915	20,775	19,448	-6.4%	-7.0%
Argyle-Tusket	1,390	1,325	1,290	-2.6%	-7.2%
Saulnierville	6,590	6,400	6,115	-4.5%	-7.2%
River John - Pictou Island	2,885	2,805	2,664	-5.0%	-7.7%
Wedgeport-Pinkneys Point	4,955	4,750	4,574	-3.7%	-7.7%
Western Shore-Indian Point	3,675	3,530	3,390	-4.0%	-7.8%
St. Peter's	5,795	5,740	5,345	-6.9%	-7.8%
Digby-Bear River	5,260	5,080	4,831	-4.9%	-8.2%
Point Tupper-Louisdale	1,130	1,120	1,032	-7.9%	-8.7%
St. Ann's Bay - Boularderie-Big Bras d'Or	1,680	1,685	1,532	-9.1%	-8.8%
Port Mouton - Port Joli	1,465	1,445	1,335	-7.6%	-8.9%
North Sydney-Alder Point	23,165	22,725	21,105	-7.1%	-8.9%

<b>POPULATION CHANGE BY COASTAL COMMUNITY, 1991 - 2001</b>					
<b>Harbour Community Cluster</b>	<b>1991</b>	<b>1996</b>	<b>2001</b>	<b>Change 1996-2001</b>	<b>Change 1991-2001</b>
Mulgrave	1,380	1,275	1,256	-1.5%	-9.0%
Shelburne	3,890	3,780	3,524	-6.8%	-9.4%
Neil's Harbour	545	545	493	-9.5%	-9.5%
Ingonish	1,385	1,285	1,250	-2.7%	-9.7%
<b><i>Very Significant Decline: 10 to 15%</i></b>					
Cap Le Moine-Chéticamp	3,505	3,355	3,150	-6.1%	-10.1%
Port Bickerton	1,260	1,260	1,126	-10.6%	-10.6%
Port Medway-Liverpool	8,135	7,840	7,263	-7.4%	-10.7%
Cape Chignecto	5,060	4,850	4,506	-7.1%	-10.9%
Isle Madame	4,335	4,165	3,848	-7.6%	-11.2%
Lockeport - Jordan	3,000	2,820	2,662	-5.6%	-11.3%
Sambro-Herring Cove	3,950	3,365	3,491	3.7%	-11.6%
Port Hébert	495	490	437	-10.8%	-11.7%
Guysborough	1,715	1,640	1,504	-8.3%	-12.3%
Glace Bay - Main-à-Dieu	23,065	22,100	20,140	-8.9%	-12.7%
Gabarus-Louisbourg	2,940	2,835	2,542	-10.3%	-13.5%
Liscombe - Ecum Secum	735	675	635	-5.9%	-13.6%

<b>POPULATION CHANGE BY COASTAL COMMUNITY, 1991 - 2001</b>					
<b>Harbour Community Cluster</b>	<b>1991</b>	<b>1996</b>	<b>2001</b>	<b>Change 1996-2001</b>	<b>Change 1991-2001</b>
<i>Severe Population Losses: &gt;15%</i>					
Digby Neck	2,245	2,070	1,890	-8.7%	-15.8%
Dingwall	755	710	606	-14.6%	-19.7%
Canso	2,540	2,245	1,962	-12.6%	-22.8%
Wreck Cove Tarbot	515	460	377	-18.0%	-26.8%
Cornwallis Annapolis Granville	5,650	3,855	3,927	1.9%	-30.5%
Pleasant Bay	380	335	258	-23.0%	-32.1%
Country Harbour Isaac's Harbour <sup>28</sup>	1,610	1,455	986	-32.2%	-38.8%

Source: Census, Statistics Canada

Eight coastal-rural communities in Nova Scotia showed significant growth over the period. Four of these communities contain First Nations where the birth rate is known to be higher than average. Three other communities are immediately adjacent to Halifax and are influenced by “urban sprawl”.

Nine coastal communities had slight-to-moderate growth. These included communities in all parts of mainland Nova Scotia. It is worth noting the number of communities such as Minas Basin North, West LaHave Green Bay, and Northport Amherst Shore in which patterns of growth or decline in the 1991 to 1996 period are reversed in the 1996 to 2001 period. This again points to the problem of statistical analysis with very small communities, but it may also reflect the current social and economic instabilities in many areas.

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<sup>28</sup> NB: Country Harbour had a significant boundary shift for the 2001 Census and lost area and population to Tor Bay - Port Felix. However, the two areas together lost 24% of the combined population over the 1991 to 2001 period and might still be said to be “in crisis”.



Sixteen coastal communities experienced slight to moderate population losses over the decade. It is important to note that this category includes a number of economically important harbour-towns, including Pugwash, Yarmouth, Lunenburg and Sheet Harbour.

Twenty-five coastal areas show significant declines (from 5.1 to 10%) over the period. Nine of these communities are in Cape Breton, including the industrial region of Port Hawkesbury-Point Tupper (with Mulgrave across the Strait). There are also the large harbour towns of Shelburne and Pictou and a number of smaller areas with important fishing communities including Inverness, Meteghan, Barrington Passage, Cape Sable, Wedgeport, Neil's Harbour, etc.

Twelve coastal areas show very significant population losses of 10 to 15%. It is important to note that nine of these communities had sizable groundfish plants that are now closed altogether or operating at greatly reduced levels, including what were the four largest fish processing centres in Cape Breton – Glace Bay, Chéticamp, Louisburg and Isle Madame.

The final category is labelled “severe population losses”, i.e., those coastal areas that have lost more than 15% of their populations over the decade. It is assumed that such areas may lose their social and economic viability in terms of maintaining services and supporting healthy, independent communities. Three of the areas are very small – less than 800 people – and people may be relocating within their local areas. The larger communities of Digby Neck and Canso have been dramatically impacted by changes in the fishery while Cornwallis lost the military base as a major employer.

### 3.1.5. General Comments on Population Trends

We can draw some general observations from the data on population shifts by harbour cluster:

1. The major fishery dependent harbour communities of Nova Scotia are losing population at rates that vary from moderate to crisis levels, with the majority at the more serious end of the scale. These trends have significant implications in terms of current and future availability of human resources for the fishing industry. The fishery is still a critical element of the provincial economy, but will people continue to live in fishing communities that are

shrinking and that may therefore fall further behind the urban areas in terms of services and amenities?

2. Communities that in the past were heavily dependent on catching and processing groundfish appear to have lost population to a significant degree. This may indicate that adjustment programs did promote labour force mobility, but that they had little success in stimulating local economic development or diversification.
3. The production of offshore gas does not seem to have had much impact on the coastal areas where the gas comes ashore, although it may have some influence on the positive trends in the Antigonish area.
4. The rapid expansion of Halifax-Dartmouth is having ripple effects along the coast and inland, with some of the fastest growing rural areas being those that are within commuting distance of the city.
5. Nova Scotia displays demographic trends that are consistent with other Atlantic Provinces and, indeed, with Canada: urbanization, an aging population, and a declining birthrate. It may be in fact that these trends are more pronounced in our region. The specific feature that appears to drive the changing settlement patterns in Nova Scotia, and to distort to some degree the province's overall population dynamics, is the dramatic decline in the industrial Cape Breton area. That, together with the lingering effects of the groundfish collapse, creates a much more negative scenario in Cape Breton as a whole, and in rural Nova Scotia generally.

### 3.1.6. Understanding Population Change Trends

During this project five experts in population dynamics, community development and regional economic development were consulted for advice on how to categorize changes in community population in terms of “significant” growth or decline, or

being “in crisis”. All were comfortable with the categories used above, although none were aware of any “scientific” basis for making such judgments.

Mr. Ray Bollman, Statistics Canada’s lead analyst on rural population issues, sent the following interesting observations reflecting overall trends in Canada and the specificities of the Nova Scotia situation:

Communities within commuting distance of bigger places are growing and communities dependent upon the more-traditional resource industries (logging - mining - fishing - agriculture) are declining -- BECAUSE they cannot find something new to export at a fast enough pace to compensate for the decline in labour needed to export more and more lumber, nickel, fish, wheat, etc. Some communities are becoming retirement-destination communities, but in general, bedroom communities are growing and resource-dependent communities are declining.

*Regarding the question of the ‘critical threshold in terms of population loss’ ....I do not know of any data / studies that indicates a threshold in terms of population loss or in terms of minimum population size -- I suspect that the threshold keeps changing - in the same way that the size of the threshold market to support an NHL team has changed over time.*

*One way to establish a cut-point is to ponder the idea that "competitiveness" is growing your market share -- thus, if a N.S. community were "competing" in the N.S. market for people, then to be competitive, it would want to grow its population more than the N.S. rate of growth... With this line of pondering, then all "uncompetitive" communities can see the writing on the wall . . . and all uncompetitive communities are at some point of the continuum from “c”risis to “C”risis . . .*

*It is interesting that county population loss appears greater than population loss on the coast -- which [may mean] that, within each county, the coastal communities are faring better than communities away from the coast -- I am not surprised -- I would have thought that the demand for coastal residences would make coastal communities more "competitive".*

## 3.2. The Age Factor

Table 11 shows changes in average age for the four zones of Nova Scotia.

**Table 11**

<b>CHANGES IN AVERAGE AGE BY ZONE, 1991 - 2001</b>					
	<i>1991</i>	<i>1996</i>	<i>2001</i>	<i>Change 1996-2001</i>	<i>Change 1991-2001</i>
Coastal Rural	36.2	37.7	40.2	+2.5 yrs	+ 4.0 yrs
Non Coastal Rural	34.8	35.9	38.5	+2.6 yrs	+3.7 yrs
Cape Breton Urban	36.1	37.2	40.1	+2.9 yrs	+ 4.0 yrs
Halifax-Dartmouth	33.2	34.4	36.4	+ 2.0 yrs	+3.2 yrs
Province	34.8	36.0	38.3	+2.3 yrs	+3.5 yrs

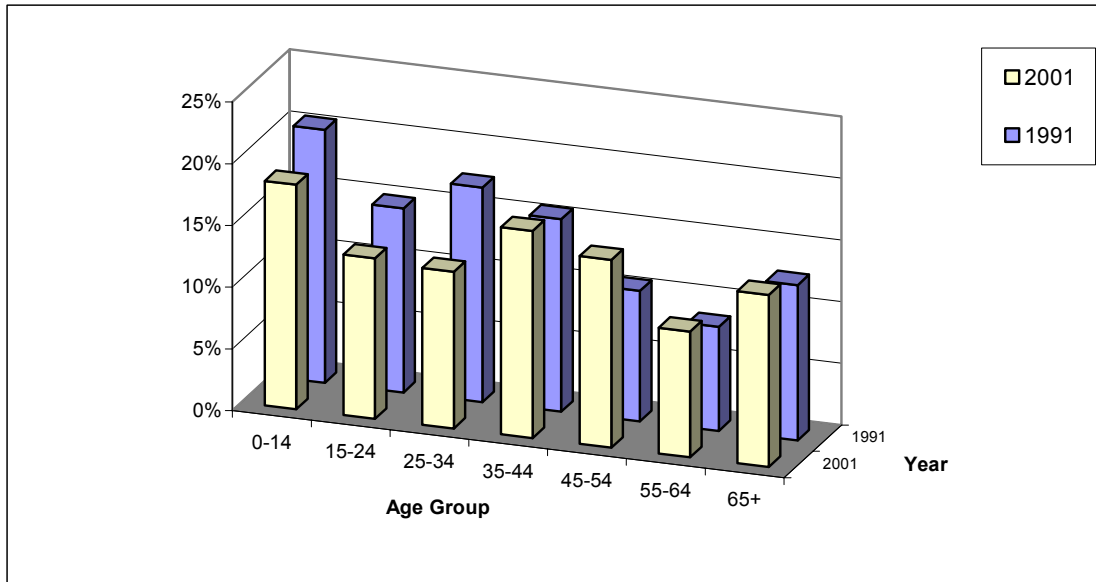
Source: Census, Statistics Canada

The overall population of Nova Scotia was, on average, 3.5 years, or 10%, older in 2001 than in 1991. The average age of people living in coastal communities was 1.4 years older than the provincial average to start with, and the gap grew to 1.9 years by 2001. The four-year increase in the average age of the population over the 1991 to 2001 period in the coastal rural zone and in urban Cape Breton is particularly striking.

In general, then, the population in coastal areas of Nova Scotia is older and the age profile is shifting more rapidly than in urban areas, although the overall provincial population is growing older at a significant rate. This has particular significance in terms of health care and human services issues, and in terms of future labour force dynamics.

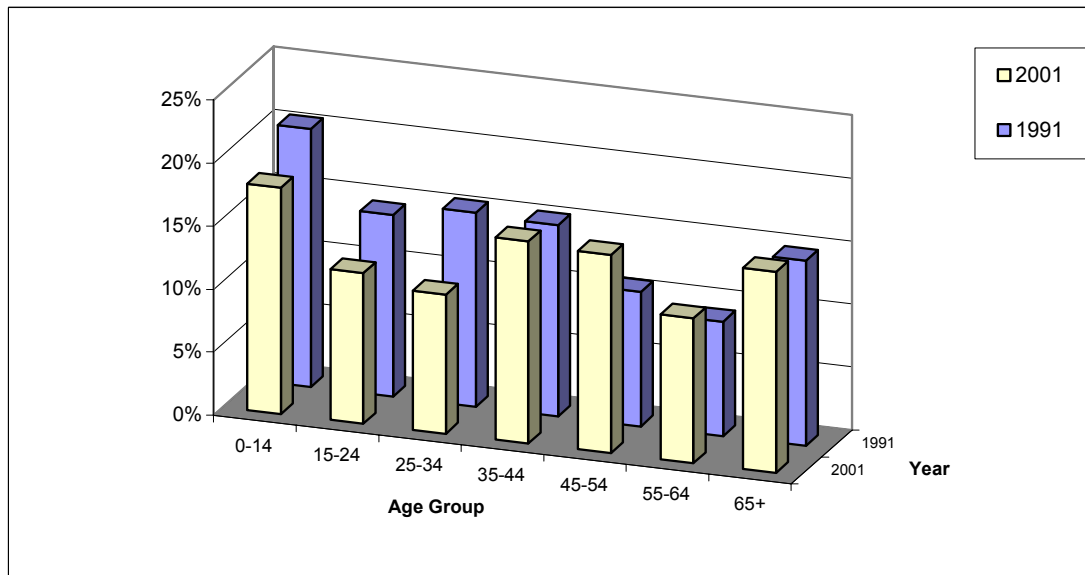
The following graph shows changes in the age group makeup of the Nova Scotia population from 1991 to 2001. (The darker shaded columns represent the year 1991 and the lighter columns in front, 2001).

**Figure 2 - Changes in Age Groups as Percent of Nova Scotia Population, 1991 - 2001**



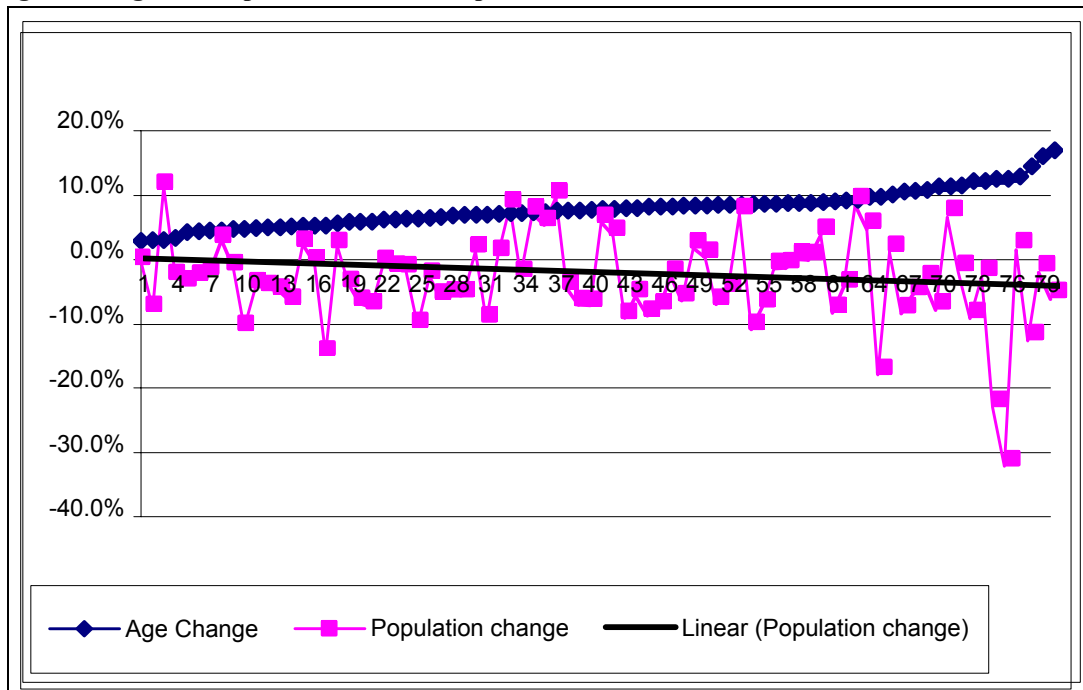
The fall in the proportion of population that is under 24, and the increased proportions of older people, are quite evident in the graph. For coastal areas the trends are much more pronounced:

**Figure 3 - Changes in Age Groups as Percent of Coastal Zone, 1991 - 2001**



The trend for population by age groups for the coastal zone follows the same pattern with a more pronounced loss of younger people and slightly greater changes on the older end of the scale.

**Figure 4 - Age and Population Relationship in Coastal Zone, 1996 - 2001**



An interesting question is whether the changing age profile in itself is a cause of population loss in coastal communities, i.e., is mortality growing faster than the birthrate, or is the age profile changing simply because so many younger people are leaving. Both these factors could be true, and Figure 4 suggests a strong relationship between age and population loss.

In the graph, the upper solid line represents the percent of age change for each coastal community, distributed from the communities with the least change on the left side of the graph to those with the most change on the right side. The zigzag line shows the population changes by percent for the same communities, and the lower straight line is the mathematically generated trend line for population change. What the graph shows, in essence, is that those communities that had the greatest degree of aging, in terms of changes in average age between 1996 and 2001, also tended to have the greatest loss of population – i.e., the communities that are losing the most population are aging the fastest (and vice versa).

Aging and population loss are mutually reinforcing trends that may accelerate over time and, taken together, will significantly affect the social and economic viability of communities.

### 3.3. Labour Force Trends

The following table presents Census Canada data on changes in the employed labour force for the four zones of Nova Scotia.

**Table 12**

<b>CHANGES IN SIZE OF EMPLOYED LABOUR FORCE, 1991 – 2001</b>					
	<b>1991</b>	<b>1996</b>	<b>2001</b>	<b>Change 96 - 01</b>	<b>Change 91 - 01</b>
Coastal - Rural	102,950	95,945	98,460		
Share of NS Total	26%	25%	24%	3%	-4%
Non-Coastal Rural	129,210	105,485	110,230		
Share of NS Total	33%	28%	27%	4%	-15%
Cape Breton Urban	22,715	20,805	20,430		
Share of NS Total	6%	5%	5%	-2%	-10%
Halifax-Dartmouth- Bedford- Sackville	134,820	157,625	172,950		
Share of NS Total	35%	41%	43%	10%	28%
Total Nova Scotia	389,695	379,860	402,070	6%	3%

**Source: Census Canada**

This data indicates that the rural coastal region experienced a 4% loss in employed people over the decade, while the non-coastal rural zone had a 15% decline in the employed labour force. There was, however, a substantial recovery in both rural zones in the 1996 to 2001 period. As a proportion of total provincial employment, the coastal rural share fell from 26% to 24% over the decade, while the non-coastal rural share fell more sharply from 33% to 27%. The employed labour force in the Halifax urban zone grew dramatically, obviously drawing in workers from all over the province.

The following table presents changes in the size of the employed labour force by harbour cluster, allowing us to compare labour force changes with the population trends depicted in the table above.

**Table 13**

<b>EMPLOYED LABOUR FORCE BY HARBOUR CLUSTER, 1991 - 2001</b>				
<b>Harbour Cluster</b>	<b>Employed Labour Force</b>			<b>% Change</b>
	<b>1991</b>	<b>1996</b>	<b>2001</b>	<b>1991 - 2001</b>
<b><i>Significant Growth - &gt; 5%</i></b>				
Eskasoni	575	825	905	57.4%
Pomquet - Afton - Tracadie	975	1,110	1,275	30.8%
Chezzetcook - Lawrencetown	7,940	8,440	9,910	24.8%
West LaHave - Green Bay	1,155	1,345	1,385	19.9%
Whycocomagh	315	425	370	17.5%
Northport - Amherst Shore	715	775	835	16.8%
Arisaig - Cape George	425	490	495	16.5%
Prospect - Peggy's Cove	3,625	4,105	4,200	15.9%
St. Margaret's Bay	2,555	2,825	2,920	14.3%
Harbourville - Halls Harbour	2,505	2,650	2,730	9.0%
Cape Negro - Barrington Passage	1,435	1,490	1,560	8.7%
Tatamagouche	550	575	595	8.2%
Creignish - Judique	675	670	720	6.7%
Havre Boucher - Auld's Cove	985	1,140	1,040	5.6%
<b><i>Slight to Moderate Growth - 1% to 5%</i></b>				
Woods Harbour - Shag Harbour	1,260	1,320	1,315	4.4%
Riverport - East LaHave	1,050	1,060	1,090	3.8%
Mabou	1,345	1,430	1,395	3.7%
Lunenburg	2,125	2,130	2,190	3.1%



<b>EMPLOYED LABOUR FORCE BY HARBOUR CLUSTER, 1991 - 2001</b>				
<b>Harbour Cluster</b>	<b>Employed Labour Force</b>			<b>% Change</b>
	<b>1991</b>	<b>1996</b>	<b>2001</b>	<b>1991 - 2001</b>
Argyle - Tusket	605	530	620	2.5%
Blandford Peninsula	1,325	1,160	1,355	2.3%
Port Bickerton	475	540	485	2.1%
Tancook - Chester	2,015	1,960	2,045	1.5%
Minas Basin North	2,650	2,555	2,680	1.1%
<b><i>Slight to Moderate Decline - 0% to -5%</i></b>				
Wallace - Malagash	345	300	345	0.0%
Musquodoboit - Clam Harbour	2,270	2,265	2,260	-0.4%
Wedgeport - Pinkney's Point	2,280	2,295	2,265	-0.7%
Blomidon - Scots Bay	5,680	5,990	5,640	-0.7%
Sambro - Herring Cove	3,215	3,050	3,160	-1.7%
Cape Sable Island	1,815	1,715	1,775	-2.2%
Merigomish - Lismore	860	780	840	-2.3%
Yarmouth	5,655	5,345	5,520	-2.4%
Minas Basin South	5,815	5,625	5,675	-2.4%
Digby - Bear River	2,295	2,240	2,225	-3.1%
Point Tupper - Louisdale	490	485	475	-3.1%
Antigonish Harbour	470	435	455	-3.2%
Port Lorne	2,820	2,855	2,725	-3.4%
Baddeck - West Bras d'Or Lake	1,125	1,130	1,080	-4.0%
St. Peter's	2,305	2,350	2,210	-4.1%
Port Hawkesbury	2,495	2,230	2,385	-4.4%
Pictou	10,030	9,710	9,565	-4.6%

<b>EMPLOYED LABOUR FORCE BY HARBOUR CLUSTER, 1991 - 2001</b>				
<b>Harbour Cluster</b>	<b>Employed Labour Force</b>			<b>% Change</b>
	<b>1991</b>	<b>1996</b>	<b>2001</b>	<b>1991 - 2001</b>
Guysborough	745	690	710	-4.7%
Big Pond - East Bay	2,310	2,295	2,200	-4.8%
Shelburne	1,825	1,655	1,735	-4.9%
<b><i>Significant Decline -5% to - 10%</i></b>				
Pubnico	1,435	1,410	1,360	-5.2%
Digby Neck	920	910	870	-5.4%
Mulgrave	625	605	590	-5.6%
Sheet Harbour	1,510	1,590	1,425	-5.6%
Cap Le-Moine - Chéticamp	1,740	1,735	1,625	-6.6%
Gabarus - Louisbourg	1,305	1,330	1,190	-8.8%
Bay St. Lawrence	270	260	245	-9.3%
South Bras d'Or Lake	270	260	245	-9.3%
Cape Chignecto	2,045	1,950	1,845	-9.8%
<b><i>Very Significant Decline -10% to - 15%</i></b>				
North Sydney - Alder Point	9,400	8,670	8,425	-10.4%
Port Medway - Liverpool	3,590	3,455	3,210	-10.6%
Pugwash	840	830	750	-10.7%
Canso	1,145	1,015	1,020	-10.9%
Saulnierville	3,285	3,030	2,920	-11.1%
Western Shore - Indian Point	1,700	1,505	1,505	-11.5%
Port l'Hébert	215	210	190	-11.6%
Meteghan	2,395	2,065	2,105	-12.1%
Wreck Cove - Tarbot	265	230	230	-13.2%

<b>EMPLOYED LABOUR FORCE BY HARBOUR CLUSTER, 1991 - 2001</b>				
<b>Harbour Cluster</b>	<b>Employed Labour Force</b>			<b>% Change</b>
	<b>1991</b>	<b>1996</b>	<b>2001</b>	<b>1991 - 2001</b>
Glace Bay - Main-à-Dieu	8,935	8,075	7,710	-13.7%
Isle Madame	1,910	1,740	1,645	-13.9%
Port Maitland - Cape St. Marys	1,045	970	895	-14.4%
Inverness - Margaree	1,415	1,160	1,205	-14.8%
<b><i>Severe Population Losses - &gt; 15% Decline</i></b>				
St. Ann's Bay - Boularderie	865	800	735	-15.0%
Ingonish	730	635	620	-15.1%
Lockeport - Jordan	1,480	1,315	1,250	-15.5%
River John - Pictou Island	1,600	1,420	1,340	-16.3%
Port Mouton - Port Joli	650	645	540	-16.9%
Neil's Harbour	255	230	210	-17.6%
Tor Bay - Port Felix	395	310	325	-17.7%
Dingwall	395	280	305	-22.8%
Liscombe - Ecum Secum	315	285	210	-33.3%
Country Harbour - Isaac's Harbour	640	535	410	-35.9%
Cornwallis - Annapolis	3,070	1,630	1,735	-43.5%
Pleasant Bay	220	135	110	-50.0%

**Source: Census, Statistics Canada**

Here we find the data shows less definite trends than in the case of population shifts, in part because with the smaller numbers in the labour force a small change in absolute actual numbers can have a significant impact in percentage terms.

It does appear to be the case, however, that in some of the major fishing communities the loss of employment has not been as severe as the loss in population, suggesting that the fishing economy is more stable than perhaps expected.

Clearly, however, the communities that are “in crisis” in terms of population loss are also losing jobs, although it is not possible to determine from these data what is the cause and what is the effect.

### 3.4. Harbour-Related Employment

Statistics Canada makes data available on the employment in two forms: employment by occupation and employment by industry. In analyzing these data it is possible to distinguish two levels of employment that are relevant to this study:

- *Wharf User Occupations*: i.e., jobs that involve active and frequent use of harbours and wharf infrastructure. These include fishing, fish processing, aquaculture, marine transportation, offshore oil and gas exploration and development, bulk shipping and vessel-dependent mining and quarrying, and ship and boat building.
- *Harbour Dependent Employment*: i.e., jobs that benefit significantly from access to, or the presence of, active harbours. These include the tourism industry generally, including transportation, hotels and hospitality services in coastal communities, petroleum refining and processing, the pulp and paper industry, and private and public services associated with marine industries.

The figures presented below on employment by industry and occupation should be considered as very conservative estimates. They do not, for example, include the substantial employment in public services related directly or indirectly to harbours (Fisheries and Oceans, the Coast Guard, Department of Environment, etc.) because it is not possible to separate out the particular jobs that are impacted by harbours.

### 3.4.1. Employment by Occupation

The following table presents an estimate of harbour-related employment in Nova Scotia based on Census data.

**Table 14**

<b>HARBOUR DEPENDENT EMPLOYMENT BY OCCUPATION, NOVA SCOTIA</b>			
	<b>1991</b>	<b>2001</b>	<b>% Change</b>
<b><i>Harbour User Occupations - Total</i></b>	<b><i>23,150</i></b>	<b><i>18,185</i></b>	<b><i>-21%</i></b>
Fishing vessel skippers & fishermen	6,715	6,780	1%
Fishing vessel deckhands	2,740	1,660	-39%
Fish plant workers	5,475	2,120	-61%
Labourers in fish processing	1,680	2,455	46%
Deck crew, water transport	1,220	830	-32%
Aquaculture – Operators & managers	150	130	-13%
Aquaculture & marine harvesters labourers	495	405	-18%
Other	5,895	4,635	-21%
<b><i>Harbour Dependent Occupations - Total</i></b>	<b><i>25,275</i></b>	<b><i>26,625</i></b>	<b><i>5%</i></b>
Tourism, Accommodation & Services	21,795	23,050	6%
Pulp & paper industry	1,285	1,460	14%
Other	2,195	2,115	-4%
<b><i>Total – Harbour User &amp; Harbour Dependent Occupations</i></b>	<b><i>48,425</i></b>	<b><i>44,810</i></b>	<b><i>-7%</i></b>

Source: Census, Statistics Canada

The data reveals that in 2001 in Nova Scotia over 18,000 people were employed in occupations that made regular and direct use of harbours and wharf facilities, while an additional 26,000 people worked in occupations that depend on, and benefit significantly from, harbours. Overall employment in all harbour related occupations shrank by 7% over the 1991 to 2001 period, but within that larger trend the harbour user jobs shrank by 21% while dependent occupations grew by 5%.

Among harbour user occupations, significant job losses were registered for fishing vessel deckhands, fish plant workers, deck crew in water transport and aquaculture workers and operators. Significant gains were made for labourers in fish processing but this may reflect variations in the way workers in the two occupations were classified rather than actual changes in the workplace. Total employment in fish processing in the province – “plant workers” and “labourers” – fell from 7,155 to 4,575, a still very significant decline of 36% reflecting the devastating impacts of the groundfish collapse.

### 3.4.2. Employment by Industry

Statistics Canada data on employment by industry presents a broader picture of overall employment in sectors that depend directly or indirectly on harbours. These figures include everyone who works in an industry such as fishing or tourism regardless of their specific occupation, and therefore picks up more people than the occupational data. The following table shows the changes in employment by industry from 1991 to 2001.

**Table 15**

<b>HARBOUR DEPENDENT EMPLOYMENT BY INDUSTRY BY GENDER<sup>29</sup></b>			
	<b>Male</b>	<b>Female</b>	<b>Total</b>
<b><i>Harbour User Industries Total</i></b>	<b><i>15,950</i></b>	<b><i>4,755</i></b>	<b><i>20,700</i></b>
Fishing	8,930	1,105	10,035
Seafood Processing	3,765	3,105	6,870

<sup>29</sup> Source: Statistics Canada, Census 2001. It is not possible to give the comparison with 1991 for these data because different classifications were used in the different census rounds. The figures in the columns do not add up exactly because of rounding of numbers.

<b>HARBOUR DEPENDENT EMPLOYMENT BY INDUSTRY BY GENDER<sup>29</sup></b>			
	<b>Male</b>	<b>Female</b>	<b>Total</b>
Ship & Boat Building	1,425	175	1,600
Water Transportation	970	235	1,195
Other	860	135	1,000
<b><i>Harbour Dependent Industries Total</i></b>	<b><i>14,955</i></b>	<b><i>22,240</i></b>	<b><i>37,200</i></b>
Tourism, Accommodation & Services	11,255	21,745	33,005
Pulp & Paper industry	2,120	315	2,435
Other	1,580	180	1,760
<b><i>Total</i></b>	<b><i>30,905</i></b>	<b><i>26,995</i></b>	<b><i>57,900</i></b>

Source: Census, Statistics Canada

In 2001, some 58,000 people were employed in harbour related industries. Of these, 53% were males and 47% female. Nearly 21,000 people were employed in industries that make regular use of harbour facilities, and 77% of them were male. Female employment is more heavily concentrated in service sector industries such as tourism that depend on harbours, the exception being fish processing where over 3,000 women are employed making up 45% of the labour force.

### 3.4.3. Overview of Harbour Related Employment

In terms of employment by industry the following table gives the general picture for Nova Scotia in 2001:

**Table 16**

<b>TOTAL EMPLOYMENT, AND HARBOUR RELATED EMPLOYMENT, BY INDUSTRY, 2001</b>		
	<b>Number</b>	<b>% Of Total</b>
Total Employed Labour Force	402,070	100%
Harbour User Employment	20,700	5%
Harbour Dependent Employment	37,200	9%
All Harbour Related Employment	57,900	14%

Source: Census, Statistics Canada

In considering this data we should bear in mind that the proportion of the provincial labour force that resides in harbour dependent communities is much more significant – 116,000 people, or 26% of the provincial labour force, in 2001. The tables above only consider occupations and industries that can be said to be direct users of harbours or otherwise dependent on them, and do not include public services, the financial and retail sectors and other goods producing and service industries that are heavily represented in the coastal zone.

The data on employment by occupation tells us that there was a decline in employment in harbour related occupations over the 1991 to 2001 period. This can be seen to be the result of both general trends in all economies and conditions specific to our region. The factors that are unique to the region include the groundfish collapse in the early and mid-90s, and the closure of the Cape Breton steel and coal industries.

However, even without these cataclysmic events, there would have been shrinkage in employment in fishing, forestry and other goods producing sectors due to expanded use of labour saving technologies and ongoing consolidation of ownership of resources and capital goods. In the fishery, for example, the mobile groundfish fleet had been reduced by two thirds in the 1990s prior to the stock collapse due to the introduction of transferable quotas and the resulting consolidation of ownership.

Resource industries everywhere are shedding jobs, and urbanization is a dominant pattern throughout North America. Coastal and rural communities everywhere face



serious social and economic challenges arising from these larger trends. Nova Scotia is no different – no better, and to all appearances, no worse. In fact, conditions may be improving measurably due to the strength and resilience of our fishing industry in the post-groundfish crisis era.

### **3.5. The Fisheries**

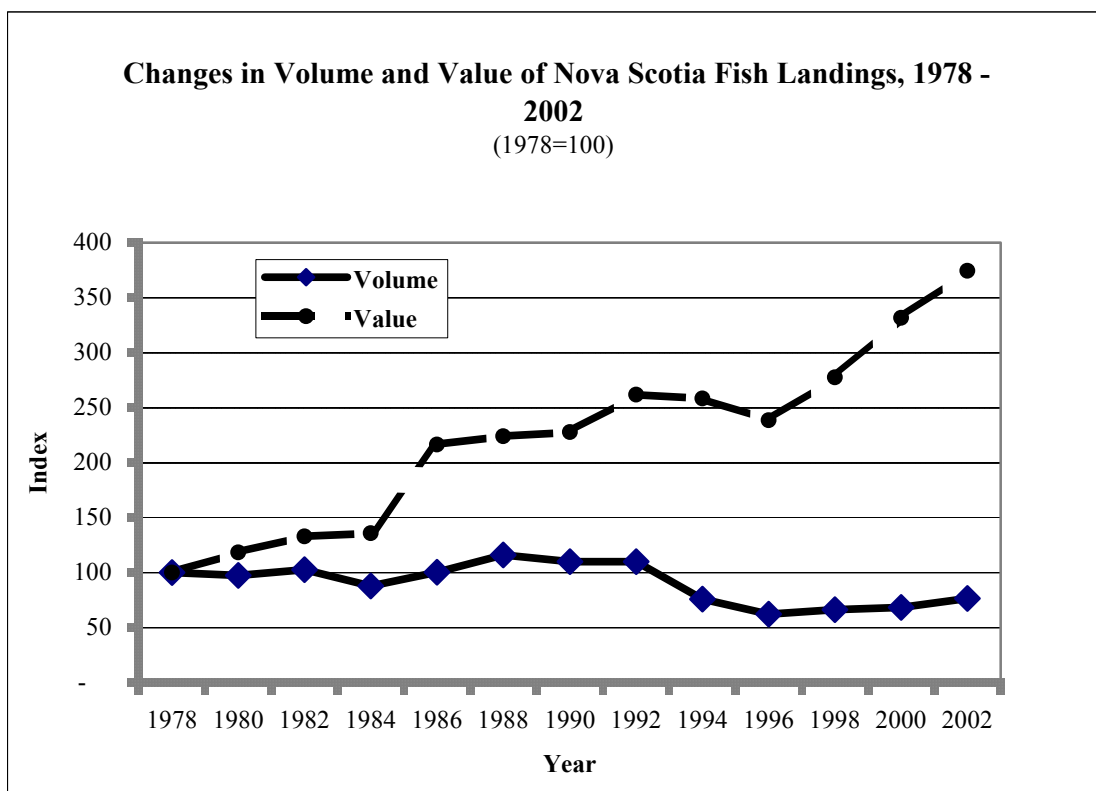
In considering current and future needs for harbours and wharves in the coastal-rural communities of Nova Scotia, there can be no question that the most important factor is the state of the fishery. The great majority of users of wharves are fish harvesters, and the most important economic impacts generated by harbours are directly or indirectly related to fish harvesting and processing. Planning and policy development with regard to harbours should therefore take full account of trends and developments in the fishery and related industries.

Closely related to wild fish production, and heavy users of wharves and harbour facilities, are the boatbuilding and aquaculture sectors. The tourism industry is less directly harbour dependent but nonetheless a critical component of the coastal economy.

#### **3.5.1. Fish Landings**

The following chart shows historical trends for fish landings and landed values in Nova Scotia. The chart takes 1978 as the base year (valued at 100) and shows the relative change since then.

Figure 5



Source: DFO Statistics ([www.dfo-mpo.gc.ca/communic/statistics/stat\\_e.htm](http://www.dfo-mpo.gc.ca/communic/statistics/stat_e.htm))

The chart reveals a different picture than the doom and gloom usually associated with the fisheries over the past decade or more. Overall landings by volume declined over the period but have been gradually rebuilding since 1996. The value of landings however has grown steadily over the 24 years depicted in the graph.

Fish landings reached a peak of 520,000 mt in 1988 before falling off to a low of 279,000 mt in 1996 and then rising to 344,000 mt in 2002. This represents a net decline of 23% over 24 years, or 34% over the last 16 years. The optimistic view would be that the exploitation levels of the 1980s were not sustainable but that the fishery overall has now stabilized at volumes that can, within natural cycles of resource abundance, be maintained over the long-term through conservation and good management.

The most positive trend however is the increased value of fish landings. Total payments for fish rose from \$195 million in 1978 to \$731 million – a 3.7 times increase over the period. In 1978 a metric tonne of fish averaged gross earnings of \$435 for fish harvesters: in 2002 it was worth \$2,128. This remarkable increase in value means that harvesters do not have to catch so much volume to sustain their

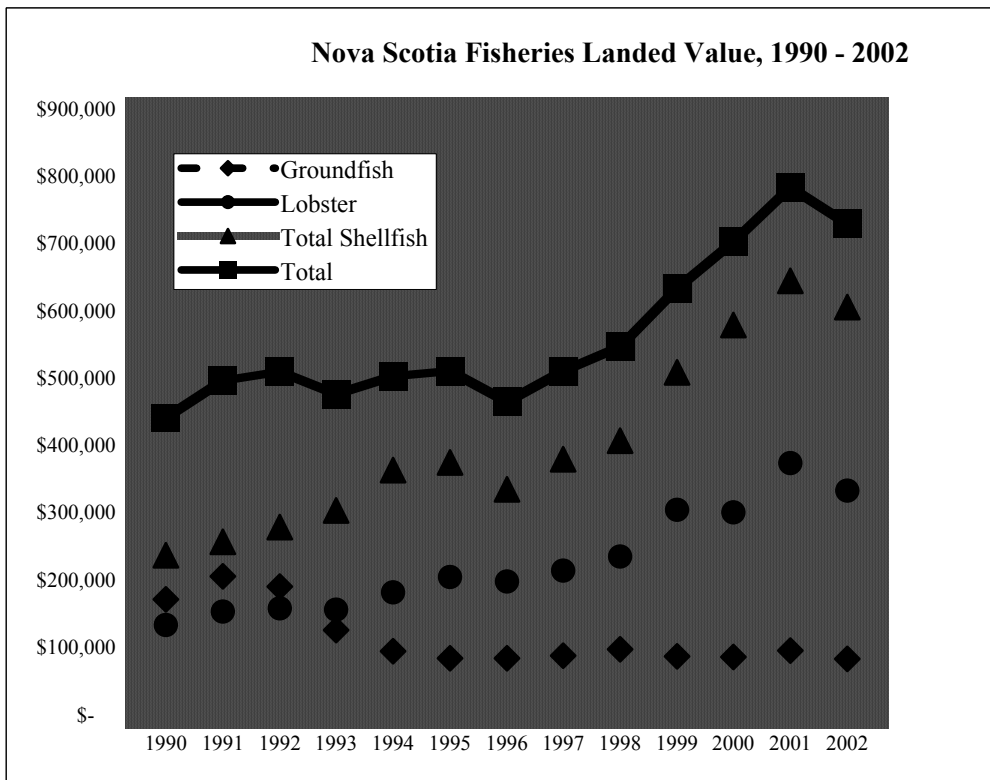
businesses. In well-managed fisheries this should result in less pressure to over-exploit fish stocks.

It is always risky to make predictions in vulnerable wild fisheries, but this data suggests that the fishery has a positive future based on the long-term trends towards increased market demand for seafood products and the possibility of stable if not gradually increasing landed volumes for Nova Scotia harvesters.

### 3.5.2. The Shellfish Sector

The dominant factor in this changing picture of the Nova Scotia fishery has been the dramatic growth in value of the shellfish sector. The following chart depicts the changing contributions to total landed value from the different components of the fishery over the 1990 to 2002 period.

Figure 6



Source: DFO Statistics [www.dfo-mpo.gc.ca/communic/statistics/stat\\_e.htm](http://www.dfo-mpo.gc.ca/communic/statistics/stat_e.htm)

In 1990 shellfish, including lobster, scallops, crab and shrimp, generated \$238 million in landed value and represented 54% of total earnings from wild fisheries. Lobster by

itself was worth \$135 million, or 30% of the total -- significantly less than groundfish that contributed \$173 million (39%) in that year.

By 2002 this picture has changed dramatically. The value of shellfish landings has grown to over \$600 million representing 83% of total landed value, with lobster alone bringing in \$334 million (46%). The value of groundfish landings fell from over \$200 million in 1991 to \$85 million in 1995 and has not exceeded \$100 million since then.

### 3.5.3. Licensing Trends

The following table shows changes in the numbers of limited entry licenses issues by DFO to Nova Scotia fish harvesters between 1985 and 2000.

**Table 17**

<b>LIMITED ENTRY LICENSES IN NOVA SCOTIA, 1985 TO 2000</b>					
<b>Species</b>	<b>DFO Region</b>	<b>1985</b>	<b>1990</b>	<b>1995</b>	<b>2000</b>
<b><i>Groundfish</i></b>	Scotia-Fundy	2,534	2,587	3,138	2,675
	Gulf	381	372	358	332
<b><i>Herring</i></b>	Scotia-Fundy	1,895	1,870	1,729	1,691
	Gulf	433	430	428	426
<b><i>Mackerel</i></b>	Scotia-Fundy	1,690	1,820	1,912	2,005
	Gulf	397	392	549	642
<b><i>Swordfish</i></b>	Scotia-Fundy	452	1,001	960	957
	Gulf	52	209	202	193
<b><i>Tuna</i></b>	Scotia-Fundy	19	32	40	108
	Gulf	134	135	134	130

<b>LIMITED ENTRY LICENSES IN NOVA SCOTIA, 1985 TO 2000</b>					
<b>Species</b>	<b>DFO Region</b>	<b>1985</b>	<b>1990</b>	<b>1995</b>	<b>2000</b>
<b>Scallop</b>	Scotia-Fundy	508	370	343	304
	Gulf	135	132	132	132
<b>Lobster</b>	Scotia-Fundy	2,676	2,741	2,675	2,706
	Gulf	695	694	691	691
<b>Shrimp</b>	Scotia-Fundy	10	9	26	61
	Gulf	0	0	0	0
<b>Crab</b>	Scotia-Fundy	103	110	138	383
	Gulf	81	87	87	142

Source: DFO Statistics [www.dfo-mpo.gc.ca/communic/statistics/stat\\_e.htm](http://www.dfo-mpo.gc.ca/communic/statistics/stat_e.htm)

This data illustrates key characteristics of the Nova Scotia fishery:

- The fishery is very diversified with an overall increase in the number of licenses issued over the past decade despite the crisis of the mid-1990s.
- The critical importance of the lobster fishery, and its rigorous management, are evident in the relatively large number of licenses and the stability of these numbers over time.
- The rapid increases in crab and shrimp licenses in recent years points to the growing importance of these fisheries.
- There also appears to be increased fishing effort in mackerel, tuna and swordfish as harvesters search out new fishing opportunities to replace groundfish.
- The licensing situation is noticeably more stable in the Gulf region of Nova Scotia as compared to Scotia Fundy. These trends perhaps indicate the extent to which the Bona Fide license policy introduced by fish harvesters themselves in the early 1980s has succeeded in professionalizing the inshore sector and preserving fishing opportunities for full-time committed harvesters.

### 3.5.4. Trends in Fishing Vessels

The next table provides data on the changing size and structure of the fishing fleet in Nova Scotia.

**Table 18**

<b>CHANGES IN THE NOVA SCOTIA FISHING FLEET BY SIZE CLASS, 1985 TO 1999</b>							
		<b>&lt;35'</b>	<b>35'-44'11"</b>	<b>45'-64'11"</b>	<b>65'-99'11"</b>	<b>&gt; 100'</b>	<b>TOTAL</b>
<b>1985</b>	Scotia-Fundy	3,194	1,633	223	41	113	5,204
	Gulf	373	446	14	0	0	833
	<b>Total</b>	<b>3,567</b>	<b>2,079</b>	<b>237</b>	<b>41</b>	<b>113</b>	<b>6,037</b>
<b>1990</b>	Scotia-Fundy	2,956	1,824	219	32	92	5,123
	Gulf	335	486	15	1	0	837
	<b>Total</b>	<b>3,291</b>	<b>2,310</b>	<b>234</b>	<b>33</b>	<b>92</b>	<b>5,960</b>
<b>1995</b>	Scotia-Fundy	2,724	1,798	186	29	50	4,787
	Gulf	380	501	13	0	0	894
	<b>Total</b>	<b>3,104</b>	<b>2,299</b>	<b>199</b>	<b>29</b>	<b>50</b>	<b>5,681</b>
<b>1999</b>	Scotia-Fundy	2,214	1,740	146	25	54	4,179
	Gulf	325	487	5	0	0	817
	<b>Total</b>	<b>2,539</b>	<b>2,227</b>	<b>151</b>	<b>25</b>	<b>54</b>	<b>4,996</b>

Source: DFO Statistics [www.dfo-mpo.gc.ca/communic/stat\\_e.htm](http://www.dfo-mpo.gc.ca/communic/statistics/stat_e.htm)

This table again reveals major changes in the Nova Scotia fishery over the 1985 to 1999 period.

- There has been a sharp decrease (-29%) in the number of vessels less than 35' suggesting that the fishery is now much more in the hands of full-time professional harvesters operating vessels large enough to support diversified

operations.

- The core inshore fleet (35' to 44'11") is remarkably stable in number. Given the shrinkage of all other vessel classes we must assume that this fleet now fishes more licenses and accounts for the largest share of the total catch and landed value of the Nova Scotia fishery.
- Midshore vessels (45' to 64'11") have declined in number by 36%. This fleet sector may have been heavily impacted by the groundfish collapse and the introduction of individual transferable quotas (ITQs) in the groundfish, herring and scallop fisheries.
- The offshore fleet has clearly been heavily impacted by the groundfish collapse with almost half the vessels over 65' being taken out of the fishery since 1985. Again there will have been some fleet consolidation with highly productive midshore vessels now harvesting a substantial portion of the quotas previously fished by the offshore fleet.

Overall the Nova Scotia fishing fleet has shrunk from 6,036 to 4,996 vessels, a change of -17%. Given the groundfish crises of the 1990s and the pressures to consolidate fleets, it is perhaps remarkable that the change has not been more substantial.

It is clear from this information that the multi-purpose inshore vessel fishing lobster and perhaps three or four other species is now the backbone of the fleet in terms of volume and value of landings. The size of this component has changed very little over the period while all other fleet classes have shrunk in number.<sup>30</sup>

### 3.5.5. Policy Issues

The Nova Scotia fishery is now predominantly a shellfish industry. A critical factor shaping the industry and impacting on coastal communities is that small business owner operators in the inshore (<45') fleet licenses now control licenses for two of the most valuable species – lobster and crab. This fact explains in large part why the 38' to 44'11" vessel class remains stable while all other classes have shrunk considerably.

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<sup>30</sup> This data only describes vessels by overall length and does not indicate the extent to which the productivity of inshore vessels has been substantially increased through wider hulls, expanded carrying capacity and refrigeration, more powerful engines and the use of electronics.

Until recently at least, DFO's Fleet Separation and Owner Operator policies<sup>31</sup>, combined with trap limits and other effort controls, limited the degree to which ownership of these valuable licenses could be consolidated within the fleet or taken over by fish processors or outside investors. By way of contrast, in ITQ fleets in the groundfish, herring and scallop fisheries there has been substantial down-sizing of fleets and consolidation of landing and processing in larger ports.

Because of the increased value of landings, the selling prices for shellfish licenses have grown dramatically over the past decade. When harvesters retire from the fisheries they can now expect to get prices for their core enterprises that range from \$200,000 to over \$1 million depending on location and other factors. It is often difficult for new entrant harvesters to raise the money to buy their own enterprise at these prices, and the tendency in some areas has been for fish processors and other non-harvester investors to get control of licenses through under-the-table arrangements.

This situation has generated considerable controversy and is one of the most important issues that emerged during the recent Atlantic Fisheries Policy Review. In late 2003 the former Minister of Fisheries, Robert Thibault, made public commitments to close the regulatory loopholes that allow non-harvesters to control licenses through trust agreements.

If the current Owner-Operator and Fleet Separation policies are maintained and strengthened by the Minister we can expect that the core inshore fleet will survive at its current size and productivity levels. This in turn will mean that most existing inshore fishing harbours will maintain current levels of usage with reasonable prospects for increased landings and landed values in the future.

If, however, the trend to greater consolidation of control over valuable shellfish fisheries continues, (with or without new prohibitions on trust agreements) we might expect to see an accelerating process of consolidation of port facilities and resulting negative economic and social impacts on many coastal communities.

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<sup>31</sup> These two policies were brought in by DFO Minister Romeo Leblanc in the early 1980s. The Fleet Separation policy prevents fish processing companies from owning harvesting licenses in the <65' inshore fleet, and the Owner Operator policy requires that the person who owns the license has to operate the vessel that fishes it. These two policies combined have maintained the Atlantic fishery as a small business, owner operator industry.



### 3.6. Aquaculture

The aquaculture industry in Nova Scotia is still in its developmental stages but there has been dramatic expansion in recent years. The following table shows production quantities and landed values for selected years.

**Table 19**

<b>AQUACULTURE PRODUCTION IN NOVA SCOTIA</b>						
		<b>1986</b>	<b>1990</b>	<b>1995</b>	<b>2000</b>	<b>2001</b>
<b>Finfish</b>	Qty (mt)	77	716	1,120	8,106	5,600
	Value (\$)	\$640,000	\$4,759,000	\$6,282,000	\$38,288,000	\$24,138,000
<b>Shellfish</b>	Qty (mt)	560	480	688	2,350	2,467
	Value (\$)	\$852,000	\$674,000	\$1,336,000	\$5,188,000	\$5,513,000
<b>Total</b>	Qty (mt)	637	1,196	1,808	10,456	8,067
	Value (\$)	\$1,492,000	\$5,433,000	\$7,618,000	\$43,476,000	\$29,651,000

Source: DFO Statistics [www.dfo-mpo.gc.ca/communic/stat\\_e.htm](http://www.dfo-mpo.gc.ca/communic/statistics/stat_e.htm)

Starting from very modest production levels in the mid-80s the Nova Scotia industry generated nearly \$30 million in sales in 2001. The volatility of the industry is evident in the dramatic growth from 1995 to 2000 and the sharp declines in both production volume and value in 2001.

Finfish production is particularly vulnerable to shifts in world markets, with prices for salmon currently depressed due to worldwide over-production. A major production site for steelhead trout in Arichat Cape Breton has closed since 2001, the result in part of high capital start-up costs and falling world prices. In contrast growth of shellfish aquaculture has been more positive and stable.

**Table 20**

<b>VALUE OF AQUACULTURE PRODUCTION, \$ PER METRIC TONNE</b>					
	<b>1986</b>	<b>1990</b>	<b>1995</b>	<b>2000</b>	<b>2001</b>
<b>Finfish</b>	\$8,312	\$6,647	\$5,609	\$4,723	\$4,310
<b>Shellfish</b>	\$1,521	\$1,404	\$1,942	\$2,208	\$2,235
<b>Total</b>	\$2,342	\$4,543	\$4,213	\$4,158	\$3,676

Source: DFO Statistics [www.dfo-mpo.gc.ca/communic/stat\\_e.htm](http://www.dfo-mpo.gc.ca/communic/statistics/stat_e.htm)

The above table indicates that the per-tonne value for total production has fallen off steadily since 1990, with a sharp drop (-12%) in 2001 over 2000. This trend is driven by the volatility and generally negative trends in finfish prices in international markets. On the other hand, shellfish products, including mussels, oysters and scallops, have seen a steady improvement in value since 1990.

There are currently about 1,200 people employed directly in aquaculture production in the province. The growth potential for the industry is uncertain, but trends over the past decade point to the likelihood of slow but significant expansion as investment builds and local experience and expertise improves. There is little likelihood, however, that aquaculture will challenge the wild fishery for economic importance in the foreseeable future.

### **3.7. The Boatbuilding Industry**

Boatbuilding has a long history in Nova Scotia. Traditionally it focused on supplying vessels for local fishing fleets and for all intents and purposes was part of the fishing industry. In recent years, however, with the switch to fibreglass construction and more up-to-date building methods, the sector has begun to diversify to produce both fishing boats and custom pleasure craft for export. The industry remains a complement to the fishing industry but increasingly supplies other markets in recreation, transportation, oil and gas development and government marine services.

Recent research by the Nova Scotia Boatbuilders Association (NSBA) has indicated that the boatbuilding industry is generating significant growth opportunities in Nova

Scotia.<sup>32</sup> The great majority of these businesses are located in coastal communities where boatbuilding is seen as an increasingly important component of local economies.

Industry leaders estimate that employment in the boatbuilding and repair industry increased by 37.5% from 1991 to 2001. In contrast to this positive outlook, Census data indicates that the number of boatbuilders and inspectors decreased from 455 employees in 1991 to 350 in 1996, a 23.1% reduction. However the Census data also shows that employment grew to 370 employees by 2001, a 5.4% increase perhaps driven by the recovery from the fishery crisis. The 10-year trend for employment shows a decrease of 18.7% by 1991.

The number of boatbuilding businesses increased from 77 in 1991 to 99 in 2001. The NSBA estimates that this is one of the fastest growing manufacturing sectors in the province with growth in sales of 35.8% from 1995 to 2001. The NSBA research report indicates that the industry has generated average annual sales of \$75 million and 1,359 person years of employment over the 1995 – 2001 period. Estimates for 2003 show sales will be \$85 million and 1,656 person years of employment. The NSBA considers these estimates to be conservative.

With a strengthening fishery and success in diversifying into the manufacture of recreational products the boatbuilding industry in Nova Scotia clearly represents an important value added component of the economy of the coastal zone. It depends directly on access to adequate harbour infrastructure in smaller communities around the coast.

### 3.8. The Tourism Sector

Tourism now generates in excess of \$1 billion in revenues in Nova Scotia. As described above in the section of the labour force, it provides employment for more than 30,000 people in all regions of the province.

The following table describes the number of tourism and recreation businesses that make direct use of wharves and harbour facilities in Nova Scotia.<sup>33</sup>

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<sup>32</sup> See Appendix One below for greater detail and sources of information.

<sup>33</sup> This information is derived from the Doers and Dreamers Book for 2003 published by the Nova Scotia Department of Tourism, and from the database of the Tourism Industry Association of Nova Scotia.

**Table 21**

<b>TOURISM &amp; RECREATION BUSINESSES IN NOVA SCOTIA, 2003</b>	
<b>Tourism/Recreation Activity</b>	<b># Enterprises in NS</b>
Whale/seabird watching tours	57
Diving tours organizations	7
Canoe/kayak tour organizations	6
Sport fishing tours (saltwater)	25
Sailing tours organizations	11
Other boat tours	28
Marinas	23
Yacht clubs	11
Sailing instruction	6
Total	174

**Source: Doers and Dreamers, NS Dept of Tourism and TIANS**

To appreciate the economic impact of such wharf dependent activities it is useful to examine the whale/seabird tour industry. Research carried out by the Nova Scotia Department of Tourism indicates that 5% of all visitors to the province participated in whale/seabird boat tours in 2000.<sup>34</sup> With over 1.4 million person visits to Nova Scotia<sup>35</sup> that year the number of whale/seabird boat tour passengers is estimated to total 71,000. Based on an average fare of \$38 per person, total revenues are therefore approximately \$2.7 million. Interviews with tour operators suggest that while

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<sup>34</sup> Source: 2000 Nova Scotia Visitor Exit Survey, p 29.

<sup>35</sup> Ibid, p 8

business in 2003 was down somewhat over previous years, and the industry is vulnerable to changes in weather conditions, exchange rates, fuel costs and other factors beyond their control, the longer term trends have been very positive and they anticipate continuing growth in the future.

The Nova Scotia Tourism Partnership Council, a leadership group bringing together provincial government agencies and private sector organizations, recently established a 10-year plan with the goal of doubling tourism revenues by the end of the plan period. The plan focuses on 11 key action steps, the third of which is stated as follows:

*The Tourism Industry develops a code of practice / management and partnership for the protection and access of Nova Scotia's coastal perimeter.*

The Tourism Industry Association of Nova Scotia (TIANS) is the designated lead agency for this action step, and in its strategic planning it has clearly identified public access to coastal waters as a critically important policy objective for the overall success of tourism development in the province. Provincial government studies indicate that only 4% of Nova Scotia's coastline is publicly owned at present. "Canada's Ocean Playground" is less and less available for playing, and this situation will further deteriorate to the extent that more and more government owned wharves and harbour facilities are shut down or privatized.

TIANS has committed itself to working in partnership with coastal communities and the Coastal Communities Network to lend the weight of the tourism industry to the effort to maintain public infrastructure in Nova Scotia's harbour communities.

### **3.9. Concluding Comments**

The data presented above describes conflicting trends: the overall coastal zone in Nova Scotia is more stable than thought, particularly considering the major economic and social shocks of the past decade. It is showing positive employment trends in the most recent period, but at the same time it continues to lose people. Many important coastal communities, including the major fishing centres, have experienced substantial population losses over the 1991-2001 decade. If such trends continue, the social and economic viability of many communities will increasingly be in jeopardy.

This impending crisis of community viability stands in stark contrast to a fundamental economic reality: the coastal zone supports 30% of jobs in the province

and Nova Scotia depends heavily on coastal-rural regions for its overall economic growth and stability. Take, for example, the data on exports:

**Table 22**

<b>NOVA SCOTIA VALUE OF EXPORTS, 2001</b>			
<b>Rank</b>	<b>Commodity</b>	<b>Value (\$ 000s)</b>	<b>% Of Total Exports</b>
1	Non-metallic Minerals & Mineral Fuels	\$ 1,409,672	25%
2	Fish & Fish Preparations	\$ 1,130,426	20%
3	Paper & Paper Board	\$ 639,844	11%
4	Transportation Equipment	\$ 233,828	4%
5	Wood Pulp	\$ 224,823	4%
6	Lumber	\$ 210,484	4%
<b>Total Exports</b>		<b>\$ 5,681,609</b>	<b>100%</b>

Source: Atlantic Provinces Economic Council, Economic Outlook Report, 2002

The industry sectors listed in the table generate nearly 70% of all exports, and are predominantly rural-coastal based, or rely on a rural-based labour force. The two largest sectors listed, representing some 45% of overall exports, depend heavily on harbours and wharves. The future viability of these sectors, and their continuing contribution to the Nova Scotia economy, will require a skilled and committed labour force living in regions where the productive activities take place.

The great majority of wharves and harbours in Nova Scotia exist primarily to serve the fishing industry. Despite the major stock collapses of the 1990s the fishery is now worth more than it ever was and is a close second to offshore energy in terms of export earnings for the province. There has been some shrinkage in employment but the sector is still very robust and a mainstay of many coastal communities.

The fishery is now predominantly a shellfish industry and the great majority of landings are generated by small and medium sized owner-operator enterprises in the inshore sector. The harvesting of the most valuable species, lobster and crab, takes place for the most part in nearshore waters and fishing effort is widely distributed around the coast. These species depend for their economic viability on convenient and accessible small harbours located close to the fishing grounds.

Leaders in Nova Scotia's \$1 billion tourism industry clearly recognize the centrality of the coastal region to the marketing of the province as a tourist destination, and they have specifically identified the strategic need to expand public access to the marine environment. Marine tours, whale and bird watching, kayaking and other adventure activities on the water are expanding components of the tourism economy and depend directly on wharves and harbours. Industry leaders argue however that harbour communities and their fishing industry activities are themselves very significant tourist attractions that need to be protected and more effectively promoted. They see the tourism industry as a whole, and not just the direct users, as dependent on wharves and harbours.

Coastal communities exist because of their productive interface with the ocean, and wharves and harbours are the bridges and platforms that make it possible to work in the marine environment, including such critical sectors as fishing, aquaculture, transportation, oil and gas development and tourism. Maintenance of wharves and harbours is therefore essential to the sustainability of the coastal zone economy on which coastal communities, and indeed the whole province, depend.

# APPENDICES



## APPENDIX ONE – SMALL CRAFT HARBOURS BUDGET CATEGORIES

The following is a description of SCH budget categories as listed by SCH36 and Mulcahy & Associates.

**Category A (Administration):** salaries, travel, goods and services, communications, students, etc.

**Category B (Technical Support):** advance planning, surveys, environmental assessments, safety inspections and estimates, technical and sounding surveys, environmental support, photographs, etc.

**Category C (Harbour Operations):** HA subsidies (JPA's), HA general support costs, etc.

**Category D (Health and Safety):** projects to avoid unsafe conditions, includes three sub-categories:

- Safety issues relating to existing structures or facilities in poor condition, or conditions that need to be addressed within the next 5 years. (e.g. wharf or breakwater reconstruction)
- Operational issues relating to existing problems that are creating safety hazards. (e.g. chronic overcrowding requiring new wharves, dredging requirements)
- Safety issues that need to be resolved to meet health or legal requirements (e.g. firewalls. (labour code)

**Category E (Functionality/Efficiency):** projects to increase efficiency of harbours. These projects would deal with structures and facilities operating in sub-standard condition that require modifications to meet present and future needs of harbour users. (e.g. facility modification resulting in more boats using the harbour more efficiently).

**Category F (Divestiture/Rationalization):** includes only projects in harbours targeted for divestiture. Includes the cost of removal and repair/reconstruction costs required in order to transfer harbours.

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36 Corporate Services, SCH Branch Regional Headquarters, Moncton, New Brunswick. May 22, 2003.

**Category G (Other):** projects not essential to the fishing industry but would help in harbour becoming self-sufficient and/or projects to increase rationalization. (e.g. new developments to concentrate fishing activity in one harbour instead of many)

**Category H (Property Administration):** land, waterlot, property acquisition and administration.

## **APPENDIX TWO – REPORT FROM STRATEGY DEVELOPMENT WORKSHOP**

A strategic planning workshop was held in Truro on October 24, 2003, to review the main findings from the research and to develop action priorities for the Coastal Communities Network to follow-up on the project. About thirty individuals participated in the workshop including members of the CCN Executive, representatives of women's groups and other community organizations, fish harvester leaders, municipal officials, staff from community economic development agencies, St. F. X. University and the Tourism Industry Association of Nova Scotia, representatives of DFO, ACOA and the Rural Secretariat.

The following is a summary of the discussions at the workshop and of the major points of consensus about further steps.

### **Reports from Small Groups**

After presentation of research findings the workshop participants worked in small groups to identify action steps. The task was to identify practical steps to use the findings to influence awareness and action among coastal communities, governments, harbour users (particularly in the fisheries) and partner organizations.

The following is a summary of the proposals from each group.

### **Getting the Message to Communities**

- We need to encourage coastal communities to be proactive, to act before crisis hits the wharf
- There is a need for more community involvement in harbour governance
  - Bring more stakeholders with a wider viewpoint of the value of the wharf to the community
  - There is still a need to maintain overall control by the primary users in the fishing industry
  - Need to make the whole community aware of the economic value of the harbour and also its social importance

- Should get the message out to local development groups
  - Business people
  - Tourism operators
- How to get the message out to all stakeholders?
  - Through the news media
  - Presentations to community groups
  - CBC Maritime Noon
  - Have a news conference to broadcast findings of the study
  - E-newsletters
  - Web page
- Don't just use dry numbers
  - Get the people's story out
  - Develop human interest messages
- Develop a three-part message
- What we found out:
  - What are some viable change strategies
  - What CCN will be doing about these issues
- CCN should also target urban dwellers
  - Rural/Coastal communities are not a "cost" to urban regions
- Use cluster profiles to focus on unique issues for particular communities
- Find creative ways to use the database

## **Taking the Message to Governments**

### Local Government and Development Agencies

- CCN and its affiliated groups should take the message to municipal councils
- Make formal presentations
- Take the report to county planners, development officers RDAs & CBDCS
- Take the database to the CAP sites and train people there to manipulate data

### Provincially

- Deliver the message to the opposition caucuses
- Present to departments involved in the study
- Department of Community Services has a big role in rural communities
- Send the report to universities & community colleges
- Present to provincial ministers and key departments
- Feed the report into consultation on new community development policy
- Make links with last Provincial Speech for the Throne re: small rural communities
- Communicate to the Premier

### Federally

- Present the report to senior bureaucrats
  - Present case studies
  - Draw out implications of inaction
- Link to Sustainable Communities Initiative to get to regional federal bureaucrats
- Briefing to Nova Scotia Rural Team – 25 government departments, ten to twelve observers and six community reps

- Identify a harbour as a case study for interdepartmental cooperation
- Make presentation to regional HRDC
- New Director General for the region should be briefed
- Brief all nine MPs in federal Nova Scotia caucus

### **Taking the Message to the Fishing Industry**

- Communicate findings to more industry reps through e-mail communication
- Get message out through the community media
  - Radio
  - Newspaper
  - CBC AM & Noon
- Participate in fishing industry events
  - Minister's meeting in the spring
- CCN Newspaper
  - Distribute through "Sou'Wester"
- CCN needs to be more visible on fisheries issues
  - E.g.: the owner-operator policy issue

### **Taking the Message to the Partner Organizations**

- Use the report as the basis for new alliances
  - CBDC
  - RDAs
  - Harbour Authorities
  - Canadian Federation of Independent Business

- CCN should play a leadership role in bringing partners together
  - Create a coalition on wharfs
  - Do a RCIP workshop to really think through strategy
  - Build a new coalition
- Go to the Federal government
  - Challenge silo approach with multiple departments involved in harbours
- Propose a three-year pilot project – government and communities working together to optimize increased investment
- Need to change approach to fishing industry
  - Emphasize fishery as small business and their role in rural Canada
  - Need new structure/new ideas to justify new investment
- Propose a new structure to flow through money to Coastal Communities
  - An agency, commission or Public/Private Partnership to address marine infrastructure issues
  - Work with RDAs and local networks
  - Alternative SCH process
  - Link up harbour authorities on a regional basis
  - Amalgamate harbour authorities in smaller neighbouring communities
  - Expand community involvement and stakeholder involvement in harbour authorities
  - Civil society structure
- Quantify economic activity/impact of a wharf
  - Successful/viable small business

- Look at tax revenue generated by a wharf

## **Overall Approach**

The research findings have generated a few general conclusions that were accepted by workshop participants.

DFO-Small Craft Harbours funding has not been adequate to maintain the existing harbours infrastructure in Nova Scotia for some time, and there are clear indications that this situation is unlikely to change and may in fact get worse in the next few years.

This situation will result in two future trends for harbours that still depend on SCH capital support:

- DFO-SCH will need to divest more harbours to be able to concentrate its limited resources in priority areas; and
- Many harbour authorities will need to find additional sources of capital to maintain and develop their harbour facilities.

Given this situation, there is a need for CCN to take leadership in making the wider community aware of the economic and social implications of the developing harbours crisis and the scale of the negative impacts for coastal communities overall. A clear and compelling picture has to be drawn of the very significant and positive contributions of coastal communities to the life of the province, and the dependence of those communities - their industries, labour force and way of life - on harbour infrastructure.

The following broad approach was developed by the workshop.

5. The CCN needs to develop and promote the use of the database as a tool
  - Share it with partner groups and agencies
  - Provide access to it for community groups
  - Prioritize harbour authorities & Harbour Authority Advisory Committee
  - Make plans to “refresh” the database in 2004



6. The CCN needs to activate its own coalition or network of potential partners on harbours and wharves issues
  - a. Fishing industry
  - b. Tourism industry
  - c. Local governments
  - d. Development agencies
  - e. Community organizations
  - f. Small business associations
7. Develop and communicate the small business message (while not ignoring impacts on larger businesses and other interest groups)
  - Harbours are critical infrastructure for a large number of viable small businesses
  - Collectively they have a very significant economic impact comparable to industrial malls in urban areas
8. There is a need for a new structure for allocating and managing investment and the harbours themselves
  - g. Look at innovations in terms of committees or councils to coordinate cross-departmental and multi-agencies issues
  - h. Develop cross-departmental partnership approaches similar to what was done for TAGS program (DFO, HRDC and ACOA working together through a coordinating committee) and the Sustainable Communities Initiative (DFO and Environment Canada).
  - i. Explore a one-stop shopping model
  - j. Funding strategies have to take much greater and more effective account of the fact that costs for harbours vary considerably depending on local environmental conditions including tides, currents, exposure to open seas, etc. It is not fair or effective to

treat all harbours the same and to expect them to work within uniform cost parameters.

9. Develop a clear and compelling message

- Develop a media strategy to coordinate communications

10. A *high priority* – do a more intensive strategy session through RCIP process

- Bring more partners into the process
- Access funding for follow-up activities
- Use RCIP process to pull people together

11. Press release strategy and timing:

- Target January planning meetings for fishing industry and other events
- Plan presentation for Agriculture and Fisheries Minister's meeting in the spring

## **APPENDIX THREE – CASE STUDIES**

### **Harbour Case Studies**

#### **Introduction**

It was the original intention of the project to conduct detailed case studies in ten communities. The researchers encountered real difficulties in making contact with harbour authorities and in setting up meetings and interviews. The resources of the project did not allow extensive travel to track down contacts in the community, so there was a continuing dependence on cooperation from local stakeholders to set up meetings and gather the information needed. In particular, the strategy of meeting with Harbour Authorities either in their regular meetings or in special get-togethers for the purposes of this project proved to be largely ineffective because of the lack of regular meetings and the difficulties of arranging them.

In the end, satisfactory contacts were established in eight out of the ten target communities. The following case study reports vary in depth and information covered due to the unevenness of the information available and the different types of contacts made.

## Case Study Report 1: Big Bras d'Or

### Community Consultation

The meeting was organized with the help of an active member of the Harbour Authority (HA). All of the directors were called and seven committed to attending. The two buyers who use the wharf were also invited, as well as, a local tour boat operator who uses the wharf occasionally.

The meeting took place on May 2<sup>nd</sup> at the fire hall in Big Bras d'Or and was attended by only two members of the HA Board of Directors and one pleasure craft owner. The reason for this low turnout seemed to be that it was a busy time for the fishermen as they were gearing up for the lobster season to open in a few days and they were using every daylight hour to prepare.

The information collected at the meeting was augmented by interviews with the HA Treasurer, the manager employed on a part-time basis by the HA, the tour boat operator, and another HA member.

### The Harbour Authority

Fishers and other community leaders formed the HA in 1997 because they believed they had no other choice; SCH was divesting harbours and either they would take over its management or someone else would. They also thought that if they went ahead with the change early they might be able to get more money for repairs.

Over the past ten years there have been many changes to the wharf, the biggest being the installation of the fuel dock. The HA has carried out other relatively minor repairs to preserve the wharf. The southern section was re-decked and re-sheathed and the northern section will receive the same improvements this summer. HA members feel that the facilities have been generally adequate during the past ten years once the fuel dock was put in place.

The HA has plans for a number of improvements to meet current and future needs:

- A priority is to add more berths for pleasure craft to expand community and tourist use of the facilities;

- There is a need to improve the haul-out and to add a skidway for up to five tenders;
- A sewage pumping station will be needed to meet new environmental regulations;
- They want to add a floating dock near the fuel wharf;
- There is a need to improve the shoreline protection to prevent erosion and expand the area onshore;
- There is a need for dredging inside the “cow pen” (the area formed between the land and one arm of the “T” of the wharf) to allow larger vessels to come inside.

While none of these tasks are seen as immediately necessary for safety or viability reasons, they are all important to the expanded usefulness of the harbour as a community facility and a working fishing port.

The wharf currently accommodates only a few pleasure crafts and the need for berths for this sector is growing. A recent study done by Development Isle Madame Association (DIMA) and the Enterprise Cape Breton Corporation (ECBC) identified the potential for growth in this sector and the value it brings to communities. For example, adding the floating dock for recreational boaters would add to the revenue of the harbour authority through increased fuel sales and docking space rentals.

## **The Community Management System - Problems**

The Directors identified some critical issues regarding the operations of the HA:

### **1. Volunteer Burnout**

The HA system generates a lot of work for people who mostly fish for a living and are not administrators. The number of active volunteers on the HA has always been limited, and there are concerns that there are not enough new people coming up to replace the veterans when they retire from active involvement.

## **2. Community Conflict**

There have been conflicts within the HA group this past year because of fishing matters unrelated to the wharf management. Such tensions spill over into the work they need to do as the HA, but they have difficulties separating these issues.

## **3. Management Capacities**

HA members need help to learn good management practices and to understand their responsibilities in relation to the expectations of SCH. Both the executive officers and the board members said they needed more help to understand what they are supposed to be doing.

## **The Community Management System - Successes**

### **1. Small Business Viability**

One clear advantage of the new system is that the people who were not paying their moorage fees to SCH are now being called to task for this and made to pay. This means that everyone operates on an even footing and revenue generation reflects actual patterns of usage.

The HA feels that they are a business success on a limited scale. They expect to make a little money by the end of this season to put away for an emergency. They believe that the wharf improvements would have happened anyway even if DFO-SCH was still in charge of the wharf.

### **2. Community Strength**

Big Bras d'Or is a strong community and people were active in taking care of the docks prior to the forming of the HA. For the most part people get along with each other, have good ideas and can articulate them. The community values the harbour, supports the HA, and is actively involved in events like the harbour festival in the summer.

## **2. Political Influence**

While SCH does not have a great deal of money to invest in the wharf, it is possible to get capital investment funds through the local MP. The HA has successfully “educated” their MP about the importance of the harbour, and as a result have accessed the funds needed for major improvements.

## **3. Effective Management**

The HA is able to use their own resources to employ a competent harbour manager on a part-time basis, and she does a good job of managing the fuel dock and seeing to minor repairs and improvements through the season. There is high level of satisfaction with the day-to-day operations of the wharf.

### **Steps to Improve Harbour Management**

The interviewees identified actions needed to improve the HA and its functioning. These included:

- Expanded training sessions to build management capabilities,
  - how to prepare needs assessments and business plans,
  - skills at interpersonal communications and problem-solving.
- Assistance when the Board faces unresolved disputes.
- Information on best practices for administrative structures so that each HA doesn't have to reinvent them.
- Access to a central clearing house and resource person in SCH to answer questions on responsibilities and best practices.

### **Social and Cultural Impacts of the Harbour**

The HA directors talked consistently about the wharf as the “hub of the community”.

This summer the HA will host its sixth Annual Big Wave Summer Festival, a week-long social and recreational event that attracts virtually everyone from the surrounding community as well as tourists and summer residents. Each year 300 or more people attend the events, which include concerts, boat tours, dances, lobster dinners, a fishing derby and a poker run.

As well, Big Bras d'Or vessel owners regularly take church groups, Boy Scouts and Girl Guides troops, school groups and other community people on outings in their boats for picnics, bird-watching and marine tours.

All through the season people regularly swim, fish and launch pleasure boats from the wharf. It is a safe and well-monitored gathering place for young people in the evenings. There is also a diving company that uses the wharf as a staging and testing area and the Bird Island Boats Tours are located a short distance down the shore, and while they use the wharf itself only occasionally they attract people to the area.

### **Estimate the Value of the Wharf Facilities**

According to SCH data the estimated value of the Big Bras d'Or harbour facilities was \$745,151 in 2002.

The facilities include the "T" shaped wharf, the land on shore behind the wharf, the water lot on shore behind the wharf, shore protection installations, the fuel wharf, and a floating breakwater.

There are buildings adjacent to the wharf owned by the Arm of Gold fish buyers with cold storage for ice and bait. They have a small private wharf associated with the enterprise and it has the capacity for a few vessels. There is also a boat repair shed.

### **Safety Concerns**

No apparent safety concerns were identified by the HA. This is a well-protected harbour with a safe approach. The Coast Guard had a training school in Sydney and they come to the area regularly to conduct training exercises. They facilitated a First Aid program in Big Bras d'Or during the winter.





## Case Study Report 2 - Pugwash

### Community Consultation

This interview took place with Mary Lou Trenholm bookkeeper for the Harbour Authority and member of the RDA. When asked about getting a meeting together or attending a Harbour Authority meeting she said that the likelihood of anyone showing up was slim to none. In this case we conducted the interview with her alone.

### The Harbour Authority

The Harbour Authority was formed in 1990. They had been approached by DFO-SCH and were told that the community could manage the day-to-day business of the wharf in a more cost effective manner than the government. They now think that the government couldn't afford to manage the wharf and neither can they. The environmental and other regulations that need to be complied with make it very difficult to keep the operation solvent. The harbour authority had not done much planning prior to mid 2000. They are now better organized and are planning for the future.

Over the past 10 years there have been few changes to the wharf. The adequacy of the docking and storage facilities was rated as an 8/10 in 1993, it went down to a 5/10 in 1998, and will be back up to an 8/10 in 2003 when the current construction project is complete. The secondary facilities were consistently rated as a 4/10 from 1993 through to 2003. They have no slipway or haul out and use the one belonging to the fish buyer at the wharf next door. The buyer has ice and there is as yet no fuel dock. The approaches are rated as a 9 and are sheltered and deep. The harbour safety is an 8 with one caveat. Large merchant marine vessels that are docking at the wharf across the harbour have to turn and this may make the approach tricky depending on the timing.

To meet the current and future needs they need to:

- construct another building (one is under construction now)
- build a slip way (though the land elevation may prevent this)
- build a fueling dock

- expand the wharf space. (currently vessels moor three across)
- build a dock for recreational vessels. (pleasure craft have no place else to go and this is an expanding industry)

## **The Community Management System - Problems**

### **1. Government Interference**

It is perceived that there are no advantages to community management. They see the government dictate what needs to be done and the community still has no voice in the matter. They see government interference as the biggest disadvantage.

As an example, currently they are required to install a fuel dock. This is a very expensive undertaking and they believe the government has been impeding the process. The companies that would install the dock and supply the fuel would also provide the design for the dock system. This is not acceptable to the government. An independent company must be hired to do the design at a fee of \$2,500. Then that design needs to be sent out with the tender for services. If this was truly a community project the community could choose to do it in the most cost effective manner.

### **2. Community Conflict**

It is very difficult for fishermen who fight for “a spot on the rocks” to come together and work on a committee. There are also fishermen policing fishermen on the wharf. This is a small community and this creates bad feeling.

### **3. Volunteer Burnout**

The volunteers that are the most responsible for the wharf management are the busiest and are overburdened by this.

## **The Community Management System - Successes**

All of the repairs and upgrades that have happened to the facility would have happened anyway. The most successful part of the arrangement was the agreements made with the SCH at the beginning of the relationship. The power, lighting,

resurfacing and other upgrades would still have happened if SCH was still operating the wharf.

### **Improved Management for the Harbour Authority**

The management process would be improved if the government listened to the people more. The group feels that SCH is not honest with them and that the government is creating more hardship in a community that already has many challenges.

There are huge concerns with the environment and it is thought that the government finds it harder to go after large corporations than small enterprises. Right now the government fine to the very large international vessels for dumping oil in the harbour is \$4,000. This needs to be raised substantially (to \$400,000) so it is really a deterrent.

### **Social and Cultural Impact of the Harbour**

There are a few social and cultural activities associated with the wharf.

- There is a Mackerel Fishing Tournament that is organized by the fire department. The contestants are taken out on commercial fishing boats. This is the eighth year and it is one of the community's biggest fundraisers.
- there are local recreational fishermen who fish from the wharf

They are not set up for public access to the ocean from this wharf. They have no haul out or slipway and they would be concerned about liability issues.

Economically the wharf is critical, if the fishermen using the wharf are not successful then the community suffers.

### **Direct and Indirect Employment**

The Harbour Authority employs one part-time bookkeeper. (\$800/year)

Indirect employment

- bookkeeper
- fuel truck (two people)

- garbage pick up
- fish buyers
- boat hauling (trucker) part-time
- mechanics, small motors, regular car mechanics
- small parts business

#### Demands for Goods and Services

- electricians
- cement workers
- dredging
- hardware store

#### **Number of Vessels**

There is a spring fishery and a fall fishery. There are 16 vessels moored on the wharf during the spring and 15 moored in the fall. In the fall 5 of those boats are also there in the spring. So the total number of boats that use the wharf is 26.

This is an increase over the past 10 years due to changes in the fishery. Now there are boats operating in both the spring and the fall fisheries.

#### **Landed Value of Catch**

The landed value of the catch has increased in the past 10 years in all fisheries.

#### **Harbour Facilities**

The wharf is shaped like an “L”. There is a slipway, no breakwater no dry dock or haul out. They are asking for an expansion, as some vessels are moored three deep.

They would also like to expand and build floating docks for recreational vessels

### **Capital Costs for New Development**

Fuelling dock - \$25,000 paid over 5 years

Expansion - \$250,000

### **Annual Budget**

Revenue 2002 - \$4,320 but should be \$6,600

Annual repair and maintenance costs - \$3,000

### **Safety Concerns Related To The Harbour**

There are many large ships that turn in the harbour and this could be a hazard combined with bad weather or low visibility.

## Case Study Report 3: Digby Neck

### Community Consultation

The consultation covered the wharves in Tiverton, East Ferry and Freeport. As well as speaking to the wharf managers the researchers attended a consultation organized by the Sustainable Communities Initiative for their project entitled *Socio-economic Impact of Wharves on Coastal Communities in Digby, Annapolis and Kings Counties*. They were looking for strategies around the development of wharves along with heritage and cultural projects to develop a roadmap for future project funding. We were able to ask some of our questions during this event.

There were sixteen people at the meeting and this included eleven fishermen and representatives from the Department of Fisheries Nova Scotia and DFO Small Craft Harbours and other interested parties. There was an opportunity to speak to five or six of the fishermen prior to the meeting. The participants were from both Tiverton and East Ferry.

The Harbour Authority manager gave the information for Freeport and additional information was received from the Harbour Manager at East Ferry.

### The Harbour Authorities

The Tiverton Harbour Authority was formed in the early 1980s in response to the information that their projects would be completed more quickly if they participated in this system.

Freeport Harbour Authority was formed in 1990. Local community leaders saw people in New Brunswick moving forward with the process and thought that it would be good for their community.

All of these communities rely heavily on their wharves for their economic survival. In both Freeport and Tiverton they said that if the wharf didn't exist neither would their village. This is a vital link to their employment. Even though tourism has helped to buoy up the economy after the collapse of the groundfish fishery, the wharves are still a central part of this activity.

It has been a long road to getting the necessary work done in these communities. In general people said that the wharves all along Digby Neck were in rough shape and work has been done to improve some of them, but others are in need of some important improvements.

### **Freeport**

When Freeport took over the management of the wharf they put in place, with the approval of SCH, a ten-year plan to repair and improve the wharf. Thirteen years later there are still parts of the plan that have not been done and the plan disappeared after the third year. They are responsible for two wharves, Fish Point and South Cove, which are located in close proximity to one another.

Next year they will rebuild a section at a cost of \$150,000 and the major repairs will be complete. In the past ten years there have been major changes. Before the repairs were started there had not been changes to the wharf for 40 years. They now have 150 ft of wharf and they have completed an upgrade to the existing 40 ft of wharf. They built a breakwater that gives them protection on both sides and they have installed electricity, lights and winches.

Their major need for the future is to have the harbour dredged to four or five feet below mean tide so it can be used at low tide. Not being able to use the harbour and wharf unless the tide is in is not only a nuisance but it is a safety concern. If there is an emergency on the boat and the tide is out they cannot get into the wharf. The boats have changed in the past 13 years. They are now longer and deeper hulled.

### **Tiverton**

In Tiverton there have been \$180,000 in improvements to the existing wharf in 2002-03. The community is not hopeful that these renovations will hold up. The concrete was taken off of the wharf, they added more rock underneath and then resurfaced it with concrete. The users see it as unsafe.

Recently, they learned that their proposal for a new wharf has been approved. This will mean a major rejuvenation for the area. Prior to the announcement there was a lot of hard feeling within the community about the management of the harbour authority and it's effectiveness. They have now seen a major turn around.



The new construction will be located a little west of the current wharf and have a price tag of \$2.6 million. This will consolidate activity from the wharves in Tiverton, Whale Cove and East Ferry. It will accommodate 35 vessels of 45 ft. and have a breakwater that will provide shelter for the ferry. It will increase access for recreational vessels and have additional parking for tourists.

## **East Ferry**

This year East Ferry built a floating dock. The majority of the vessels here moor away from the wharf. The wharf was originally built as a breakwater for the two fish plants. With the advent of the Harbour Authority they now can provide garbage removal and lighting for the wharf.

## **Community Management System - Challenges**

### **1. Volunteer Burnout**

When we first spoke to the volunteer manager at Tiverton he was in the process of resigning his position. They had gone through a long process of applying for repairs to the wharf and then the repairs had not been done well. He had come under fire for this even though it was out of his control. The volume of work, stress and time involved were all contributing to him leaving the position. For him it was a thankless job. He said there were never enough people to take on the work. This has all turned around since the announcement of the funding for the new wharf.

More people are participating on the Harbour Authority and they are proud of the accomplishments.

### **2. Conflict**

The Tiverton volunteer manager became the focus of some frustration in the community over not being able to move forward with their progressive vision.

The tourist season creates a safety hazard on the road adjacent to the wharf. The only parking for the wharf is along the side of the road and it makes the road allowance too small and is therefore unsafe. Also during this time because of the additional users, the garbage collection is not frequent enough, but these users do not pay fees and the boat owners are made responsible for their access to the wharf.

There was mention that sometimes it is difficult for tourism and eco-tourism to co-exist with fishing enterprises. Tourist operators have put forward requirements that have proved to be a disadvantage to the fishermen. Fishing practice can co-exist with tourism where there is enough space for them to operate separately.

### **3. Management Capacity**

The management capacity of the Harbour Authorities is compromised because of the nature of the work and the fact that it is being done by volunteers.

- When volunteers take care of the bookkeeping things are not always done in a systematic way because there are so many little things to keep track of, hoist charges, pumping fuel etc.
- Directors are members of the community and being responsible for the collection of dues can strain relationships, so they often go uncollected.

### **4. Dealing with a Variety of Government Agencies**

The Freeport Harbour Authority mentioned how difficult it was to deal with all of the government agencies. From the environmental impact studies to the development agencies and the municipalities, each organization has their own focus. It is hard to coordinate a project when dealing with this wide variety of interest.

### **4. The Increased Financial Burden and Responsibility**

SCH does pay for major repairs but the fishermen are increasingly forced to undertake smaller repairs themselves. In Freeport fishermen are preparing to shoulder some of the costs for the dredging.

### **5. Politics**

The political side of getting the work approved is seen as a major drawback to the process. The former Minister of DFO lives in the area and people fear that fewer projects will be approved if they lose this leverage in future.

### **Community Management System - Successes**

## **1. Improved Communication**

Each area acknowledged that there have been improvements in communication between SCH and the communities. They now have some control over what happens at their wharves, even though it does not always work out as they planned.

## **2. Repairs to the Wharf**

The work does get done. In each area people spoke about the feeling of accomplishment that they have when the needed repairs are completed. It may be a frustrating process but the small increments of improvement are welcomed.

## **3. Improved Viability of Business in the Community**

The new wharf in Tiverton will be a major contributor to business in the community. Not only will it make for safer and easier docking and loading and unloading of vessels for fishermen, it will increase the access to the village by tourists.

Already a tourist destination because of the whale watching tours, the new marina will attract the tourists that travel by water with the new moorage available to recreation vessels. The Harbour Authority will potentially benefit from this by charging for the services they provide. It will solve the conflict in the wharf usage and the safety issues caused by lack of parking near the old wharf.

## **Steps to Improve Harbour Management**

1. Bill Hall of Small Craft Harbours, the area representative, suggested that two or three wharves could get together and hire one bookkeeper/manager to take care of the business for all three. This would help with a number of challenges.
  - To have an individual in this position would give the SCH a regular point of contact
  - They could write the business plan for all three and meetings could be district meetings
  - They would be paid to keep track of all the little details and to do this for more than one wharf would make it an economically viable job for someone.

## **Social and Cultural Impacts of the Harbour**

The Tiverton wharf is seen as a meeting place for the community. People meet there to chat, fish recreationally or just take a walk. It has not had the capacity to accommodate much more. Neither has the East Ferry wharf, but because there is the ferry wharf and activity takes place around that as well there is less focus on the small less attractive wharves. They plan to increase the activity around the wharf when the new wharf is built starting with a fishing derby.

## Case Study Report 4 - Harbourville

### Community Consultation

Harbourville is located on the shore of the Bay of Fundy in Kings County. The consultation meeting took place at the Harbourville Community Centre on May 13<sup>th</sup> 2003. There were five people in attendance, all members of the Harbourville Restoration Society. There were no fish harvesters present. George Spicer arranged the meeting.

### The Harbourville Restoration Society

The Harbourville Restoration Society was formed in 1999 in response to the need to have a community organization to take charge of the wharf as it had deteriorated to the point that the facility was in jeopardy. Their goals extend to fostering and maintaining a sustainable fishery in Harbourville, fostering social and cultural vitality, and creating opportunities for diverse economic activity in Harbourville.

Though they have been in existence for more than four years and have successfully raised funds, developed detailed engineering plans, conducted a feasibility study, developed a business plan, and undertaken the needed environmental studies, they do not yet control the wharf.

On March 4<sup>th</sup> of this year they were allocated funds by ACOA but they are unable to make use of them until the ownership issues are settled. This harbour is no longer recognized by DFO SCH. The wharf itself was divested to the Province, but the federal government still owns the land adjacent to the wharf. The Province has not been in the business of repairing wharves and they have no funds to manage it or do the repairs. Regarding the ownership and how it can be transferred to the society, they have had conflicting information from the Provincial Fisheries Minister and the Ministry of Fisheries bureaucrats. This has been frustrating for a very bright and dedicated group of volunteers.

There is one safe ladder, one workable wharf that is 90 feet long, no washrooms, a slipway that is unusable, two excellent breakwaters, no marinas, dry dock or haul out.

There are many improvements needed and the first is the new wharf facilities. The next would be dredging and after that lighting.

This is a harbour that will flourish when the necessary repairs are complete. Tourism is increasing and there are new fishing licenses in the community. It is also a harbour that is necessary for safety along the coast. During foul weather this is a very well protected harbour. There are few safe harbours along this coast and the traveling distance between them is great, so it has an important value for marine safety.

### **Changes to the Use of the Wharf in the Past Ten Years**

Over the past ten years the wharf and secondary facilities have been in disrepair. Where the docking and storage facilities were rated at six out of ten in 1993 they are now down to a zero or a one. Secondary facilities are almost non-existent. The haul out will resurface when the east side wharf is repaired but it has not been used for ten years. The approaches are rated as an eight because of the excellent breakwater. Harbour safety is good but there are many areas of the harbour that are not useful.

Today there are more commercial and recreational vessels using the harbour. There are more commercial vessels because there are fewer harbours and there has been an increase in the number of licenses in the area. The introduction of a First Nation's commercial and food fishery from this wharf has added a new dimension and increased activity.

The area is also growing as a recreational area with many more recreational vessels looking for moorage and more tourists are visiting by land as well. The increase in tourist visits to the area has encouraged growth in the number of commercial enterprises that go along with that.

### **The Community Management System - Problems**

The group said that they were driven to form the Harbourville Restoration Society by a dreadful situation. The wharf was in terrible disrepair, the community was growing and they knew that they had to have a committee in place to apply for the funds to keep the wharf going.

Still, after four years they have not been able to take over the wharf. It has been a tangle of red tape. Departments do not work together, the Minister says one thing and the bureaucrats contradict that and the federal and provincial government's don't communicate well. If the bureaucracy was easier to work with they believe the east wharf would have been built three years ago.

### **1. Government Mismanagement**

The greatest disadvantage is working with a government bureaucracy that does not have the respect for the needs of this community and holds the community back from moving forward economically. They believe they have been stymied in their efforts to make their harbour work by a slow and uncooperative bureaucracy and a local RDA that has not provided them with the support and assistance they expected.

### **2. Lack of Management**

No one is really managing the harbour and there are no funds except what comes out of the pocket of fishermen and from fund raising efforts of the Harbourville Restoration Society.

### **3. Liability Insurance**

When the wharf repair is complete the society will have to contend with the cost of the liability insurance. It will be at least three times greater than it is now and this is prohibitive.

## **The Community Management System - Successes**

### **1. Community Strength**

The group believes that the need to restore the wharf has brought people from different groups in the community together for a common cause. The mobilization of the community around this issue has been very successful. They have raised a considerable amount of money with fundraising activities and community members who are not involved in the committee show their support by participating in the fundraising activity.

## 2. Future Improvements

Improvements to the Harbour Management system will happen when the wharf is built. This will allow the organization to generate income without all the work that goes into fund raising.

The building of the wharf will increase the commercial and recreational fishing in the area and also stabilize the tourism industry.

### **Social and Cultural Impacts of the Harbour**

The members of the committee talk about the harbour as the “Heart of the Community”.

The Festival by the Bay is a week-long event that hosts all types of activities associated with the marine environment. There are rowing contests, shellfish shucking, knot tying, music and cultural events.

At other times there are fishing parties, kayak tours and recreational fishermen all who use the harbour.

The public access to the marine environment is less than adequate from the wharf as there is no safe ladder, no haul out and no berthing facilities.

There are many small businesses in the village that depend on the presence of a working harbour to attract tourists. These include:

- a retail outlet for fish
- an art gallery
- a restaurant
- a bed and breakfast

The real estate values will rise and the cottage owners can ask a better price if the harbour is a more vital place.

The First Nation’s fishery is a new addition to the wharf. Their Communal and Commercial fishery has increased the activity at the wharf and they have also provided some much need funds for renovation of the east wharf.



## **Direct and Indirect Employment**

Along with the eighteen commercial fishermen and the five First Nations commercial fishermen, there are about ten full-time and twenty seasonal part-time positions with the restaurant and the fish market.<sup>37</sup>

The west wharf has had approximately \$300,000 of repairs this past year and that employed six people part-time for the seasonal work. There will be additional indirect employment when the wharf construction is undertaken.

## **Estimated Value of the Wharf Facilities**

The group gave rough estimates for the value of the facilities to be:

New wharf construction - \$300,000

Slipway - \$20,000

Breakwater – 1,000,000

## **Annual Repair and Maintenance Costs**

\$3,000 dredging - paid by fishermen

Hydro for Lights – paid by fishermen

## **Annual Capital Costs for New Development**

One time cost for new development - \$1,000,000.

## **Annual Budget**

Estimated to be - \$50,000 maintenance and insurance

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<sup>37</sup> EDM Environment Design and Management Ltd. Economic Impact of the Harbourville on the Province of Nova Scotia

### **Safety Concerns Related to the Harbour**

This is the safest harbour in the upper bay area because of the breakwater. Marine vessels need several harbours in the upper bay area to depend on and Harbourville is the largest. To steam to either of the next two close safe harbours takes 4-1/2 hrs to Port Lawrence and two hours to Halls Harbour.

### **Coast Guard**

There are no coast guard facilities present but there is a coast guard auxiliary member that operates from the wharf.

## Case Study Report 5: Liverpool

### Community Consultation

Three members of the harbour authority attended the meeting plus one interested community member. Two were fishermen. The meeting convened at the Seaside Community Centre. Interviews were conducted with two major industries in Liverpool regarding their wharves and use of the harbour.

### Harbour Authority

The group said that they were forced into being a harbour authority. They had tried to take ownership but it was not viable. They thought that small craft harbours would not rate them high enough to do the necessary repairs and it was in very poor condition and needed to be barricaded to protect the public. They formed a company to buy the wharf but they could not do it if the wharf was not in good condition when they took it over. The Harbour Authority route was the only one open to them. In April 2002 the wharf came under the protection of a Harbour Authority.

The wharf serves an aquaculture site and this has increased the number of boats as well as the size of the boats at the wharf. It has also increased the traffic on the wharf with the boom trucks, feed trucks and lifts. Groundfish landings have decreased in the area but lobster landings have increased.

The wharf was unused for the five years prior to the repairs in the fall of 2002. The docks, storage, approaches and safety were all rated as fair. There is no haul-out, ice is not available and the secondary facilities are still rated as a 0.

In the fall of 2002, they added a new concrete surface. The Harbour Authority was displeased with the extent of the repair. The original wharf was 150 feet long and 35 feet wide and the SCH would only repair it to 100 feet long and 25 feet wide.

Although the Harbour Authority is only a year old the public is pleased to have the wharf open and useful. The community has a history of marine activities since the days of Champlain and the wharf used to be a focal point of the community. This has changed and now the marina, which is located close by, has taken over that position.

To meet the current and future needs of the community the wharf needs:

- a new skidway,
- access to running water,
- a container for used oil,
- bumpers, and
- dredging.

This is a wharf that has been unused for a long time and the resurfacing is just the beginning of the work that needs to be done to keep this a viable wharf.

### **Community Management System – Problems**

This is a new Harbour Authority, they are doing a great job, but soon after assuming responsibility they quickly become disillusioned with the process. They knew what was needed to repair the dock and they were not able to make that happen. They had \$250,000 for the repair; the tender that was accepted was for \$190,000 the rest of the money was redistributed into other SCH projects.

The group believes that the representatives from Small Craft Harbours do their best. They listen to what the community says and then they have to act within their guidelines. It would be preferable for the repairs to be done right the first time.

### **Community Management System: Successes**

The Harbour Authority has only been in place for a year and a half and they have successfully completed renovations to the wharf that have increased its usefulness to the community.

### **Steps to Improve Harbour Management**

The action identified by the group to improve harbour management included:

- More money to ensure the wharf is a safe and efficient operation.
- A better financial management system.

- To address this problem they suggested that the five wharves in the area hire one bookkeeper. It would make the system more efficient.
- The five wharves could share knowledge and one person would become expert in the execution of the businesses.
- The municipality was suggested as an organization that could undertake this function.
- More meetings with other Harbour Authorities in the area
- Workshops on relevant topics

### **Social and Cultural Impacts of the Harbour**

The marina, located about 150 yards from the wharf, is the centre of many cultural and social activities. Seafest, a summer festival, takes place with the Marina at the heart of the activity.

The wharf is not the best place for the public to access the ocean. The repairs are almost complete but there is very little parking space and there is no ramp on which to launch a boat. Currently, the wharf is operating at full capacity with commercial fishing and aquaculture vessels. If other boats were moored there it would make it difficult to load or unload. However people still use the wharf for recreational fishing.

### **The Demands for Goods and Services Created by the Harbour.**

In Liverpool the large Mersey Seafoods Operation, the Bowater Mersey Paper Company, the Harbour Authority Wharf and Stempro Steel Engine Products create a large demand for goods and services. The Stempro Steel Engine Products representative was not available to answer the survey but both Bowater Mersey Paper Company and Mersey Seafoods completed the questionnaire by telephone interviews. Together these two companies have about 580 employees.

They are both heavily dependent on their wharves and the same could be said of the Stempro Steel Engine Products who do repairs to large ships and fishing vessels. The Bowater Mersey Paper Company representative said they would not be there if it wasn't for the wharf. This was the key to the mills location as they ship their product overseas from this site.

These wharves create an estimated 85 jobs associated with loading and unloading vessels, fuelling, maintenance and icing. According to Bowater Mersey representatives, spin-off employment is estimated to be equivalent to three times direct employment figures.

The Mersey Seafoods operation has 500 meters of vessel space on their wharf while Bowater Mersey has room to dock two ships at a time. These ships are 200 meters long and 30 meters wide.

The Bowater Mersey Wharf was expanded in 1989 to make it longer and stronger and they did some dredging to increase the depth. The Mersey Seafood wharf has not changed during this period of time but they have done repairs as needed.

The Bowater Mersey Paper Company handles large amounts of cargo about 180,000 metric tons per year. Their biggest concern is the maintenance of the dredging. Located on the harbour at the mouth of a river, silt becomes a constant problem. In 1989 the federal government discontinued the funding for this dredging and they now must maintain the approaches themselves.

### **Estimate of the Value of the Wharf Facilities**

The Harbour facility wharf was estimated at \$360,000 and to replace at about \$500,000. The capital costs over the past five years were about \$250,500. The annual repair and maintenance costs are about \$1,500.

Estimated value for the two large wharfs is unavailable.

Mersey Seafoods purchased their wharf from SCH five years ago.

### **Safety Concerns**

The two companies running large vessels out of the harbour had concerns about safety in the harbour. These include:

- The decline in the number and maintenance of the navigational aids.
- There used to be two navigational markers at the entrance to the harbour. Now there is one that was moved to cover both. This requires that the vessels rely on their navigational equipment. If this equipment malfunctions they have no fall back visual support. Foggy nights become a greater safety concern.

- If the trend to larger vessels and fewer navigational markers continues the possibility of accidents will increase.

## Case Study 6 - Sheet Harbour

### Consultation

Rob Turner, the project manager with the Millbrook Band Council answered the questions for the case study.

### The Wharf

The wharf at Sheet Harbour is a new installation built in 2001 as part of the Millbrook First Nations Fisheries Agreement and is managed by the Millbrook Band Council. It is replacing the old East River Wharf that was destroyed by fire. It has been a very good addition for the Band. It has created employment not just in the fishery but also in the construction and maintenance of the facility.

There is a full time manager for the facility and a part-time maintenance person and the offshoots have provided employment for a truck driver. There are four vessels that moor at the wharf and twenty fishermen. The main catch is lobster, with some people fishing snow crab and others swordfish and tuna.

There are no slip-ways or haul-outs at the facility, but generally they are pleased with the facility and rate it as an eight out of ten. The facility has security, ice, bait, power, fuel, water and a freezer.

Their next item for improvement will be to add a slipway and then to have an icebreaker in the winter.

### Advantages and Disadvantages of the Community Management System

The fact that the Band Council manages the facility was said to be the major advantage of the system. They have successfully used this as an opportunity to bridge the information gap on First Nations fishing rights with the public and non-native fishermen.



## Case Study 7 – Clark’s Harbour

### Community Consultation

Interviews were conducted with Max Kenny the Harbour Manager and Brenda Stoddard the bookkeeper.

### The Harbour Authority

The Harbour Authority was formed in 1996 in response to the information given by SCH. At Clark’s Harbour there are four wharves, two are part of the Clark’s Harbour Authority and one is maintained by the West Head Harbour Authority and the other is privately-owned. The Coast Guard station is located at the West Head wharf.

There are 106 vessels moored at the two Harbour Authority wharves. The number of boats has decreased in the past ten years but they are larger. The interviewees estimated that where five boats used to fit, they now only fit three.

The condition of the wharf had deteriorated in all areas in the past ten years. The approaches have improved as dredging was done in 1998 and harbour safety has remained the same. There is currently a weight restriction on the wharf due to poor stability. Fuel trucks are not allowed on the wharf.

There are major upgrades and construction planned for the wharf over the next three years. The wharf needs to be stabilized and there is a plan to enlarge the wharf to accommodate more vessels. The surveying and preliminary work is completed but the project has been put on hold a couple of times.

### The Community Management System – Problems

#### 1. Insufficient Funding

There never seems to be enough money for the much needed repairs and expansion. They are able to handle the smaller repairs from their own resources but they are not able to undertake the larger repairs and they are at the mercy of SCH.

### Community Management System – Successes

## **2. Improved Internal Communication**

The volunteers do a good job and work well together. Things run well and are generally well organized. It is a positive system and 80 % better than when managed by SCH. If someone has a need or a complaint they have someone to speak directly to and the board can respond to the needs of the wharf users quickly. They are comfortable with the communication with SCH and have confidence in their regional manager.

## **3. Repairs and Improvement to the Wharf**

They have installed a waste oil containment facility; shore power and electrical hook ups and the garbage and oil pick up runs smoothly. Most small repairs and maintenance projects are financed by the user fees.

### **Social and Cultural Impacts of the Harbour**

Recently the Town of Clark's Harbour installed a boardwalk along the waterfront. This has improved the look of the waterfront and the access to the wharf. The wharf is strictly a commercial wharf with no berthage room for the pleasure craft or boat launch for sport fishing. There are other facilities near-by to provide this access.

### **Direct and Indirect Employment**

Along with the employment from fishing there are two part-time positions directly involved with the wharf; a harbour manager and a bookkeeper.

The interviewees suggested that there were about 25 others whose employment was indirectly effected by the wharf. These include the boat builders, mechanics, fuel deliverers, waste disposal, and fish buyers.

### **Landed Value of the Catch**

It is estimated that the landed value has decreased.

### **Estimated Value of the Wharf Facilities**

The interviewees estimated the value of the wharf facilities at 4 million dollars.

### **Annual Repair and Maintenance Costs**

The user fees ranging between \$40,000 and \$60,000 to cover costs including minor repairs, power, garbage removal, wages etc.

### **Annual Budget**

The annual budget is \$60,000.

### **Safety Concerns Related to the Harbour**

At present, the deterioration of the wharf due to old age is the major safety concern.

There is shallow water near the wharf and though it has been dredged it remains a hazard.

The regional Coast Guard station is located in this harbour. There are numerous training programs offered in the area. E.g. Fishing Master, MED and First Aid

## Case Study 8 – Englishtown

### Community Consultation

This study was to be included with the Big Bras d’Or study, but because of the unique status of this wharf as a privatized facility it was studied separately here. It was difficult to contact the owners of the wharf and the interview involved one of the owners.

### Wharf Management

The St. Ann’s Fishermen’s Association, comprising of seven people, purchased the wharf from SCH in 1998. The interviewee believed they were “coerced” into buying the wharf. They were advised that if they did not purchase the wharf SCH had another buyer and they would sell it to the others if the fishermen didn’t want it. They were not given the option of forming a Harbour Authority. They thought that they would lose access to the wharf if it was sold to someone else and this would mean they would have to travel a long way to the next wharf where there was moorage available.

The fishermen believed that the SCH would complete the repairs that were needed at the time of sale. They did not. They also believed that they would have access to funding grants for repairs but there are none available.

This is an exposed wharf and they lost over half of the wharf one year from ice damage. The repair done by SCH was cosmetic and did not return the wharf to A-1 condition.

The number of fishermen using the wharf has declined in the past ten years. Three families have stopped fishing, one due to an accidental death.

The adequacy of the wharf facilities has declined significantly in the past 10 years. The secondary facilities in particular are very poor. The haul out is in poor condition, there is no ice and the fishermen have to haul their own fuel. This can be a bad stop as the harbour is large and rough, but it is easy to get to and safe on the inside of the “L”.

## **The Community Management System – Problems**

### **1. Covering the Cost of Repairs**

Without additional grant funding the wharf will slowly fall into disrepair. The seven fishermen do not have enough money for the up keep and improvements needed. The insurance costs are also very high.

In the past the interviewee said they would have to fight to get help. Now there is no help.

### **Private Management – Successes**

No successes were identified by the interviewee.

### **Steps to Improve the Harbour Management System**

To improve the current system there would have to be a source of funding for the necessary repairs or the operation could revert to a Harbour Authority system.

### **Social and Cultural Impacts of the Harbour**

This is a small community and fishermen that use this wharf all live in close proximity.

The community does not understand that this is no longer a government wharf. The Association put up a fence and it was damaged. The garbage barrel is regularly thrown over board and people park their vehicles on the wharf so fishermen can't do their jobs.

There is a tour boat that operates from the wharf and there are many more pleasure boats in the area. Recreational fishermen use the haul out and people fish mackerel from the wharf.

In 1998 one of the tall ships docked at the facility.

### **Number of Fish Harvesters**

The estimated number of fish harvesters is sixteen. There are six boats using the wharf and each employs one or two helpers.

### **Direct and Indirect Employment**

There is no one employed in the management of the wharf. There are three fish buyers and a tour boat operator that use the wharf. The tour boat operator also is a fisherman. There is a mussel business that is getting started and will be using the wharf soon.

The interviewer was unable to contact the bookkeeper for the yearly financial figures and estimated value of the wharf.