NEW SOLUTIONS FOR OLD PROBLEMS?
CANADIAN NAVAL SUPPORT OF SOVEREIGNTY: 1971 - 2000

by

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DEDICATION

This thesis is dedicated to both my immediate and extended families. Their love, faith, and support have remained as a constant welcome home beacon throughout my twenty-nine year voyage in this man's navy. I also dedicate this thesis to my naval brethern who have done so much with so little for so long, and who have encouraged and supported my pursuit of three separate careers in the command, diving, and engineering worlds.

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ABSTRACT

New Solutions for Old Problems?
Canadian Naval Support of Sovereignty and Surveillance: 1971 - 2000

Since the 1971 Defence White Paper, support to sovereignty and surveillance has evolved into a primary role for the navy. Following the white paper, continuing Government interest in ocean sovereignty issues was evident in the 1973 Oceans Policy, and in Canada's participation at the third United Nations Conference on the Law of the Sea (UNCLOS). In 1977, Canada unilaterally declared a 200-nautical mile exclusive fisheries zone and naval support to manage this zone became essential.

This requirement continued in both the 1987 and 1994 White Papers. When the UN Law of the Sea Convention came into force in 1995, the government again displayed strong support for ocean sovereignty and surveillance issues as witnessed by the implementation in 1997 of the Canadian Oceans Act. Given the ongoing LOS discussions to extend jurisdictional control over seabed resources out to 350 nautical miles, and the recent UN convention on straddling stocks, the requirement to support ocean sovereignty and surveillance is likely to grow. As such, this task will continue to be important to the navy well into the millennium.

This thesis demonstrates that:

a. support of sovereignty by the navy has been a declared government role that has grown in scope and importance since 1971; and
b. for a variety of reasons, the role has not been effectively supported by the government or put into full operation by the navy.

Given this situation, the thesis explains that there has been a disconnection between the government's objective and the subsequent actions of the navy. This mismatch has been caused, in varying degrees, by the impacts of four factors. The most important factor has been a lack of adequate government support and consistent direction to the navy. The second cause was the resistance of the navy to change its focus from its collective defence role. The third factor, a minor contributor, was the lack of interdepartmental cooperation. Lastly the departments have lacked adequate technology to allow the data necessary to maintain sovereignty to be managed efficiently between the departments involved in the oceans area.

With the continued cutbacks to the navy's budget, the slow DFO progress on developing an Oceans Strategy, and the re-alignment of the navy into a combat-capable, multifunctional force, the prospects for improvements in the area of sovereignty support are not encouraging.

The one area that does offer some hope for the future revolves around the benefits offered by current technological developments such as CANMARNET, RADARSAT II and HFSWR.

LIST OF ABBREVIATIONS USED

ADAM	-	Airborne Data Acquisition Management
ADM	-	Assistant Deputy Minister
ADS	-	Advanced Deployable System
AIP	-	Air Independent Propulsion
ALCM	-	Air Launched Cruise Missile
AOR	-	Auxillary Oiler Replenishment
APEC	-	Association of Petroleum Exporting Countrys
ARCSSS	-	Arctic Sub-surface Surveillance System
ASIS	-	Air Surveillance Information System
ASW	-	Anti-Submarine Warfare
CANLANT	-	Canadian Atlantic Region
CANMARNET	-	Canadian Maritime Network
CANPASS	-	Canadian Pass System
CANTASS	-	Canadian Towed Array Sonar System
CDS	-	Chief of the Defence Staff
CF	-	Canadian Forces
CFIC	-	Canadian Forces IUSS Centre
CFIN	-	Canadian Fisheries Information Network
CG	-	Coast Guard
CMS	-	Chief of Maritime Staff
CPF	-	Canadian Patrol Frigate
CSIS	-	Canadian Security and Investigation System
CZ	-	Contiguous Zone
DELEX	-	Destroyer Life Extension
DINA	-	Department of Indian and Northern Affairs
DFAIT	-	Department of Foreign Affairs and International Trade
DFO	-	Department of Fisheries and Oceans
DND	-	Department of National Defence
DOE	-	Department of the Environment
DOT	-	Department of Transport
DPG	-	Defence Planning Guidance
DREA	-	Defence Research Establiment Atlantic
DREP	-	Defence Research Establishment Pacific
DSR	-	Defence Structure Review
DVS	-	Departmental Violations System
EC	-	Environment Canada
ECAREG	-	Eastern Canadian Area Regulation
EEZ	-	Exclusive Economic Zone
ELVIS	-	Enhanced Linked Virtual Information System
EMR	-	Energy, Mines and Resources

ETASS	-	Experimental Towed Array Sonar System
EU	-	European Union
FEATS	-	Fish Enforcement Activity Tracking System
FPS	-	Force Planning Scenarios
GCCS	-	Global Command and Control System
GDP	-	Gross Domestic Product
GNET	-	Government Enterprise Network
GPS	-	Global Positioning Satellite
HF	-	High Frequency
HFSWR	-	High Frequency Surface Wave Radar
HMCS	-	Her Majesty's Canadian Ship
HQ	-	Headquarters
ICMO	-	Interdepartmental Concept of Maritime Operations
IMO	-	International Maritime Organization
INNAV	-	Information System on Marine Navigation
IPCRC	-	Interdepartmental Program Coordination and Review Committee
IUSS	-	Integrated Undersea Surveillance System
JMCIS	-	Joint Maritime Command Information System
JOTS	-	Joint Operations Tactical System
LAN	-	Local Area Network
LOS	-	Law of the Sea
MAG	-	Maritime Air Group
MARCOM	-	Maritime Command
MARCOT	-	Maritime Command Operational Training
MARLANT	-	Maritime Forces Atlantic
MARPAC	-	Maritime Forces Pacific
MCAN	-	Maritime Command Administrative Network
MCDV	-	Maritime Coastal Defence Vessel
MCM	-	Mine Countermeasures
MCOIN	-	Maritime Command Operational Information Network
MCPG	-	Maritime Capability Planning Guidance
MND	-	Minister of National Defence
MOT	-	Ministry of Transport
MOU	-	Memorandum of Understanding
MP	-	Member of Parliment
NAFO	-	North Atlantic Fisheries Organization
NATO	-	North Atlantic Treaty Organization
NCDB	-	National Crime Data Bank
NCS	-	Naval Control of Shipping
NGO	-	Non Governmental Organization
NORAD	-	North American Air Defence Command

NORDREG	-	Northern Canadian Regulation
NTDSA	-	Naval Tactical Display System Afloat
OASIS	-	Observer Analysis and Statistics Information System
OGD	-	Other Government Departments
PAL	-	Provincial Airlines
PCO	-	Privy Council Office
PIRS	-	Police Information Retrieval System
RADARSAT	-	Radar Satellite
RCMP	-	Royal Canadian Mounted Police
RCN	-	Royal Canadian Navy
RHIB	-	Rigid Hull Inflatable Boat
RMP	-	Recognized Maritime Picture
SAR	-	Search and Rescue
SATCOM	-	Satellite Communications
SCEAND	-	Standing Committee on External Affairs and National Defence
SCONDVA	-	Standing Committee on National Defence and Veteran's Affairs
SLCM	-	Submarine Launched Cruise Missile
SOSUS	-	Sound Surveillance Underwater System
SOUP	-	Submarine Operational Update Program
STAFFEUR	-	Special Task Force on Relations with Europe
SUBTASS	-	Submarine Towed Array Sonar System
TBS	-	Treasury Board Secretariate
TIAPS	-	Towed Intergrated Active, Passive System
TRUMP	-	Tribal Update and Moderization Programme
TTCP	-	The Technical Cooperation Programme
TTFP	-	Transition to Full Partnership
UHF	-	Ultra High Frequency
UNCLOS	-	United Nations Conference on Law of the Sea
UNFA	-	United Nations Fisheries Agreement
USN	-	United States Navy
UUV	-	Unmanned Underwater Vehicle
VHF	-	Very High Frequency
VTS	-	Vessel Traffic System
WESTREG	-	Western Canadian Regulation

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CHAPTER ONE

INTRODUCTION

Canada has the longest coastline in the world, the second largest continental shelf, and is one of only three countries that borders on three oceans. Canadians derive approximately 26 billion dollars of our national wealth directly from the sea, we transport 35 billion dollars in exports annually, and more than 500,000 jobs depend directly on our ocean resources.[1]

Historically, in Canada, the responsibility for management of ocean issues has been fragmented between federal and provincial departments. Oceans' policy has developed by sector (fishery, coast guard, defence, environment, etc.), and various government departments/ agencies control different aspects. In "Oceans' Policy and Naval Policy 1970 to 1997", Fred Crickard states that the efforts of Canadian oceans' policy makers can be grouped into three periods:

a. 1969-1979 - this era was marked by a technology-based development approach to facilitate offshore oil and gas exploration, and concerns regarding overfishing and marine pollution. Canada passed the Arctic Waters Pollution Prevention Act in 1970, and unilaterally declared a 200 nautical mile Canadian Exclusive Fishing Zone in 1977. Canada also took a significant leadership role at the United Nations Law of the Sea III (UNCLOS III) negotiations that began in 1973;[2]

b. 1980-1989 - in this period, interest in offshore resource development was replaced by concerns over environmental degradation, and the near depletion of important fish stocks. In 1987, the government identified that 75 ocean-related programs were being implemented via 14 different departments and agencies. Subsequently, in 1987, a new oceans' strategy was developed and published in Oceans Policy for Canada. This policy

had four goals: promotion of ocean industry, development of ocean science, sound management of ocean resources/ environment, and protection of sovereign rights;[3] and

c. 1994 - 1997 - this period witnessed an increase of Canadian government awareness of the oceans as a resource for sustainable wealth generation. Coupled with this was an expansion of the definition of sovereignty protection to cover areas such as marine pollution, illegal drugs, and illegal immigration. In 1997, the Canadian government passed the Oceans Act, concurrent with the coming into force of the Law of the Sea (LOS) Convention. The Oceans Act acknowledged Canada's jurisdiction over a twelve-mile territorial sea, a twenty-four-mile contiguous zone(CZ), and a 200-mile exclusive economic zone (EEZ). This gave Canada control of one of the largest EEZs in the world. In addition, this act provided for the development and implementation of a national Oceans' Management Strategy.[4]

The right to claim jurisdiction over specific ocean areas is accompanied by the responsibility to ensure that those waters remain free and safe for lawful use by Canadians and others. Therefore, the maintenance of sovereignty must be one of the essential elements within any concept of oceans management.[5] The Canadian Navy, by the nature of its activities, has traditionally provided this type of support to Canadian oceans sovereignty. In 1910, the Naval Service Act created the Royal Canadian Navy (RCN). Among the duties assigned to this fledgling naval force was the responsibility for fisheries patrols.[6] As a result, from the earliest days of the RCN, the navy has provided support to Canadian sovereignty. Traditionally the navy devoted the majority of its effort toward providing support to Canada's allies through the NATO alliance. The navy maintained this emphasis right through the 1968 unification of the navy into the Canadian Armed Forces.[7]

In the 1971 Defence White Paper, the Trudeau government re-prioritized support to sovereignty to make this the primary role for the navy. This reflected the increased government concern over fishing and pollution as noted in Crickard's first period. A continuing high degree of importance was accorded this role, as well, in both the 1987 and 1994 White Papers. With the signing of the Canada Oceans Act, and the coming into force of the LOS Convention in 1997, the requirement for the Canadian navy to support ocean sovereignty will continue to be an important role for the navy well into the next millennium.

OBJECTIVE

Through a review of critical documents and events, this study will demonstrate that:

a. support of sovereignty by the navy has been a declared government role that has grown in scope and importance to Canadians since 1971; and

b. for a variety of reasons, the role has not been effectively supported by the government or put into full operation by the navy.

On the basis of these two conditions, the purpose of this thesis is to explain why there has been a disconnection between this declared government objective and the subsequent action by the navy. The thesis will also include a look toward the future to show how the requirement might better be met through cooperative interdepartmental arrangements, combined with the effective employment of surveillance and information management technology.

APPROACH

In order to determine how effectively the navy has conducted the role of sovereignty support, the following four factors are considered the most critical elements for analysis:

a. government support;

b. response of the navy;

c. interdepartmental cooperation; and

d. technological capability.

Of primary importance is government support. This factor includes the extent of government commitment to the sovereignty task and the budgetary support provided to the navy. The intent is to demonstrate that, while the government has maintained the importance of this role in declaratory documentation, the navy has been hampered in implementing this task due to a lack of follow-on support in resources.

The second factor involves the navy's commitment to carrying out this task. This portion of the analysis will determine if the navy actively resisted replacing the NATO role as the navy's top priority.

The third factor, interdepartmental cooperation, was chosen because there are fourteen federal government departments involved in ocean issues. Thus, it can be quickly realized that any attempts by the navy at management of its sovereignty support role would require extensive interdepartmental cooperation. The intent here is ascertain if the navy and the other government departments have been successful in establishing or maintaining any meaningful long-term cooperation efforts.

The final factor, technological capability, has been selected as a direct result of the importance of electronic information gathering, compilation, and management to the development of an accurate and timely picture of activity in Canada's sovereign areas. This picture is the key to the efficient use of limited government assets. With a large number of different areas, methods, and types of surveillance support information available, the collection, management and utilization of surveillance data requires

extensive technological support and sharing of data. The intent is to determine if the technologies in use, by the navy and the other government departments, were adequate, compatible, and capable of supporting the requirement.

There are several other factors that have had an effect on the development of the Canadian Navy's support to the sovereignty role. These factors include such issues as public opinion, media influence, and external nation influence, and assistance. A full evaluation of these factors, while important, is beyond the scope available within the limitations of this thesis. Where appropriate, the impacts of these issues will be included in the review of events under the other categories.

STRUCTURE

Throughout the thesis, the information presented has been acquired through a review of open literature, augmented where possible by personal interviews of individuals from the principal departments involved in the ocean sovereignty issues. These interviews include representatives from the navy, Fisheries and Oceans, RCMP, Environment, Customs and Excise, academia, and industry.

The thesis will be developed in three parts. Part I provides the necessary background, Part II analysizes the topic and Part III establishes the conclusions. In Part I, Chapter 1 establishes the objective, approach and structure that will be used to develop the review, analysis and conclusions. Chapters 2 through 4 will be used to address the following questions:

a. Chapter 2 - 'What are the requirements of sovereignty support?'

b. Chapter 3 - 'What have been the declared government expectations for the navy regarding sovereignty support since 1971?' and

c. Chapter 4 - 'What evidence has been provided by actual events regarding the match between declaratory policy and action since 1971.

Chapter 2 sets the framework for the thesis by initially establishing a definition of sovereignty, and then identifying the necessary requirements to provide support to sovereignty. Finally, the chapter will discuss, in generic terms, the types of technology available to navies to provide this support.

After Chapter 2 has identified the requirements of sovereignty support, Chapter 3 will trace the government's declared intent regarding sovereignty support and the navy. This begins with a review of the events that lead to the development of the 1971 White Paper and the shift in priority of the sovereignty support role for the Canadian Forces (CF). After examining the details of this White Paper, the chapter narrows its focus from the CF to the navy. With this focus, the review moves forward with an examination of government's declaratory policy from 1971 until 1999. This review will also include examine the implications of the developing Department of Fisheries and Oceans, Oceans' Strategy on the near future of this naval role. The goal by the end of Chapter 3 is to identify what the government has directed the navy to accomplish, since 1971, as regards the sovereignty support role.

The aim in Chapter 4 is to examine actual events associated with the sovereignty support role over the period 1971 - 1999. The intent is to analyse what actually happened when the government was faced with a challenge to Canadian sovereignty. This chapter concludes with a brief analysis of the degree of congruence between government declared policy and actions taken in support of that policy.

Part II of the study provides an analysis of the information presented in Part I to determine explanations for all the conflicts identified between the declaratory policy and the actions taken. This will be done in Chapters 5-8 under the four categories identified previously: Government Support, Naval Response, Interdepartmental Cooperation and Technological Capability.

Part III of the thesis begins with a summary of the findings from the analysis conducted in Chapters 5-8. Chapter 10 completes the thesis with the development of conclusions regarding the reasons for the disconnect, and the implications for the navy in the future under the new 'Oceans Strategy'. A summary of conclusions and

recommendations regarding the part to be played by governmental support, technological developments and interdepartmental cooperation in the navy's future support of this role is also included in this chapter.

In order for the reader to be able to understand the implications and importance of the decisions made, and actions taken in the years since 1971, it is necessary to have an understanding of the basic requirements of the sovereignty support task. Therefore Chapter 2 will provide a theoretical grounding in the basics of sovereignty support.

CHAPTER TWO

SOVEREIGNTY REQUIREMENTS

INTRODUCTION

The object of this chapter is to provide background information regarding the requirements of the sovereignty support task. To that end, the chapter begins with a definition of sovereignty and progresses through the scope, goals and tasks associated with providing support to sovereignty. Subsequently, the chapter will focus on identifying, in general terms, what level of support the government has deemed necessary to provide this support in Canada's oceans. The chapter will conclude with an examination of the types of technology generally employed in this role. While this background will be primarily generic, where possible specific references to the impacts, or effects on the navy, will be presented in support of the principal focus of the thesis.

SOVEREIGNTY REQUIREMENTS

Under the Montevideo Convention on the Rights and Duties of States, among the four criteria that states must possess to be recognized under international law is a defined territory and a governing central authority that makes and enforces laws.[8] Accompanying the right to claim jurisdiction over specific territory are certain responsibilities for the Canadian government. This is equally true for the ocean areas claimed as Canadian territory. These responsibilities are considered an essential requirement for the maintenance of sovereignty as the "supreme and independent political authority."[9]

In 1990, the Standing Committee on National Defence and Veterans Affairs (SCONDVA) undertook a study on "Maritime Sovereignty." As a basis for their deliberations, this committee developed the following definition for Sovereignty:

> "the prevention of trespass, the provision of services and the enforcement of national and international law within (Canadian) territory, waters, and airspace."[10]

This thesis begins with that definition and places it in context with the requirements for ocean management to identify the support requirements for the navy. Using the ocean management definition presented in the Canadian Marine Policy and Strategy Project, it can be seen that Canada must undertake the following marine tasks:

a. Ocean Environment - Protection of habitats, conservation of species, environmental forecasting, pollution prevention, and control;

b. Resources Development - Fisheries, aquaculture, offshore petroleum and minerals, alternatives for generating energy;

c. Marine Transportation - Support of shipping, harbours and waterways, ice breaking, aids to navigation, search and rescue, emergencies;

d. National Maritime Security - Defence, sovereignty, support of law and regulation enforcement, international contributions; and

e. Marine Science and Technology - enhancing capabilities in all above.[11]

In Canada, three main autonomous fleets have evolved to support these requirements: the coast guard, fisheries and oceans, and the navy. In reviewing the functions of a navy, Ken Booth suggests, that all navies have three main functions:[12]

a. Diplomatic - use of warships as extensions of a nation's foreign policy;

b. Policing - to address issues of national sovereignty, resource management, and the maintenance of law and order at sea; and

c. Military - employment related to national and international security.

Comparison of these roles to the Ocean Management tasks previously identified, results in a direct match between sovereignty support and the navy policing role.

There are two basic levels of sovereignty support that must be considered. The first is protection of sovereignty from external military threats, exclusively a military role. The second is protection of Canadian sovereignty from nonmilitary challenges in areas such as the fishery and the environment. In this second area, the military provides support to Other Government Departments (OGDs) who have the primary responsibility in these areas.

While there are two levels to sovereignty support, the basic government objectives for the overall sovereignty support task remain, as described by Peter Haydon,

a. knowing what is going on in Canadian waters;

b. maintaining an unequivocal expression of government authority in the waters; and

c. being able to respond quickly and effectively to violations.[13]

Given these goals, governments must determine how much control is necessary to meet the objectives. This provides a problem for governments because the greater the degree of control desired, the greater tend to be the associated costs. As the costs associated with exercising full control over all activity in a specified area of ocean are prohibitive, governments have typically sought compromise solutions. This solution most often starts by the government determining what is the minimum level of control considered acceptable. At this point, governments try to strike a balance somewhere on the continuum between minimum and full control based on what the government feels it can afford. This is certainly the situation in Canada as seen in this commentary by Crickard and Haydon regarding the sovereignty support question in Canada,

> "The area is just too large and the chance that there be threats or challenges to all that area at the same time is so remote as to be nonexistent. However, there is a clear national requirement to be able to conduct surveillance, patrol, and respond to situations in select parts of Canadian waters. Those areas are invariably related to the national maritime vital interests: shipping routes; approaches to ports and waterways; resource areas; areas of environmental sensitivity; and areas of shared or disputed use."[14]

In order for the navy to meet the government's objectives for sovereignty support, Admiral Garnett stated, that the Canadian navy must focus on three mission areas:

a. surveillance;

b. patrol; and

c. response.[15]

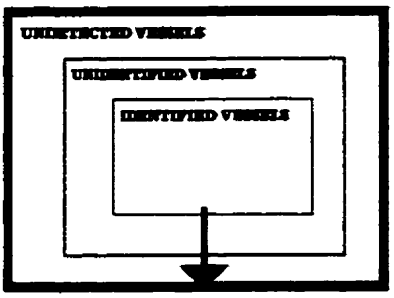
Surveillance - the maintenance of sovereignty demands, as a minimum, that a state must be able to monitor activity in nationally claimed areas. To gain an appreciation of the requirements of surveillance in Canada, start by considering all the activity underway at any time in Canada's ten million square kilometres of maritime jurisdictional area. If, in abstract terms, one could consider the jurisdictional area as the large rectangle shown in Figure 2-1, then any type of activity anywhere in Canadian waters must fall into one of three categories:

a. undetected;

b. detected but unidentified; or

c. identified.[16]

Figure 2-1 - Sovereignty Concept Diagram



Within these three categories is a further distinction between activities involving cooperative parties, uncooperative parties, and parties whose willingness to cooperate is unknown. Combining all these factors results in a continuum that goes from the best case, an activity involving a cooperative, identified party, to the worst case, an undetected uncooperative party.

This spectrum of possible activity sets the boundaries of the surveillance problem, and the essence of the "big picture" necessary to define the support requirement of deploying scarce surveillance resources. The obvious goal of any surveillance program, is to use all available information sources to compile an accurate, "Recognized Maritime Picture" (RMP) maximizing the number of activities, not just in the "best case" box but for the entire continuum.

A review of the major resources available to provide maritime surveillance information in Canada, reveals the following:

a. Patrol/Response Assets - government-operated ships, submarines, and aircraft (mainly the Departments of National Defence, and Fisheries and Oceans);

b. Voluntary Reporting Sources - information provided either by vessels or government departments through programs such as the Coast Guard Vessel Traffic Management Scheme, Fisheries Observers and Coastal Watch;

c. Technical Collection Systems - systems such as shore-based radar, space-based sensors, and all available intelligence sources including "classical intelligence" provided by other nations; and

d. Commercial Information Sources - various publications, periodicals, online databases, and INTERNET services that provide useful background information.[17]

As no single surveillance source can provide all the information required to maintain the RMP, information available from all the sources listed above must be incorporated to have an effective surveillance program. In turn, the picture itself must be the tool used to direct the resource management of scarce surveillance assets. Commander Darren Knight has suggested that combining the information from the various sources into a single picture to monitor activity and direct the response should be done under a "Surveillance Concept of Operations." This concept of operations is based on the premise that it is unrealistic and too expensive to attempt to provide continuous complete coverage in terms of surveillance, patrol and response of Canada's EEZ. As such, the Surveillance Concept of Operations proposes three distinct levels of effort be utilized to maintain an effective surveillance programme:

a. Level 1 - the information collected from the voluntary, technical, and commercial sources is used to establish and maintain a common baseline surveillance RMP which is maintained 24 hours a day, seven days a week;

b. Level 2 - each involved department can use the information from the RMP to identify areas of interest, and its patrol assets can assigned to these areas. While on patrol these assets support the monitoring, identification and data collection activity; and

c. Level 3 - when a specific surveillance problem or requirement is identified, through cooperative discussion between the involved departments, all available resources can be focused on a discrete area or vessel. This type of response applies for problems as complex as counter-drug operations or as straightforward as supporting a basic search and rescue effort.[18]

Patrol/ Response - while surveillance systems are the heart of all naval operations, these two categories are linked on both sides to surveillance. Patrol/Response assets contribute to the surveillance picture while deployed. This is the case any time navy ships are operating within Canadian waters. Even though the ships may not be on a dedicated sovereignty support task, they are providing a sovereign presence in Canadian waters. As well, the ships are available to respond if they observe illegal activity, or they are required for search and rescue (SAR). While it is difficult to quantify the degree of support provided in this manner, it is important to remember that this support must be included in any discussion of the navy's contribution to the overall task of sovereignty support.

SUPPORT RESOURCES REQUIRED

The surveillance concept of operations provides a good framework for the compromise approach to the sovereignty support role. The next questions revolve around, "How much support is required in the Canadian situation?" In trying to address the questions of quantity, it becomes very difficult to establish just how much is enough. However, this was attempted by the government in 1975 in an attempt to anticipate what resources would be required to maintain sovereignty under an extended 200 nmi fishery protection zone. In a 1975 study done for Cabinet, it was determined for fisheries surveillance in this protection zone that,

> "...the minimum level of fisheries patrol activity required for effective surveillance of fishing activity and enforcement of regulations must be sufficient to permit at sea inspections of one third of the foreign fleet and one sixth of the Canadian fleet every month"[19]

and,

> "...air patrols must locate and identify every fishing vessel in areas of Canadian interest once a week throughout the year as a minimum with an additional 20% increase in total flying activity for more frequent coverage of 'sensitive areas.'"[20]

This study indicated that approximately 2000 dedicated sea days and 4200 air hours were required to provide the minimum levels of surveillance and enforcement capability required in support of the fishery.[21]

A second study, conducted for the Cabinet during this same period, stated that the following levels of support were required to provide adequate coverage to meet the requirements of the other departments involved in oceans management:

a. Ministry of Transport (MOT): Vessel Source Pollution - While no requirement for dedicated surface vessel support was identified, it was stated that the necessary surveillance requirements could be met as a secondary task for Coast Guard ships when deployed. Dedicated air support of approximately 1700 air hours was seen as being required for bi-weekly surveillance of the shipping lanes;[22]

b. Departments of Energy, Mines and Resources and Indian and Northern Affairs (DINA): Mineral Resources - Approximately 1000 hours of air support were identified for surveillance of areas of mineral resource activity;[23] and

c. DOE, MOT, DINA, RCMP: Arctic requirements - These various departments require approximately 1300 air support hours for surveillance purposes.[24]

A summary of these requirements is provided in Table 2-1 for reference purposes.

Table 2-1: Summary of Sovereignty Support Requirements [25]

Task	Departments	Sea Days	Air Hours
Fishery Protection	DOE	2000	4200
Vessel Pollution	MOT	Secondary Task	1700
Mineral Resources	EMR, DINA	Nil	1000
Arctic Activity	DOE, MOT, DINA, RCMP	Nil	1300
TOTALS		**2000**	**8200**

While the totals shown in Table 2-1 indicate the bulk of the sovereignty support requirement, there is an additional need for the government to maintain sufficient capability in reserve to be able to deploy for a Level 3 type mission in response to a situation identified through the surveillance picture. This includes being able to respond to a full range of activity from identifying detected vessels, to SAR, and to the use of force to dissuade or apprehend intruders.

Given the goals and the amount of support required, it is now appropriate to turn to a review of the capabilities of the assets themselves. Each of the patrol/response assets (ships, submarines, aircraft) brings certain characteristics and limitations to the task of patrolling the three dimensional maritime environment. While ships move relatively slowly, they offer good endurance. Aircraft travel rapidly but are much more limited in the amount of operational time they can remain in an area. Submarines combine stealth and endurance with an ability to use speed at the cost of the other two factors.

Other considerations in this category include the endless combinations of equipment and the effect on platform size. Smaller is generally cheaper, but this offers less capability and endurance. Technology is a major factor in this regard, not only from the perspective of improved performance of new equipment, but also from the perspective of systems interoperability with assets from other government departments

and from allied countries that also provide information and support to Canada's sovereignty efforts.[26] The next section will provide a more detailed description of the general types of technology employed in this regard.

GENERAL REVIEW OF TECHNOLOGY

To understand the role technology plays in the support of sovereignty, it is necessary to restate the three sovereignty support missions defined above: surveillance, patrol, and response.

Among these three missions, surveillance is the area primarily affected by technology. While the same technological applications would be used in support of the patrol and response missions, the most critical factor for sovereignty support is the initial detection and identification of activity of interest. Concerning this requirement, again recall from the requirements section above that any type of activity in Canadian waters would fall into one of these areas: undetected, detected but unidentified, or identified.

The crux of the problem for technology is to provide the means to detect and identify these activities in any of the three ocean dimensions (over, on, and under the sea). The detection ideally should occur no later than when the activity begins to take place in Canadian waters. The same ideal situation applies to the task of activity identification. There are two parts to this problem. The first part concerns questions of quantity. Are there sufficient resources available to maintain necessary coverage, and to allow timely management of the data obtained? This part was introduced in the previous section regarding the 1975 delineation of resources required to manage the 200 nmi fishery zone. The second part concerns the availability of appropriate technology to facilitate the detection and identification process.

In support of the detection and identification process, the following technologies have been the principal assets used by Canadian departments in this regard:

a. Radar Systems - these systems have been the primary method used by patrol craft at sea, and in the air. As well, radar has been used extensively

on shore-based applications. Space-based radar systems began to appear in the 1990s and these have begun to see more frequent use;

b. Sonar Systems - this type of technology has been utilized both on shore and at sea although most predominantly by the navy;

c. Communications Systems - historically, the bulk of communication has been station-station direct transmissions, either from ship to ship or between ships and shore bases. In the 1990s, the use of satellite-managed communications (SATCOM) has been rapidly increasing; and

d. Data Management Systems - computer-based data storage and management systems have generally been used by all the involved departments to collect and store data for management and historical reference purposes.

Limitations on the maximum ranges obtainable for the data acquisition and communications systems (radar, sonar, radio, etc.) determine the area of coverage of a particular asset. By default, this defines the number of surveillance assets required to provide adequate coverage.*

A second factor associated with the detection and identification of targets, and the efficient use of the available assets, is related to the question of data sharing. Data on any particular activity held by one government department may reside in that department's data collection system. Without some method of data-sharing, a second department, on coming into contact with that activity, would be unaware that further data is available. This may result in an unnecessary expenditure of patrol assets. Another

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* For example, if a coastal radar station can cover a semi-circular arc of coastline and ocean for 20 miles either side of the station, you would require approximately 3 such stations for every 100 miles of coastline to allow coverage overlap.

aspect of the data sharing concept involves the synergistic amalgamation of the pieces of data from the various available sources into a single picture. This process, known as "data fusion" is traditionally done by a trained analyst who is essential to the process. For example, if four contact reports are received from various sources and the position reports are very close but slightly different. It is the analyst who must fuse the data to make a determination if there are four ships, or just the same ship being reported at different times.

This intent of this chapter was to provide a concise background of the requirements for supporting sovereignty. The Canadian government's declaratory expectations for the navy and this role since 1971 is that next area that will be examined in the chapter 3.

CHAPTER THREE

THE DECLARED SOVEREIGNTY ROLE

INTRODUCTION

The 1971 White Paper, Defence in the 70s, assigned the "general responsibility for surveillance and control over Canadian territory, waters and airspace" to the Canadian Forces (CF) as its first priority.[27] This was an apparent major role change for the CF from its previous focus: support of collective security through NATO. This chapter begins with a review of the lead up to the 1971 Defence White Paper. Subsequently, it reviews government declaratory policy from 1971 to the present in order to determine, "What has been the government's declared policy direction regarding the navy and the role of sovereignty protection?"

BACKGROUND

Bruce Thordarson notes that Canadian foreign policy remained remarkably consistent between 1948 and 1968. The central focus of this policy was providing support to collective security via the United Nations, and by Canada's participation in various security alliances.[28] As a result, the main tenet of Canadian defence policy became centred on Canadian involvement with NATO, and NORAD.[29] When Pierre Trudeau became Prime Minister in 1968, this changed. Trudeau held three beliefs that were to become relevant for DND. The first was that national interests should determine and promote both foreign and domestic policies. This was in direct contrast to the in vogue Pearsonian premise, that saw Canada's natural role as the world's "helpful fixer."[30]

Trudeau's second belief was that defence policy should flow from foreign policy. The following statement demonstrates that Trudeau believed the reverse had been the case ever the formation of the NATO defence alliance, "For two decades, Canada's foreign policy was largely its policy in NATO, through NATO."[31]

Finally, Trudeau believed that there was little value in maintaining the armed forces. This attitude was obvious in his comment to ex-Wing Commander Bill Lee, "Why would a guy as smart as you waste his time in the military?"[32]

After becoming Prime Minister, Trudeau wasted little time in acting on these beliefs. He directed that "first principles" reviews of defence and foreign policy were to take place. Regarding defence policy, Trudeau insisted on "a comprehensive review ... [of] Canada's armed forces policy, including alternative forces' structures and costing."[33] Despite Trudeau's preference for developing defence policy from foreign policy, the defence review commenced first, and was completed first. This was because of a pressing need to establish the size of the defence budget for the next fiscal year. Severe inflation was dramatically affecting the Canadian economy and the government's fiscal situation. As well, the annual NATO review meeting was approaching. At this meeting, Canada would be required to make firm military commitments for one year, and forecast its commitments to NATO for the next five. The future status of Canada's NATO commitment was therefore the most contentious issue at this point. Bruce Thordarson says that,

> "NATO was the issue that seemed to arouse the greatest interest among critics of Canadian foreign policy, and because it was one of the areas in which Mr. Trudeau himself appeared critical of existing policy."[34]

Trudeau was critical of continuing Canada's existing involvement in NATO for two reasons. First, Western Europe had fully recovered from the devastation of World War II. As well, a substantial number of other countries had emerged on the international scene. Trudeau believed that these two factors had combined to reduce Canada's political influence in the Western European arena.[35] Trudeau's second reason was that the central premise for maintaining the NATO security alliance was to provide a balance against the USSR. Since the end of the Second World War, the USSR had traditionally been considered a "revisionist" power eager to take advantage of any Western weakness. However, during the 1960s, there was growing evidence of

"pluralism" within the Soviet *bloc* and a general development of east-west *detente*.[36] The perceived loss of influence, and the apparent easing of E-W tensions were two major factors fuelling Trudeau's belief that there was no longer any requirement for Canada to support NATO at the current level.

By March 1969, a broad-based review of defence policy had been conducted. This resulted in the production of three official reports containing recommendations regarding Canada's future in NATO:

a. the report of the Special Task Force on Relations with Europe (STAFFEUR);

b. a joint report by the Departments of External Affairs and National Defence; and

c. a report from the House of Commons Standing Committee on External Affairs and National Defence.

In general, all three reports recommended Canada's continued commitment to NATO, at least until the main items of equipment for the Air Division and Mechanized Brigade required replacement.[37] These reports provided small comfort to the Prime Minister, given his mind-set about reducing the Canadian commitment to NATO. As a result, Trudeau directed his special assistant, Mr Ivan Head, to produce a separate secret report. This report was first revealed to the cabinet on March 29.[38] This paper, "Canadian Defence Policy - A Study," more accurately reflected the Prime Minister's thinking. It advocated a reduction of support to NATO and a shift in focus for the Armed Forces to domestic roles. As such this report became the basis for the subsequent cabinet decisions.[39]

There were several other developments during this period that also influenced the government's decision to shift the focus of the CF to domestic roles. In 1969 and 1970, the voyages of the US tanker *Manhattan* through the Northwest Passage awakened Canadian public interest regarding Arctic sovereignty issues. This was seen in the subsequent rapid development of the Arctic Waters Pollution Prevention Act. Public

concern was also growing regarding overfishing, and environmental problems associated with an increase in offshore gas and oil exploration.[40] In 1970, the government asserted its jurisdiction over its offshore waters for the purpose of establishing pollution and fishing control. Government officials believed that an emphasis on sovereignty was necessary to remind Canadians that more attention should be focused on Canadian issues, and less on a "crusading" international role.[41]

In addition, during the 1960s, Canada had become heavily involved in the United Nations development of the Law of the Sea, having participated in two UN Conferences (UNCLOS I and UNCLOS II). These conferences had achieved some initial success in redefining principles for this critical area. In 1968, the UN established a committee to study the peaceful uses of the seabed beyond national jurisdiction. This committee operated from 1968 - 1973 and it established the agenda for the UNCLOS III convention. The agenda proposed several radical ideas such as the establishment of a 200 nmi. Exclusive Economic Zone for each maritime country.[42] The Canadian government realized this dramatically increased Canada's sovereign ocean area which might require a sizeable increase in management effort and resources.

The first public inkling of this pending change in defence policy focus came at a press conference held by the Prime Minister April 3, 1969. Trudeau stated that, while Canada rejected a non-aligned or neutral role for Canada, his government believed that the armed forces could be better employed in Canada than in Europe. Under his government's new "philosophy of defence,"defence priorities therefore would be:

a. the surveillance of our own territory and coastlines - sovereignty protection;
b. the defence of North America in cooperation with the United States forces;
c. the fulfilment of agreed NATO commitments; and
d. the performance of international peacekeeping roles from time to time.[43]

In a speech to the Liberal Association, in Calgary, on April 12, 1969, Trudeau reiterated his intention to downgrade the NATO role. He stated that the country had no previous foreign policy except for that provided through the defence policy position of supporting NATO. In making this change, Trudeau explained that the government was attempting to,

> "stand the pyramid on its base instead of its head" -- "to review our foreign policy and have a defence policy flow from that, and from the defence policy to decide which alliances we want to belong to, and how our defences should be deployed."... "that is why we gave a series of four priorities."[44]

Regarding the order of the four priorities, Trudeau left no doubt as to the magnitude of the shift he intended when he stated that, "Our first priority is the protection of Canadian sovereignty, in all the dimensions that it means."[45]

Donald Macdonald, as the Minister of National Defence, inherited the task of developing a White Paper to justify this shift in priorities. Macdonald supported Trudeau's contention that the conventional threat had been reduced and that nuclear parity had been established between the US and the USSR. Macdonald believed that this factor, added to budgetary pressures, and increasing national concerns over Northern and Coastal sovereignty issues, supported the need to rework defence policy priorities.[46] Therefore, Macdonald began to construct the white paper based on his strategic assessment that *detente* between the US and the USSR would last, that there would continue to be steady economic growth in Europe, and that there would be growing peace and prosperity in the world. The resulting improvement in world stability would allow Europeans to take more responsibility for their own defence and as such, Canada could reduce its commitment to NATO.[47] To replace the NATO role, the CAF would focus primarily on the domestic task of sovereignty protection.

SOVEREIGNTY 1971 - 1999: GOVERNMENT DECLARED POLICY

During the period from the release of the 1971White Paper until 1997 there were a number of critical policy developments that provided insight into the government's perspective on the support to sovereignty issue. This section will review government declaratory policy and actions over this period under the following categories to determine what direction the navy received regarding the sovereignty support role:

a. the 1971 White Paper;

b. the 1974 Defence Structure Review;

c. 1977 Fishery's Zone Expansion to 200 nmi;

d. the 1987 White Paper;

e. 1987-1994: Sovereignty as Security;

f. the 1994 Defence Review and White Paper; and

g. the 1997 Oceans Act.

The 1971 White Paper

The 1971 White Paper clearly established the scope of the sovereignty support task in the following statement, " National Defence has, however, ultimate responsibility to ensure that overall an adequate Canadian surveillance and control capability exists for the protection of Canadian sovereignty and security."[48]

To accomplish this objective the Government indicated its intention to establish CF Operations Centres on the East and West Coasts to work with the civilian departments to ensure overall adequate surveillance and exercise control in areas not covered by civilian authorities.

The section of the White Paper entitled Surveillance Role - Maritime & Land, stated that the *Argus* and *Tracker* would provide the bulk of the air surveillance until the end of the decade. As well, a study of the feasibility of installing a sub-surface perimeter detection system for the Arctic would be conducted, and research would begin on the use of hydrofoils (*Bras d'Or*) for surveillance. Direct support by the navy to Fisheries and Environment for arrests of violators was also pledged.[49] In addressing

defence budget issues, the necessity for continued cutbacks was emphasised, although it was noted that some increase in the budget would occur to allow the continued operation of the *Tracker*.[50]

Critical review of this new direction for the navy found opinion on both sides of the argument. Colin Gray states that the 1971White Paper was a welcome step away from the Cold War mentality,

> "The very limited contribution that Canada can make directly to international security has been recognized by a sensible redirection of attention to those domestic missions that have often been slighted in the past in the face of more glamorous, big-league, 'real soldiering' alliance duties'".[51]

On the other hand, John Granatstein, from York University, was strongly critical of this shift in roles,

> "... the paper's emphasis on sovereignty and surveillance has to be seen for what it is. Except for those in NATO and NORAD, and on peacekeeping duties, the bulk of the armed forces is to have as its first charge the maintenance of sovereignty. But what does this mean? ... Sovereignty is a fraud, a patently phony defence priority. There is no physical threat to our sovereignty in the north. ... The real reason, the only possible reason, for the emphasis on sovereignty is the justification it offers for keeping troops in Canada."[52]

C.C. Merritt supports Granatstein's position in his article "The True Requirements of Canadian Defence". The author takes up the argument that the White Paper totally ignores the realities of the true defence role and that it is a case of "inadequate resources being wrongly applied" and "a collection of trivia." Merritt challenges the White Paper's statement that the resources of the CF were adequate for the surveillance role. He concludes that this White Paper was for appearance only, and that it had no substance.[53] Arnell and Anderson concur with this assessment. Their review of this policy shift notes that, "while it identified these roles and the priority assigned to each of them, the statement left unsettled the question of effort to be devoted to each role..."[54] Thus the navy was given a task that was not well defined with no indication of

the degree of effort expected to be expended on what was considered a 'phony priority.'

In retrospect, the critiques by these authors would appear to have had justification given that only three years later, the CF would have to hold a Defence Structure Review to redefine its role and functions.

1974 Defence Structure Review (DSR)

In November 1974, the MND, James Richardson, announced that a Defence Structure Review committee would be established. This committee was to examine options for dealing with the increasingly obvious inability of the military to deal with its commitments in the face of falling revenues. A seven percent funding increase, started after the 1971 White Paper, had been overtaken by double digit inflation and the CF was facing a financial crisis.

As a result of this situation, the DSR was tasked with examining options for the CF to meet its commitments within its budgetary constraints. Prior to making its recommendations, this review group established several basic points:

a. a well trained and equipped force serves a wide range of Government interests;
b. certain tasks of a purely national nature, sovereignty, fishing, etc are best performed by the Armed Forces;
c. detente rests on the maintenance of a balance of power; and
d. Canada has benefitted from its participation in the collective security arrangement.[55]

On the basis of its findings, this DSR group recommended that:

a. Canada stay in NATO and in NORAD;
b. 18 new *Auroras* be acquired;
c. the government make an immediate decision on the construction of new Canadian Patrol Frigate (CPF) ships for the navy;
d. a new realistic funding arrangement be pursued.[56]

Thus, after only three short years, the government had returned the NATO commitment to the first priority.

In 1977, L. Rossotto provided a good final analysis of this period in his article, "A Final Look at the 1971 White Paper on Defence." The following quote from that article appears to capture the essence of the government commitment to real change at that time,

> "The irony of the current situation is that although the Cabinet has produced a clear and rational definition of its objectives in *Defence in the 70s* it has refused to give them substance. The *White Paper* indicated very definite requirements for the military to fulfill, yet a true defence policy is not only a matter of White Papers, but also of men, equipment and training. Even a cursory look at the recent past of the Canadian Armed Forces must reveal that either the government did not really believe what it said or it was not willing to face the economic sacrifices which were required." [57]

Thus, by 1977 the priority on sovereignty support was on the wane and questions were beginning to appear regarding the ability of the CF to meet the requirements of the role. This was hardly an auspicious time to dramatically increase the requirements of the task. Nonetheless, that is exactly what the government undertook to do in 1977 with an expansion of a fishery protection zone out to 200 nmi.

1977 Fisheries Zone Expansion

In 1977, the Canadian Government unilaterally declared a 200-nautical mile exclusive fisheries zone. This was done in conjunction with Canada's continued participation in the LOS development process that was underway in New York. This declaration increased the size of the ocean area claimed by Canada as sovereign territory from twelve miles to two hundred miles, a total now of eleven million square kilometres.[58] To overstate the obvious, this declaration dramatically increased the area for which the navy was responsible to provide sovereignty support.

At this point, the navy had too many tasks, and insufficient resources to meet all its requirements. This situation became known as the "commitment-capability gap" In

the last years of the Trudeau government prior to a 1984 election, this problem was recognized by the government and it began efforts to rectify the situation. In 1984, the Mulroney election platform also expressed outrage at the poor state of the Defence Department and the Conservatives promised a six percent increase in defence spending immediately upon election. Once elected, Mulroney initiated foreign and defence policy reviews. Among the main issues identified in these reviews were:

a. continued support for Canada's military alliances;

b. the problems of the "capability-commitment gap"; and

c. the re-emergence of the sovereignty issue due to the increase of American/Soviet activity in the Arctic and the growing importance of the Pacific Ocean. While the Arctic had been seen previously as a buffer, it was now seen as having the potential to become a battleground due to the advent of nuclear submarines and intercontinental ballistic missiles.[59]

In 1986, Perrin Beatty was appointed National Defence Minister and, after extensive consultation with the military, he produced the 1987 White Paper, Challenge and Commitment..

The 1987 White Paper

The basic thrust of this defence policy statement was that Canada would continue to support collective security and deterrence through NORAD, and NATO. Canada would also re-dedicate itself to peacekeeping and continue working for arms control. On the national front several new initiatives were announced to enhance national capabilities under a new "Three Ocean Navy" concept that recognized the importance of the Arctic from a strategic perspective.

After reviewing each of the proposals in this White Paper, Joseph Jockel said that,

> "Having found something for the Germans, the Americans, the three armed services, assorted critics of past policy, 'transatlanticists,' and those concerned about Canadian sovereignty; having even found a little something for the Norwegians; and having retained the same number of

> Canadian contributions to NATO Europe, while at the same time announcing a bolstering of Canadian sovereignty protection, surveillance and territorial defence, *Challenge and Commitment* still manages to stay in the good graces of Finance Minister Michael Wilson and his department."[60]

Professor R.B. Byers says that this White Paper correctly identified that Canada's security concerns revolve around the E-W strategic balance. He feels, however, that the tone of the paper was far more "right wing" than the positions established in the foreign policy review. In discussing the commitment-capability gap, Byers gave credit to Mr. Beatty for his honesty, and he indicated that a number of other non-governmental studies had also shown that, "Canadian commitments to NATO and Western security exceeded the ability of the Canadian Forces to fulfil assigned roles and missions in a credible manner."[61]

Byers believes that while all areas of the military received an augmentation in capability, the true winners were the maritime forces, the surveillance and control capability and the reserves. Byers states that this priority reflects the recognition that Canada is a maritime nation with three ocean interests.

> "In order to pursue these interests it is deemed essential that Canada's navy of the future have sufficient sea denial capabilities to fulfill maritime roles and missions within the projected demands of Western security..... Acquisition of such capabilities would also ensure that Canadian sovereignty can be protected."[62]

In closing, Byers raises the various impacts and implications regarding implementation of the recommendations ending with this statement, "The real question is whether Canadian governments will exercise the necessary political will to allocate sufficient resources to ensure the security and sovereignty of Canada." [63]

Douglas Bland, in his review of this White Paper, says that it differed from the 1971 version in that this one was more of a "classic defence statement". It was prepared in complete cooperation with the military and it reflected a "realist" perspective on the soviet threats of submarine launched missiles, cruise missiles and bomber attack. This

White Paper also clearly identified the problems associated with the "commitment-capability gap" that had developed under the Liberal government. Bland believes that Perrin Beatty attempted to shift the defence department's priority back to the NATO role over the domestic focus but events such as the Arctic passage challenge and the True North Strong and Free rally meant that he had to maintain a balanced approach. This led to the White Paper introducing the "Three Oceans Navy" concept. Bland contends that Beatty's goal was to provide the navy with enough high end equipment to do both the NATO and domestic roles.[64]

Middlemiss and Sokolsky suggest that this paper indicated a re-emergence of the sovereignty issue due to the increase of American and Soviet activity in the Arctic, and the growing importance of the Pacific Ocean. What had been seen in the Arctic before as a strategic backwater, now had the potential to become a battleground.[65] In summarizing this White Paper these two authors come to the following conclusions,

> "Overall then, the 1987 White Paper on defence promised to rebuild the CF in accordance with a traditional Canadian approach whereby Canadian security was predicated on that of the United States and the West European allies. Within these parameters, however, there was an unmistakable shift of emphasis from the primarily European orientation of the Cold War years to North American roles. Of the four changes identified by the minister, three of them -- the importance of the Pacific and of the Arctic and the growing ALCM/SLCM threat - necessitated more attention to the direct defence of Canada."[66]

With this new direction and support for the sovereignty role as a counter to the submarine threat, hope began to rise in the navy, especially given the extensive capital equipment purchases identified to support this role. However, Perrin Beatty was replaced as Defence Minister by Bill McKnight shortly after the release of the White Paper. This move did not bode well for the government's continuing support of its bold white paper. Nor was anyone in the navy any more reassured when Marcel Masse replaced McKnight as Defence Minister just after the 1989 budget announced the cancellation of fourteen of the major capital items from the White Paper. It remained to be seen how Masse would address the confusion running rampant in the navy.

1987-1994 - Sovereignty as Security

The 1989 budget announcement was closely followed by the end of the Cold War in 1990. Now all the rationale behind the 1987 White Paper had been called into question. In 1991, Masse produced a defence policy review booklet. This booklet was intended to outline the department's post-Cold War vision of defence issues. Masse began this review with his observation that the world is both, a safer yet more volatile place. The booklet continued by identifying factors currently shaping defence policy. These were the collapse of the Soviets, the ascent of ethnic nationalism as a force, and a new expanded definition of security. This new definition now included the,

> "adoption of a broader approach to national and global security, brought about by international concern over such issues as the environment, population growth and the availability of critical resources..."[67]

This report also included several glimpses of how the government now viewed the future role of the navy and the degree to which it would become involved in the maintenance and support of this new security,

> "The maritime forces of the future will be asked to respond to a new set of challenges. The focus for the Canadian navy, first and foremost, will be the Canadian areas of maritime responsibility off our East and West coasts."[68]

and,

> "The maritime forces will be trained and equipped to conduct sea patrols for the protection of Canadian sovereignty, particularly with respect to fisheries, drug interdiction and our maritime economic zones. Greater use of our maritime areas of national jurisdiction will increase the demands placed upon the maritime forces for search and rescue and environmental monitoring." [69]

and,

> "We will distribute available capacity more evenly between the Atlantic and Pacific fleets. Increased Canadian presence in the Pacific will enhance sovereignty, enable the navy to carry out national roles more effectively and signal Canada's increasing interest in Pacific security." [70]

Thus in 1993, as Canada prepared for an election, there was a state of turmoil regarding the role of the navy. During the election campaign, the Chrétien Liberals indicated that there was a need for an immediate Defence Policy Review. With their subsequent election, everyone in the navy now waited for that promised review.

1994 Defence Policy Review

After David Collenette was appointed Defence Minister, he announced his intention to hold a open, and 'democratic,' parliamentary review of defence policy. In reference to this review Robert Lawson said that,

> "The 1994 defence review began as an attempt to implement the Liberal Party's promises to democratize the process of defence policy formation in Canada while shifting Canadian defence policy away from its Cold War fixation and into the service of a far more activist, internationalist and independent foreign policy."[71]

To establish the ground rules and expectations for this review committee, Collenette produced a "Minister's Guidance" document. This document specified the range of issues to be considered by the committee. This paper advanced the concept that the "New World Order" was anything but orderly, and it appeared to want a directed answer for the CF as can be seen in the question the committee was tasked to answer,

> "Should Canada maintain - at the lowest possible cost - a combat-capable total force of naval, land and air forces which is adequately equipped, appropriately supported, and properly trained to protect Canadians and protect their interests and values abroad?[72]

The Guidance Document also suggested a range of tasks for the CF to meet the proposed role. These included,

a. good governance at home including action against illegal activity that challenges Canadian Sovereignty (fishing, drugs, immigration, pollution);

b. support civilian law enforcement agencies (SAR, humanitarian aid)

c. recognition of the importance of providing support to NATO; and

d. continental defence.[73]

The review committee was drawn from all the parties within Parliament, except the New Democrats. As well, Claire Sjolander says, the Canadian Forces' (CF) perspective was well represented. Three of the eleven members were ex-senior officers, two others had previously been commissioned officers, and two others represented ridings with large military bases.[74] During the review, this committee interviewed 841 witnesses, received written submissions in ten cities from non-governmental associations (NGOs) like the Canada 21 Council, and the Conference of Defence Associations. It also visited several locations in Europe and the United States.

From the outset of the review, the committee discovered that most Canadians believed the world had become an unstable and very dangerous place. In addition, the public hearings established that massive Canadian public support existed for the peacekeeping function. The committee also concluded that the government's fiscal situation meant that further cuts to the defence budget would be required. The committee contended that the solution was to move from a 'general mobilization' model to a,

> "unified, combat-capable, multipurpose armed forces composed of sea, land and air elements that are: properly equipped, able to operate abroad in support of Canada's multilateral peace and security interests and responsibilities."[75]

In October 1994, the committee published its report, "Security in a Changing World," which recommended the following policy positions:

a. establishing Sovereignty Protection as the fundamental role of the CF;
b. remaining as an effective partner with the United States in the defence of North America, and continuing to participate in NORAD;
c. continuing to participate in the full range of UN, and other multilateral peacekeeping operations;
d. remaining an active member of NATO; and
e. increasing the emphasis on the Pacific aspects of Canadian security.[76]

The priority for the sovereignty support role, while established as being 'fundamental,' was now on par for priority with the other four roles. The recommendations also reflected a need to expand the peacekeeping role and they identified the need for further budget cuts. It now fell to the Defence Minister to determine how the department was going to achieve these contradictory goals one more time. This was done one month after the release of the review report when the government published the 1994 White Paper, the first in the post-Cold War era.

1994 Defence White Paper

The tone for this White Paper was set early in the domestic considerations section which discussed at length the growth of the public sector debt. This section also referred to the Special Joint Committee's recommendation of stable funding for DND at a level lower than that set in the 1994 Budget and the necessity for additional cuts. However, in Chapter 3 of this White Paper, government support for retaining a combat capability was established, "Even so, we must maintain a prudent military force to deal with challenges to our sovereignty in peacetime, and retain the capability to generate forces capable of contributing to the defence of our country should the need arise."[77]

Chapter 4 identified several roles for the navy associated with Canadian sovereignty protection:

a. demonstrating, on a regular basis, the capability to monitor and control activity within Canada's maritime areas of jurisdiction;
b. assisting, on a routine basis, other government departments in achieving other national goals in such areas as fisheries protection, drug interdiction, and environmental protection; and
c. maintaining a national search and rescue capability.

In reviewing this White Paper, Claire Sjolander felt that the document had failed to identify one clear threat and this demonstrated inability to focus on a central theme resulted in, "the 'transformation' of the Canadian military into one capable of responding

to any emergency anywhere in the world on short notice represents a broadening of the mandate of the department."[78]

While these machinations were underway in the Defence Department, there were also some very significant developments in progress in other areas of the government regarding oceans' policy. In May 1994, the National Advisory Board on Science and Technology presented the Prime Minister with a report by the Committee on Oceans and Coasts. This report, entitled Opportunities From Our Oceans, recommended the development of a strong oceans policy through the creation of an Oceans Act.[79] Following this recommendation, and coupled with the coming into force of the Law of the Sea Convention in 1994, the government began to create the Canadian Oceans Act. The government intended this act to be the framework for the development of a Canadian Oceans Management Strategy that would map out the Canadian government's plan to manage all aspects of Canada's oceans in the 21st century.[80]

1997 Oceans Act and Strategy

The Canadian Oceans Act became law on January 31, 1997. It officially established a twenty-four nautical mile Contiguous Zone (CZ) and a two hundred nautical mile Exclusive Economic Zone (EEZ) for Canada. Within these waters, this Act consolidated previous activities and legislation that allowed Canada to take action with respect to offences committed in Canadian waters relating to customs, environmental, fiscal, and immigration laws.[81] The Oceans Act called for leadership by DFO in integrating and coordinating oceans activities – from developing and implementing an oceans management strategy, to establishing a national network of marine protected areas; from developing marine environmental quality standards, criteria and guidelines, to achieving integrated management of all activities that take place in, or affect, the oceans. The intention of the government was to use this act as the legal framework for the development and implementation of the Oceans Management Strategy. This strategy was to be developed under the same guidelines as the Law of the Sea, ie: based on the principles of sustainable development, integrated management, and the precautionary

approach.[82] In support of this process, the Canadian government also announced its intention to ratify the UN Convention on the Law of the Sea (UNCLOS) and the UN Fisheries Agreement(UNFA) on straddling stocks. Given the stronger conservation and management provisions of the UNFA, the government specified it would first ratify the UNFA agreement, followed by the ratification of the UNCLOS. The bill for ratifying UNFA was passed by parliament in December 1997 and ratification of the bill is forecast for August 1999.[83]

To begin the development of the ocean strategy, DFO released a discussion paper called Towards Canada's Oceans Strategy. This paper identified eleven major issues that needed to be addressed within the strategy. Among the eleven issues, it is envisioned that Maritime Security and Enforcement will be the issue area that predominately defines the navy's future role as regards sovereignty protection. Goals established for this issue are the development of:

a. an integrated surveillance and enforcement regime;
b. a capacity to monitor and enforce territorial and environmental security;
c. coordination mechanisms to exercise and protect sovereign rights over offshore areas and resources;
d. international, cooperative surveillance of fisheries; and
e. methods to share technology and assets between surveillance providers.[84]

DFO's plan was to use this discussion paper as the focal point for a series of meetings with Provincial and Territorial governments, and Aboriginal organizations. These meetings were to be conducted from March 1998 - March 1999, and a public consultation process would follow this series of meetings. On completion of this process, a work plan was to be developed to identify pilot projects and various initiatives to be conducted. The Oceans Management Strategy was to be developed using the results of these projects with a target date for implementation of this strategy as the year 2000.[85] However, due to delays in the creation of the Oceans Sector department and the appointment of an ADM Oceans, the first series of meetings did not begin until October

1998. As well, the new ADM Oceans has decided to proceed from the initial series of meetings to the development of a "straw man" strategy paper. This straw man paper would form the basis for bilateral interdepartmental discussions. These talks are now forecast to commence in the summer of 1999. On completion of these talks, the strategy will be finalized with the goal of presenting it to the government for standing committee review by January 2000.[86]

With the initial discussion phase just underway, DFO officials believe it is too early in the process to be able to define the navy's role. They suggest that perhaps 9-12 months after the public consultation phase DFO would be in a better position to comment on this role.[87] At this point, DFO is still finalizing the working arrangements resulting from the 1995 merger with the Coast Guard and the reduction in the combined fleets. As such, the roles of the Coast Guard and even the Conservation and Protection Directorate in DFO have not been finalized under the new strategy.[88]

SUMMARY

To briefly summarize this review of declaratory policy since 1971, it is evident that a dramatic shift in the primary CF role occurred with the 1971 White Paper. This shift lasted until the 1975 DSR which re-established the primacy of the NATO support role. From 1975 until 1987, a series of mixed messages were delivered by the government as highlighted by the 1977 expansion of the fishery protection zone, and the development of the 'commitment-capability' gap. The 1987 White Paper re-established the priority of the sovereignty support role, but more so in response to a perceived military submarine threat than in the support to OGD aspects. Marcel Masse's 1991 defence policy review booklet appeared to revert to stronger OGD support, while the 1994 Defence Review and White Paper, established the "combat-capable, multipurpose" focus for the CF with sovereignty support again just one of the assigned roles. As these events were emerging for the military, DFO was assigned the major task of developing the overarching strategy for the oceans including the future role for the navy in this area.

The end result of twenty-eight years of varied policy declarations appears to be an uncertain status of the priority of the sovereignty support role for the navy as envisioned by the government. Indeed, the very fact that there were only three defence white papers during this period is indicative of the degree of importance the government placed on defence and, by default, the navy's role in this area. On the one hand, the government appeared to recognize the importance of the task as seen through its actions such as the Arctic Waters Pollution Prevention Act, the extension of the fishery protection zone, the Oceans Act, and the declared support for the LOS and UNFA conventions. On the other hand while the scope of this task was being increased through these actions, the priority attached to this role by the government waffled from the initial strong support under Trudeau to become just another task among the many tasks assigned to the navy under the 1994 White Paper. With this chapter as the background, the next chapter will now examine a number of instances where the government faced challenges to Canada's sovereignty. The intent in this process is to determine to what degree government actions matched its declaratory policy.

CHAPTER FOUR

A SYNOPSIS OF SOVEREIGNTY EVENTS 1971-1999

INTRODUCTION

As illustrated in the last chapter, with the election of Trudeau in 1969, Canadian sovereignty became a declared priority of the Canadian government. The focus on Canada's oceans appeared to grow in declared importance for the subsequent governments as witnessed by the policy line linking the 1970 Arctic Waters Pollution Act, the 1977 Fishery Protection Zone Act, the Oceans Act, and the government's declared support for the LOS and UNFA conventions. Over this same period, there have been several incidents which presented challenges to Canadian sovereignty. The objective of this chapter is to review these key incidents and the government's responses in order to determine, "What evidence has been provided by actual events regarding the match between declaratory policy and action since 1971?'

THE VOYAGES OF THE *MANHATTAN*

In 1968 the discovery of significant quantities of oil in Alaska led a US company, Humble Oil, to examine cost-effective ways to transport this oil to the US. Their plan was to send an oil tanker, the *Manhattan*, through Canada's portion of the Northwest Passage. At this time there were conflicting claims regarding the legal status of this passage. Canada's position was that this was Canadian territorial water, while the US claimed it was an international strait. In keeping with an informal arrangement between Canada and the US, Humble Oil notified Canada of the intended trip. Ottawa, in an attempt to strengthen its sovereignty claim, decided that the Canadian icebreaker, *John A. Macdonald*, would accompany the *Manhattan*. As well Canada suggested that the US send an official request for an American icebreaker to accompany the ship, and the three ships would then travel together. When the US government did not respond to this suggestion, the Canadian government began to issue public statements signalling its

determination to resolve the sovereignty issue.[89] The Department of External Affairs also began discussions with other countries regarding Arctic issues such as Canadian continental shelf rights, and straight baselines legislation.* This was followed by Prime Minister Trudeau's April 12, 1969 speech wherein he declared that sovereignty support would become the first priority role for the CF. In addition the government introduced a bill to amend the Territorial Seas and Fishing Zones Act. In May of the year, the Prime Minister delivered a speech declaring Canada's sovereignty over the Arctic lands, and its rights to the Arctic continental shelf and Arctic territorial waters.[90] These pronouncements were followed by a joint Canada-US meeting in June at which an agreement on the joint transit of the *Manhattan* was reached. In August, the *Manhattan*, with the two icebreakers, began its transit of the passage, emerging on September 14. Humble declared the transit a success and indicated that a second transit would occur the following year. External Affairs officials concluded that, while the arrangement used for this transit did not directly challenge Canadian sovereignty, a definitive legal position would be required prior to the next transit. In the final three months of 1969, the Cabinet moved slowly to resolve the problem. The strategy that emerged in January 1970 avoided a direct sovereignty claim and focused instead on the prevention of pollution damage through the imposition of restrictions on Arctic shipping. The key to this strategy was the monopoly held by Canada on heavy icebreakers. In simple terms, all shipping wanting to go through the passage had to meet Canadian pollution regulations or ice breaking services would be withheld.[91] The position taken by the government received unexpected public support as a result of the grounding off Nova Scotia of the Liberian tanker, the *Arrow*. The furor over the one million-gallon oil spill raised Canadian public awareness of the potential problems associated with oil transport at sea and especially in the Arctic. Thus, when the Humble Oil Company formally notified the Canadian government of the second *Manhattan* voyage, it was decided that

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* This concept involved calculating Canada's territorial waters based on straight lines extending out from headland to headland rather than following the curvature of the enclosed coastline.

discussions would be undertaken with the US regarding the *Manhattan* having to meet the provisions of the then draft Arctic Waters Pollution Prevention bill. After much discussion, Humble Oil agreed to give Canada ultimate control over the voyage. They requested the assistance of the Canadian icebreaker, agreed to have a Canadian government representative travel onboard, agreed to meet the Canadian pollution prevention standards, and they posted a bond and accepted responsibility for the voyage.[92] The US government was considerably less amenable, not conceding anything on the jurisdictional issues and feeling out-manoeuvred on the environmental issue. On April 1, the *Manhattan* began its voyage. At the same time the US Senate approved the construction of a series of what would become the world's most powerful non-nuclear icebreakers.[93] While Canada had won the first round, one of the new US icebreakers, the *Polar Sea*, would return to the Arctic seas fifteen years later to renew the controversy.

THE *POLAR SEA*

In the summer of 1985, the US ice breaker, the *Polar Sea*, made an unannounced trip through the Northwest Passage. This re-ignited the controversy over Canada's claim of sovereignty in this area. Once again public opinion in Canada was inflamed and a series of discussions ensued between the two countries. The issue was finally resolved after a summit meeting in April 1987 between Prime Minister Mulroney and President Reagan. At that summit, Reagan was supportive of the Canadian position and this led to the eventual signing of the Arctic Cooperation Agreement in 1988. Under this agreement the US agreed to ask for Canadian consent before any future voyages by Coast Guard icebreakers through the passage.[94]

With the 1988 resolution of one piece of the Arctic sovereignty puzzle, the next challenge developed the following year on the Atlantic, and involved the US fishing vessel, the *Concordia*.

THE *CONCORDIA*

At 9:00 a.m. on December 11, 1989, the *Concordia* was observed by a *Tracker* aircraft fishing illegally off Georges Bank in Nova Scotia. As the DFO patrol vessel crews were on strike, HMCS *Saguenay* was dispatched to arrest the *Concordia*. *Saguenay* arrived on the scene at 11:00 a.m. and was rammed while attempting to stop the American ship. The *Concordia* proceeded to take off at high speed heading toward American territorial waters. At 1:00 p.m., a series of interdepartmental discussions began in Ottawa between DFO, DND, External Affairs, and the Privy Council Office (PCO). At 3:00 p.m. the navy was asked to apprehend the *Concordia*. Once in position, at 5:30 p.m., *Saguenay* requested permission to fire warning shots at the *Concordia*. Permission was sought via conference call directed by DFO to the PCO. At 6:45 p.m., permission was received and the shots fired. These shots were ignored, and the *Concordia* entered US territorial waters at 9:50 p.m. that evening where she was arrested by US authorities. The skipper and owner each paid a fine of $9000, but were allowed to keep their catch.[95] This incident highlighted a major problem with sovereignty protection at this point in that the Government had no plans in place to deal with such an incident. This was evident in the time delay from the first 11:00 a.m. arrest attempt until the 6:45 p.m. firing of warning shots, indications of a bureaucracy trying to develop a plan on the run. The navy was also unprepared for the role demanded in this incident. Dan Middlemiss notes that few states "have wanted to become embroiled in a military confrontation over an isolated violation [such as in the case of a fishing dispute]."[96] The navy also lacked the proper rigid hull inflatable type boats and the training necessary to conduct "assault-type" boardings for this type of enforcement operation.[97] While this incident was not well handled, Operation Ambuscade would prove to be a much more successful endevour.

OPERATION AMBUSCADE

In 1992, discussions between MARCOM and DFO resulted in an agreement that a submarine would be used for a fishery surveillance trial. Code named "Operation Ambuscade", HMCS *Ojibwa* was dispatched to monitor the activity of US scallop draggers along the Hague Line which divided the US and Canadian scallop grounds on Georges Bank in the Atlantic. With a DFO fisheries officer embarked on board as a legal eyewitness, *Ojibwa* departed on March 5, 1993 and she spent a week in the area tracking and recording information via low light television, radar and sonar. While there were several technical difficulties with the *Ojibwa's* equipment, the trial demonstrated the potential inherent in this type of operation. Foremost perhaps was the deterrent effect achieved when the submarine contacted a US dragger on radio and informed the captain that they would be apprehended and charged if they crossed over the line again.

However, the operation did have some noteworthy problems. Even though the event was jointly planned it was not conducted as a joint interdepartmental operation. This let to problems relaying information from the DFO flights to the *Ojibwa*. As well, it became obvious that despite the excellent covert ability of the submarine, it could not work alone. The submarine could not effectively apprehend a violator, there was inherent danger to the submerged submarine from nets and trawl equipment, and once on the surface, the submarine was vulnerable to weapon fire or ramming by hostile fisherman.[98] As a result of this operation, DFO recommended that a combined "sub-air barrier" be established along the Hague line. At a subsequent press conference release of the information that Canada was now using its submarines to support DFO had an amazing deterrent effect. Violations of the Hague Line dropped from 33 in 1993 to 6 in 1994, and to 1 in 1995.[99] This operation demonstrated the versatility available to support sovereignty operations, and it aided interdepartmental working arrangements for improving further joint operations. This fact would become very clear in 1994 when an old domestic overfishing dispute boiled over into what became known as, 'the Turbot War'.

THE TURBOT WAR

Following the entry of Spain and Portugal into the European Union (EU) in 1985, the EU acquired a reputation for overfishing, and ignoring NAFO attempts at conservation in the Nose and the Tail of the Grand Banks.

When the Chrétien government was elected, it made fisheries conservation a priority. In May 1993, the Canadian Parliament amended the Coastal Fisheries Protection Act to give the government the authority to conserve the straddling stocks.[100] By 1994, the Canadian government became very concerned about the growing number of illegal fishing citations against Spain and Portugal. An intensive Canadian diplomatic effort followed, which resulted in NAFO agreeing to greatly lowered quotas for 1994. The EU refused to accept these quotas, and Spanish fishing continued in the area. Canada responded in March 1995 by having a Fisheries and Oceans vessel arrest the Spanish trawler, the *Estai.*[101] As might have been expected, this slowed diplomatic efforts to negotiate a settlement. Later that month, Spanish trawlers returned to the areas and a Fisheries and Oceans vessel went out and cut the nets of the Spanish trawler, the *Pescamaro Uno.* At this point, the EU wanted to negotiate a settlement, but Spain resolutely rejected all proposals. In April 1995, the Canadian government sent two Canadian warships to support the DFO vessels. Canada informed the EU to be prepared for military action against the trawlers. The next day, as the warships took up positions, the Spanish agreed to the offer thus ending the crisis.[102]

The management of this crisis saw foreign policy progressed primarily from two sources - the Department of Foreign Affairs and International Trade (DFAIT), and the Department of Fisheries and Oceans (DFO). DND was involved in a backup role providing monitoring and surveillance support. While the navy did not actively participate in any military action, it did have the two ships in reserve as previously mentioned.[103]

A textbook case of interdepartmental tension, this crisis pitted a charismatic, opportunistic minister in Fisheries, against a ministry that viewed itself as the keeper of Canada's national interests, and experts in tradition Canadian statecraft. Andrew Cooper

states that neither DFAIT, nor Tobin tried to conceal their dislike for each other. Foreign Affairs believed that Tobin's actions were disruptive, with great potential to escalate into retaliation by the EU on other issues, such as beef exports. Tobin, on the other hand, believed that diplomacy had been attempted down to the last few remaining fish without any success and bold actions were required.[104] Therefore the whole campaign evolved into a 'good cop, bad cop' affair with DND displaying "little if any inclination to get involved in any naval action."[105] While the DFO vessels conducted all the arrest and seisure activity, dispatching two warships to the area decidely escalated the seriousness of the situation, even given that the ships just remained in waiting over the horizon. This situation, much like the *Concordia* incident, raised the question of how should the navy be employed in these types of incidents. In this case, Barry says, the threat of naval action against the Spanish fishing vessels certainly assisted in the ultimate arrival at an agreement to end the dispute.[106] However, it was a tense situation that had the explosive potential to develop into a very unpleasant, 'war' between Canada and an EU nation.

The previous sections raised some questions regarding the role of the navy in the area of sovereignty support. To provide some balance, the next events demonstrate several examples where the navy involvement was more clearly defined.

THE NAVY SUPPORTS SOVEREIGNTY

In October 1996, the RCMP intelligence became aware of a planned drug smuggling operation involving the sailing vessel *Dame Blanche*. The surveillance of this vessel was undertaken by an *Aurora* aircraft while an RMCP Emergency Response team was dispatched in HMCS *Terra Nova*. The suspect vessel was subsequently boarded off the coast of Cape Breton and eight tonnes of hashish were impounded. Based on the evidence collected during the surveillance and the raid, the crew was convicted of importing narcotics.[107]

A good example of the extent to which the navy, the Coast Guard and other Canadian Government departments can work together effectively occurred on the

morning of 16 January, 1998. Acting on a Mayday message from the *M/V Flare*, the search and rescue (SAR) teams and aircraft from Greenwood, Nova Scotia, and Gander, Newfoundland, were dispatched together with HMCS *Montreal* and five Coast Guard patrol vessels. Information on the *Flare* was collected at MARLANT's Maritime Operations Centre and used to brief all the rescue team. Four survivors were subsequently rescued before the *Flare* broke in two and sank.[108]

In both of these incidents, the ability of the navy to provide surveillance and collate information was of extreme value. In the case of the *Dame Blanche*, while the navy did not act in an enforcement role, the presence of the ship on the horizon provided a convincing backdrop that indicated the serious intent of the proceedings. This "response of last resort' reserve role for the navy seemed to be a role well suited to the severity and scope of the incident.

SUMMARY

The voyages of the *Manhattan* sparked a significant change in Canadian foreign policy concerning sovereignty issues. Although the central issue revolved around sovereignty, it quickly became a dual focus issue with pollution prevention. In the end it was the pollution aspect that provided the key to a difficult international situation. In this instance the government acted with a strong sense of conviction. The diplomatic efforts went well beyond discussions and rhetoric to actual legislation as witnessed by the passing of Arctic Waters Pollution Prevention Act and the work to amend the Territorial Sea and Fishing Zone Act that would eventually surface in 1977 as the Fishing Zone Protection Act. In this example, the actions of the government strongly supported the declaratory position of the government albeit in a reactionary mode.

The follow-on incident involving the *Polar Sea* eventually strengthened the Canadian claim to Arctic sovereignty. However, the incident caught the Canadian government off guard and it again required a reactionary development of a new agreement to cover that area. Though this incident led to a strengthening of Canada's position in this one area, it did not address Arctic issues across the board. One area in

particular remained very much unresolved. This was the question of the Arctic transits of US navy nuclear submarines. While it was common knowledge that these transits were occurring, the Canadian Government never officially acknowledged this fact, instead preferring to turn a blind eye to this type of activity. However, the problem could become a major issue if one of the submarines was forced to surface and was discovered in Canadian waters. The Government would be forced to deal with this blatant sovereignty violation. This would be a very difficult situation as noted by Rob Huebert who believed that the government " is definitely uncertain as to what action could be taken."[109]

Regarding the *Concordia* incident, a simple review of the time line demonstrated the inefficiency of the interdepartmental coordination process in place at that time.[110] Secondly, the inability of the Canadian authorities to apprehend individuals engaging in illegal activity in Canadian waters raises questions about the part played by the navy in this area. The government, though the circumstances of the DFO strike, found itself with its biggest enforcement resource, a Canadian warship, on site. The decision to use this asset to only fire warning shots and then to provide witness to the escape raised severe doubts about the rationale of the navy being directly involved in these types of events. F.S. Northedge notes that for maritime enforcement operations, the strength of the navy lies in the deterence factor. He says that if a nation, "...has to use force, rather than the threat of force, the purpose of the operation has already broken down."[111] In this instance, the Canadian government's bluff was called. Thus the inability of the government to arrest the ship in Canadian waters severely damaged the credibility of the government's sovereignty claim.

With the confusion still rampant over the navy's role in sovereignty protection, 'Operation Ambuscade" served to highlight both positive and negative aspects of the support role expected of the navy at the time. On the one hand, the submarine offered excellent deterrent value. On the other hand, it could not work alone and while the interdepartmental cooperation improved during this operation, the departments were still not used to working together. The lack of effective interdepartmental cooperation was

also evident during the 'Turbot War.' As was noted, several Canadian government departments were involved in the foreign policy decisions and actions during this incident. Andrew Cooper contends that this led to several competing interests behind the foreign policy actions during this crisis:

a. departmental competition - DFO and DFAIT;

b. domestic interests (the collapse of the groundfishery);

c. an attempt to deflect attention from internal Canadian problems; and

d. an attempt to promote global governance.[112]

While the end result of the 'good cop, bad cop' approach achieved the aim, this example appears to provide another instance wherein the government found itself in an ad hoc reactive mode somewhat akin to the *Polar Sea* and *Concordia* incidents. The major difference in this instance was that a lot of the reactive activity came about in response to the 'loose cannon' activity of the Fisheries Minister, Brian Tobin. The DFO actions regarding the *Estai* and the *Pescadaro* took place in international waters and ran counter to international law. Once the process had begun, the events unfolded not according to any well thought-out plan by the government but more by happenstance. The navy, perhaps wary of being caught in the *Concordia* limbo again, resisted any direct involvement, and was content to merely provide a distant presence. In reviewing the outcome of this dispute, Robert Edwards notes that,

> "Canada's strategy of coercive diplomacy also lent substantial support to Canada's decision to act. Significantly, the threat to use force, and the use of force itself, was not intended as the sole means to gain compliance in the fishery. Rather, it was designed to be used as an adjunct to diplomacy."[113]

This incident seemed to demonstrate that the concept of the navy forces as the ' final reserve' option had developed as a better method of employment in this regard. This was subsequently again demonstrated in the *Dame Blanche* incident. While this role was under development over this period, the value of the navy for information collection, collation and distribution appeared to be the one clear area that is well matched to the navy's strengths.

With this short review now complete it remains to determine, "What evidence has been provided by actual events regarding the match between declaratory policy and action since 1971." The events examined provided a diverse series of challenges to the various Canadian governments. In virtually every case, it is safe to say that the challenges were not anticipated and no great degree of government planning, or foresight, was in evidence. This forced the government into a reactive mode and far-reaching decisions, such as the decision to arrest the *Estai*, appear to have been made on the spur of the moment. While the end result may have been an improved Canadian position vis-à-vis new legislation, the reality is that there was little pre-planning to match activity to declared objectives.

For the navy, the crucial questions regarding its role were never satisfactorily addressed until the events of the Turbot War unfolded. Prior to this point the role had been very confused as events such *Concordia* undercut the navy's credibility and the end of the Cold War added in new directions and priorities for the navy. One would surmise that if the navy had been provided the clearly defined 'threat of last resort' role with well defined goals and an appropriate degree of support after the 1971 White Paper, the match between policy and action would have been much closer. This period was more a continuing series of trial and error, and save for a few bright spots such as Operation Ambuscade and the *Dame Blanche* case, the navy support to sovereignty was confused and disjointed until the Turbot War provided a successful model.

Having established that the match between policy and action has been a developmental process that was less than ideal, the stage is set for an analysis of how the factors of Government Support, Naval Response, Interdepartmental Cooperation and Technological Capability have contributed to the situation. However, it should not be forgotten that whenever navy ships are operating within Canadian waters, they are providing a degree of support to Canadian sovereignty. This degree of support must be included in any discussion of the navy's contribution to the overall task of sovereignty support and it will be specifically addressed in Chapters 6 and 7 as part of the analysis of the navy's response and interdepartmental cooperation.

CHAPTER FIVE

GOVERNMENT SUPPORT

INTRODUCTION

Part I of this thesis demonstrated that the government appreciated the growing importance of oceans sovereignty to Canadians and this was reflected in its declaratory policy. This policy, however, was not always supported with the same degree of priority when it came to the tasking direction provided to the navy. This lack of commitment to its sovereignty policy was also evident in the government's actions when confronted by challenges to Canadian sovereignty. The objective of this chapter is to review the government's budgetary and procurement support provided to the navy to determine the extent these factors contributed to the discrepancies between words and deeds.

1971 WHITE PAPER

In his article, "Naval Mastery: The Canadian Context," Paul Kennedy states that Western political tradition was to keep defence expenditures to a minimum. Even so, Kennedy notes that as early as 1950, Canada was gaining a reputation and some degree of embarrassment for its lower than average spending on defence and by the time the Trudeau government was elected defence spending was a low government priority indeed.[114] Dan Middlemiss concurs with Kennedy's assessment noting that, from 1970 onward, the Canadian government's contribution to NATO was well below one-half of the average, and it "placed Canada consistently next to Luxembourg as the lowest contributor to the Alliance."[115]

While the White Paper did announce the priority shift to sovereignty support, there was no indication of any additional funding for DND. As previously discussed, one of the main driving factors behind the role shift was to allow the government to reduce overall DND costs. Thus the White Paper expression of support to sovereignty was soon followed by government attempts to extract some fiscal benefit from this shift in primary roles. In the 1971 budget, a three-year freeze was imposed on defence

expenditures. This was followed by a reduction of one-half of the Canadian forces in Europe, the decommissioning of HMCS Bonaventure, and a substantial lowering of manpower levels in both the active forces and the reserves.[116] The defence budget was also frozen and indications were that the constraint would continue for the future. According to Douglas Bland, this provided defence planners with a difficult, perhaps insurmountable problem. The government continued to accept commitments to the NATO alliance, while at the same time announcing new roles and emphasising older tasks to be met from a diminished resource base.[117]

Notwithstanding the motives behind the White Paper, the first opportunity for the government to demonstrate its degree of resolve for this new role was not long in coming. The first evidence of the government's resolve was to be seen in the circumstances surrounding the decision to replace the *Argus* with the *Aurora* long range patrol aircraft.

CP-140 AURORA ACQUISITION

In his book, Canadian Foreign Policy: Contemporary Issues and Themes, Michael Tucker indicates that problems with the 1971 White Paper first became obvious during the process of identifying a replacement aircraft for the *Argus*. The navy was faced with an immediate contradiction between supporting the new sovereignty role, and its preferred traditional alliance commitment to ASW. Tucker suggests that, given the priority of sovereignty as a DND task in the 1971White Paper, the choice of a replacement for the *Argus* should have supported that task.[118] This process, obviously, was the first "proof of the pudding" for the commitment of the government and the navy to the new priority of sovereignty support.

In December 1972, the DM, James Richardson, told the Standing Committee on External Affairs and National Defence (SCEAND) that,

> "the aircraft will be multipurpose, with a capability of performing defence and non-defence missions, and will reflect the Government's intention to make increased use of the capabilities of the Canadian Armed Forces to assist civil regulatory agencies to discharge their surveillance and control

> responsibilities. The primary role of the aircraft will be to safeguard Canadian national sovereignty through surveillance and control of all Canadian territory, airspace and waters off the coasts of Canada."[119].

This direction lasted until March 1974 when, coincident with a budget freeze, and the cancellation of the Arctic sovereignty flights to save money, the minister changed his mind and informed SCEAND that,

> "Our primary requirement, he informed that body, is still the anti-submarine capability with other surveillance capabilities as well. But really the most apparent need is in ASW rather than in general surveillance." [120]

In July of 1975, the joint cabinet task force on Capabilities and Resources for Sovereignty Control released its report. Tasked with identifying the necessary requirements to support the expanded sovereignty of a 200 nautical mile. fishery zone, this task force had examined the question of required air support. Surprisingly, the committee recommended that, "The decision to procure a Long Range Patrol Aircraft be justified on demonstrated military needs."[121] This recommendation was subsequently realized in a December 1975 government announcement indicating that the CF would acquire the Lockheed P3, equipped with the most up-to-date ASW gear. In addition, it was decided to equip these planes with a sophisticated and expensive civilian remote sensor pack for sovereignty protection. This plane would be known as the CP-140 *Aurora*. This decision was subsequently revoked in May 76 when a Lockheed financial shortfall became public knowledge. With reworked finances, and under extensive US Government pressure, the deal was put back together. However, the civilian surveillance capability was eliminated from the package as it was deemed too expensive. Regarding the final outcome, Tucker says that, "The acquisition of the CP-140 Aurora helped seal the fate of the sovereignty protection role as Canada's first defence priority."[122]

The reason for this change seemed to come from the competing interests of Trade and Commerce for industrial offsets, DND for an ASW platform, the US government's desire to help Lockheed, and the Cabinet's desire to find an aircraft that could fill the

sovereignty role. Of these factors, Tucker indicates that the sovereignty role ended up as the last priority for the navy and the government to fill. It was also the first requirement dropped when the pressure to finally make a deal mounted.[123] This was the first indication of the extent of real commitment of the government for this role.

While the *Aurora* decision-making process was underway, problems with the sovereignty support role and the budget began to develop. These problems resulted in the Defence Minister deciding to set up a Defence Structure Review Committee to review DND's financial situation.

1974 DEFENCE STRUCTURE REVIEW (DSR)

In 1973 the government attempted to establish a stabilized funding system for DND. It had approved a scheme involving a seven percent increase in budget for the next five years. However, by 1974, the seven percent funding increase in spending had been overtaken by double-digit inflation and the CF was facing a financial crisis. The Defence Minister, James Richardson, summarized the situation by noting that,

> "with no major equipment purchases for almost ten years, and insufficient resources to meet day-to-day operational needs, the Canadian Armed Forces were approaching the point where they could no longer carry out effectively the tasks assigned to them, either at home or abroad." [124]

Dan Middlemiss provides a summary of fiscal events that had taken place since the change of navy role in 1971. He contends that even though the government had made a shift in the role of the navy, "In practical terms, however, the reversal in Canada's naval policy was more apparent than real. Indeed, for the navy, the Trudeau era amounted to 'constraint as usual'."[125] This situation, Middlemiss says, began in 1971 and was obvious in government actions up to 1975. Over this period, the navy's capital budget was decreased from 26 percent to 8 percent. In addition, in 1974 and 1975, high inflation forced additional economies and MARCOM's budget was cut 10 percent.[126] The navy now struggled under the twin problems of too many taskings and insufficient support. As a result, the DSR was initiated in November 1974 to examine these problems.

This review group concluded that certain tasks of a purely national nature, such as support to sovereignty , the fishery, etc. are best performed by the Armed Forces. However, the group also believed that Canada had benefitted from its participation in collective security arrangements such as NATO.[127] As such, the group recommended:

a. Canada stay in NATO and in NORAD;

b. an additional 18 new *Auroras* be acquired;

c. the government make an immediate decision on the construction of new Canadian Patrol Frigate (CPF) ships for the navy; and

d. a new realistic funding arrangement be pursued.[128]

Given that three of the four recommendations supported the collective defence task and the fourth recommendation suggests that support for the collective defence requirements must be identified, the government had re-instated the NATO commitment as the navy's first priority. However, this 1976 quote by the Assistant Deputy Minister of the Department of National Defence, Mr C.R. "Buzz" Nixon, is noteworthy in that it provides the impression that the government was still looking for both tasks to be maintained at the pre-DSR levels,

> "Those are still the four main areas of concern, the main determinants of the activities of the Canadian Armed Forces...As to the order of priorities a major problem arises in that although one of them may be listed at a particular position, say number one, it may not be the one. In other words, you cannot start off with saying that this is the first one you are going to fill because one of the other ones may determine the nature of the force. This is very much the case here, NATO is the one that determines the nature of the force. That does not change the fact that the sovereignty and surveillance one is [the] one [that] the government gives priority."[129]

After its deliberations, the DSR recommendation, in effect, had restored the NATO role as the primary support role for the navy. The report also recognized the need to provide the resources to equip the CF appropriately. The committee recommended that the operating budget be increased each year for the next five years by an amount equal to inflation and that the capital procurement budget be increased by twelve percent

each year after inflation until it reached twenty percent of the total defence budget.[130] The question now became one of whether this was too little, too late as the CF was caught in the throes of what was to become known as the 'commitment-capability' gap.

1975-1987: BUILDING THE COMMITMENT-CAPABILITY GAP

After the DRS recommendations were published, the government took action in several areas. In 1976, the order was placed for eighteen CP-140 *Auroras*. This turned out to be a disappointment for the CF as this was only one-half of what was considered necessary to adequately support the requirements of the sovereignty support role.[131]

On the positive side, in 1977, the government announced its intention to begin the first phase of the 24 CPF ship replacement program. At the time, work began on a submarine replacement program, the replacement of the navy's Auxiliary Oiler Replenishment (AOR) ships, a new mine countermeasures craft program, and the *Sea King* replacement program. Middlemiss states that even though the navy's capital budget rose from 1978 to 1984, all the programs were subsequently delayed due to cash flow problems and competition with other DND procurement programs.[132]

As a result of these delays, the situation regarding navy equipment and personnel became more desperate. The following quote from an April 1984 meeting of the Special Committee of the Senate on National Defence aptly describes this situation,

> "Because of the reduced number of ships and aircraft, combined with age-obsolescence problems, there is a mounting scepticism that the navy, as it is currently postured, can carry out its various responsibilities. This is especially so given the additional duties acquired after Canada declared its 200-mile fishing zone in 1977."[133]

This was the situation that faced the Mulroney Conservatives after their election and their attempt to address the problems of the "commitment-capability' gap appeared in the 1987 Defence White Paper,

1987 WHITE PAPER

Chapter VI of the 1987 White Paper provides an excellent synopsis of the state of the CF in 1987 and why, "After decades of neglect, there is indeed a significant 'commitment-capability' gap."[134] The chapter goes on to state that,

> "...much of the equipment of most elements of the Canadian Forces is in an advanced state of obsolescence or is already obsolete. Modernization programs have not kept pace with obsolescence. The maritime forces have too few operational vessels, very limited capacity to operate in the Arctic and no capability to keep Canadian waterways and harbours clear of mines."[135]

The White Paper clearly lays the blame for this problem on the long-term government trend of reducing the percentage of the budget and Canadian GDP spent on defence. It notes that this trend, in some years, meant that the defence budget did not even keep pace with inflation.[136] The White Paper further states that the solution that will be pursued will involve the alteration of some commitments, improving the effectiveness of the others and increasing spending through, "a steady, predictable and honest funding program based on coherent and consistent political leadership."[137]

The White Paper introduced a novel budgeting scheme that recognized the long-term nature of major capital purchases. It pledged a real growth in defence spending of not less than two percent per year after inflation, with additional capital increases in some years as necessary to cover the funding of the new major capital purchases. A forecast plan would be developed based on a fifteen-year period to provide planning guidance, while firm budgets would be established for a five-year period with a yearly review process.[138]

Turning to the major capital equipment, the White Paper indicated that,

a. six additional CPF frigates would be built;

b. Canada would purchase 10-12 nuclear submarines;

c. a modern fixed under-ice Arctic surveillance system would be installed;

d. new sonar systems and towed arrays would be acquired to enhance the anti-submarine warfare capability of the CPFs;

e. a fleet of minesweepers would be built for use by the Naval Reserve; and

f. new ASW helicopters would be purchased for the fleet.

g. at least six additional *Aurora* long range patrol aircraft would be acquired;

h. the existing medium range aircraft would be modernized; and

I. research on the use of space surveillance systems would be conducted;[139]

In reviewing the various critiques of the White Paper, the cost of all the upgrades, the requirement for nuclear submarines and the government resolve to get the job done were all raised. David Cox notes that the White Paper has resulted in a 'full shopping cart'. He questioned whether the government could get it through the register. He believed that the costs associated with going from three conventional submarines to twelve nuclear submarines capable of under-ice patrols would be enormous and this would suck all the resources from the other programs.[140] As indicated in the next section, the something for everyone approach was to prove too costly, although no one could have predicted that this bold policy statement would only have a two-year life.

1987- 1994: EVERYTHING WITH NOTHING FOREVER

In their article, "Canadian Defence Policy: An Analysis," Terry Wu and Ross Fetterly look back at the 1987 White Paper three years after its release. They indicate that initial public reaction to the proposals in the White Paper was supportive, but with some scepticism regarding the proposed nuclear submarine purchase. However, after the White Paper's release, a number of key events occurred. The author and chief defender of the White Paper, Perrin Beatty, was replaced as Defence Minister by Bill McKnight, and a government expenditure review committee was established. This committee subsequently made the recommendation to reduce the DND budget in 1989 by $2.79 billion over 5 years.[141]

In the 1989 budget, eleven major equipment purchases were cancelled, reduced in scope or delayed. The plan to purchase nuclear submarines was cancelled as was the *Tracker* Replacement program. No further *Auroras* would be purchased, but the minesweepers would still be built. It should be noted at this point that virtually all the

cuts announced involved equipment being acquired to enhance the navy's sovereignty protection capability.

Wu and Fetterly attempted to analyse why the White Paper was so ambitious. They reflect the fact that, the "capability-commitment" gap was so serious that drastic action was required. The authors also state their belief that the Conservative government was more pro-defence than the Trudeau Liberals. Further, there was genuine and growing concern among the NATO allies over the strength of the Soviets, and as well, a defence lobby organization had developed in Canada that was now actively working in support of defence interests.[142]

In determining the reasons why the 1987 White Paper was abandoned, the authors put forward the following three theories:

a. the White Paper was flawed - even from the beginning the government could not afford the bill. Public support for defence was also soft and the nuclear submarine component acted as a lightning rod for criticism;

b. there was no political will to implement the White Paper recommendations - the government lacked the political will to implement controversial programs such as the nuclear submarine acquisition when the public opinion polls showed a majority of Canadians were opposed to the plan;

c. the White Paper was made obsolete due to rapidly changing world circumstances - the White Paper firmly tied Canadian security to the E-W NATO balance. The end of the Cold War undercut the central tenet of the policy.[143]

In reality, the failure of the 1987 White Paper was probably caused by a combination of all three factors. The end result was that formal direction was given to the navy to strengthen the NATO role while at the same time broadening the sovereignty tasking to increase support to sovereignty in the Arctic and the Pacific. However, the

government not only failed to provide the promised additional assets, but in fact it also ended up reducing the navy's budget and available resources, most especially those intended to support the sovereignty role.

With the collapse of the White Paper and the 1990 end of the Cold War, there was widespread uncertainty regarding the future role of the navy. Marcel Masse was appointed Defence Minister and in 1991 he published a defence policy review booklet that provided a new expanded definition of security which now included, "adoption of a broader approach to national and global security, brought about by international concern over such issues as the environment, population growth and the availability of critical resources..."[144] Again however, this declaratory support for a strong sovereignty role did not have any financial backing. In fact, in the 1992 "Canadian Defence Policy" overview, the Mulroney government announced its intention to reap a "peace dividend". This dividend was to be harvested over the next five years. The Regular Force was to be reduced from 89,000 to 75,000 members and a further several billion dollars was to be cut from the defence budget. These savings would be used to assist the government with the more pressing priority of attacking the federal deficit.[145] With confusion over priority of roles and inadequate funding the rule of the day, a *do everything with nothing forever* syndrome began to appear in the navy.*

In 1993, as Canada prepared for an election, there was a state of turmoil regarding the role of the navy. However, Claire Sjolander noted that there was one belief held by Canadians, " The 1993 election witnessed the emergence of a remarkable consensus among the major political parties in Canada: whatever the outcome, the defence budget would be slashed."[146]

After the election of the Chrétien Liberals the extent to which the defence budget would be affected began to take shape through the 1994 Defence Review.

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* In the operations room of HMCS *Athabascan*, during my tour in 1990, there was a sign that read "*We have done so much with so little for so long that soon we will be asked to do everything with nothing forever.*" This sentiment was commonplace among the rank and file members of the navy at this time.

1994 DEFENCE REVIEW

As previously discussed, the principal recommendation of this review was the establishment of a combat-capable multipurpose role for the CF. At the same time the committee made several recommendations regarding and force structure. Recommendations that affected the sovereignty support role for the navy included,

a. maintain the current fleet of frigates and destroyers;

b. take early action to purchase helicopters to replace the in service ship-borne, and SAR helicopters; and

c. not pursue the replacement of existing conventional submarines, but be prepared to buy if funds were available within current budget.[147]

The Review Committee also provided a recommendation on future budget reductions. It proposed only a modest $300 million cut to be phased in over three years. The committee believed that,

> "We are approaching the minimum size of force and minimum level of capability required for the government to act to protect Canadian interests in the world... Defence spending is not responsible for the deficit problem, nor can cutting it be the remedy."[148]

With this report providing direction, the Defence Minister developed and released a White Paper six months later that would detail to what extent the new role would be implemented and at what cost to the defence budget and procurement plans.

1994 WHITE PAPER

This White Paper established the multipurpose role for the CF and it then turned to policy implementation. It identified that most areas of defence would be cut, and that there would be a reduction in infrastructure with one level of command being eliminated. Equipment life extension would be the primary focus with only new "core" function equipment purchased. Fifteen billion dollars would be removed from the capital budget over 15 years and commercial off the shelf (COTS) standards were to become more

commonplace. A forecast of force posture reduction established that by 1999, the total number of personnel in DND would be reduced by 25 percent.[149]

For the navy, the paper indicated that new helicopters would be acquired by the end of the decade, the government would explore the purchase of the *Upholder* submarines, that HMCS Provider would be life-extended, and starting in 1995, the MCM vessels would begin arriving. [150] However, budget restrictions resulted in a change of the primary focus for these vessels This class of vessel now became Maritime Coastal Defence Vessels (MCDVs) and they inherited the additional roles of control of shipping and maritime coastal defence, in addition to their original minecountermeasure tasks.[151]

Claire Sjolander notes that against this backdrop, that Finance Minister Paul Martin was busily cutting DND's budget with a promise of a $7 billion cut over five years. In his 1994 budget, he proposed reductions in regular force and civilian personnel, and the closure of several bases. His 1995 budget merely followed through on the further cuts proposed by the White Paper. Defence spending was projected to go from $11 billion in 1994/95 to $9.9 billion in 1997/98 and $8.7 billion in 1998/99, while capital spending was to be reduced by $15 billion over the next 15 years.[152]

SUMMARY

In examining the 1971 White Paper and the follow-on DSR, it is apparent that the Trudeau government attempted to make a fundamental shift in the navy's primary role from NATO to sovereignty support. The reality, however, was that regardless of what role might have been the principal role, the government did not provide sufficient support to the military to allow it to address either role effectively. This lack of support began even before Trudeau came to power and he merely followed the pattern established since the end of the Korean War. Paul Kennedy notes that,

> "...all comparable statistics covering the period from the 1960s to the early 1980s have revealed how low down the lists - in one of Gavin Kennedy's tables, forty-sixth among the nations - the Canadian position is when it comes to measuring the share of GNP and per capita income devoted to defence."[153]

After the 1971 White Paper, the navy struggled under the budgetary pressures to try to maintain its roles. MARCOM's capital expenditure budget reached a post-war low in 1975, and operations had to be cut back due to the low levels of funding available. While new CPFs and *Auroras* were acquired, the final numbers of each were fewer than originally announced and certainly less than what was considered as necessary for the identified requirements. These programs were also delayed on several occasions due to cash flow problems. This forced the navy into expensive stop-gap measures to preserve the navy's old, obsolete ships.[154] This reality was most appropriately noted by the members of the Standing Senate Committee on Foreign Affairs in 1983,

> "The failure to provide MARCOM with additional equipment designed for the purpose of sovereignty surveillance and its related wartime tasks becomes truly baffling when the enormous additions to Canada's maritime jurisdictional claims since publication of Defence in the 70s are taken into account."[155]

This 'commitment-capability gap' was finally addressed in the 1987 White Paper. As an aside, the very fact that it took sixteen years for the release of another white paper paints a telling picture regarding the commitment of the government to addressing military issues. Wu and Fetterly noted, "The sixteen-year gap between the two white papers reflected the low priority accorded to the military by both the federal government and Canadian Parliament."[156] R.B. Byers adds that, "A sixteen year hiatus between white papers constituted an abdication of political and governmental responsibility"[157]

The 1987 White Paper attempted to reinforce the sovereignty support role as a counter to the perceived increase in the Soviet threat to North American and also in response to growing public concern over sovereignty protection.[158] The White Paper was also a dramatic attempt to address the "commitment-capability" gap. However, the reality of the government's fiscal deficit situation, combined with the end of the Cold War, resulted in this ambitious plan only lasting two years. The military was again subjected to further reductions in resources with no comparable reductions in responsibilities.

The Gulf War and the end of the Cold War resulted in a further shift in primary roles to that of a combat-capable, multipurpose fleet. Since 1990, the Canadian navy has remained at about the same size, but the composition of the fleet has changed dramatically. With the CPF, TRUMP, and MCDV ships all coming into service, sovereignty support on the surface is well served by the navy. The 1998 announcement of the purchase of the *Upholder*** Class of Submarine has provide a definite boost to the undersea surveillance capability of the navy, especially with one of the submarines being stationed in the MARPAC region[159]. The next areas that need to be addressed for the navy are replacements for the aging *Sea King* and *Aurora* aircraft. While these aircraft continue to provide the required levels of support, the amount of time now being spent on maintenance and repair has increased past the point of cost-effectiveness.

For the navy, the period from 1971 to 1999 saw a continued series of budget cuts, reductions in numbers and capabilities of equipment, and delays in all major equipment purchases. This was evident in the *Aurora* acquisition process, the 1989 budget, the 1991 Annual Defence Review, the CPF acquisition process, the MCDV project, the 1994 White Paper, and the submarine and *Sea King* Replacement program delays. The government has failed, at virtually every turn, to provide the budgetary support necessary to meet the requirements it had specified. This was not just limited to the sovereignty support role but to the entire spectrum of tasks asked of the navy during this period. Specifically in the area of sovereignty support, the equipment acquisition programs never seriously considered the sovereignty support requirements, considering these requirements only as add-ons and 'nice to have' features. The story of government support to the navy has been one of continuous cutbacks and reductions in resources while adding to the navy's task list. The government's procurement pattern has been slanted towards the NATO ASW role and little, if any, consideration has been given to equipment acquisition in direct support of the sovereignty task. After the *Aurora* purchase example, the MCDV project is perhaps the next best instance of this

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** The *Upholder* Class of submarines have recently been renamed as the *Victoria* class. The designation will be used for future references.

phenomenon at work. This project was originally conceived, in the 1987 White Paper, to provide the navy with a minesweeping capability. In a move forced by budgetary constraints, these vessels had two additional roles added to their duties: naval control of shipping and maritime coastal defence.[160] Again too few resources are expected to undertake too many tasks.

Against this backdrop of shrinking budgets, conflicting demands and inadequate support, it is appropriate that the response of the navy to these circumstances be reviewed. This is the focus of Chapter 6.

CHAPTER SIX
THE NAVY'S RESPONSE

INTRODUCTION

Chapter 5 provided insight into the degree of Government support afforded the navy regarding the increased priority for sovereignty support expressed in the 1971 White Paper. This objective of this chapter is to look at the other side of the coin and examine the willingness demonstrated by the navy to meet the requirements of this role.

RESPONSE TO THE 1971 WHITE PAPER

Prior to the release of the 1971 White Paper, there were reviews underway by NATO and the US navy regarding future developments at sea. Two reports were completed, the Brasio Study , and Allied Defence in the Seventies. Both of these reports indicated that the growth of Soviet submarine strength was worrisome and that better maritime surveillance, anti-submarine forces, and more maritime patrol aircraft were required to counter the Soviet threat.[161] When the 1971 White Paper announced that Canadian efforts would shift from collective-defence to sovereignty protection, Canada appeared headed in the opposite direction from its NATO allies, in spite of a strong NATO appeal for more and better ASW forces and the replacement of over-age ships.[162]

Given this strategic situation, there was obvious reluctance from the navy to change its primary focus. In addition, as Middlemiss and Sokolsky note, "It is also difficult to decide what role DND and the CF should play in sovereignty protection, as opposed to that played by other governmental agencies, such as those concerned with fisheries, transportation, and the environment."[163]

These difficulties became apparent when Trudeau shifted emphasis from collective defence to sovereignty in the 1971 White Paper. It was unclear what level of effort the navy was to devote to this task as opposed to the NATO ASW role, especially given that none of its commitments had been dropped.[164] Arnell and Anderson noted that even though the sovereignty protection role had been assigned as the first priority role, the government had not provided any direction on the degree of effort to be devoted

to this role or the balance of effort to be struck between all the roles assigned to the navy.[165] Colin Gray supported this belief stating at the time of this shift in focus that,

> "Maritime Command is happy to contemplate a future in pollution legislation policing, but this future is to be *added on* to existing ASW and surveillance duties. Any suggestions that, for example, some of the Argus aircraft should be stripped and re-equipped as a flying anti-pollution patrol would be most strenuously resisted. In brief, Maritime Command is looking for work, but not at the expense of any ground already occupied."[166]

Thus the navy was faced with a situation of having to balance the requirements of the sovereignty role with those of the collective security role. The approach adopted by the navy was to focus on the more demanding requirements of the collective defence tasks in the belief that the capabilities required to meet the NATO task would easily be capable of meeting the sovereignty task. One of the primary positions espoused by the navy was that anytime Canadian warships are sailing in Canadian waters they are serving to affirm Canadian sovereignty even if they are pursuing collective defence tasks. As well, these ships would be in the area if required to provide support to OGD or come to the aid of any vessel in trouble. An unarmed fisheries patrol vessel might be able to meet the second requirement, it certainly could not meet the first. This approach was considered the best way to make effective use of the navy's limited resources.[167]

As noted by Dan Middlemiss, the navy's resources were continually cutback over the period 1971 -1975. The navy's response was to make reductions in both training and operations schedules. As well, four older destroyers were sent for disposal, and the *Tracker* fleet was reduced from 33 to 16 aircraft. Arctic Surveillance flights were cancelled, six of the *Argus* fleet were eliminated and ship/air operations ran at 82 percent of the normal minimum requirements.[168] In examining the navy's reaction to these budget cutbacks it appears that the navy's response was to try to maintain the balance between the two tasks and share the cutbacks equally. Notwithstanding the goal, the effects of the cutbacks were quite severe and the navy obviously welcomed the start of the November 1974 DSR, in hopes of receiving some further assistance or direction in dealing with this situation.

1974 DEFENCE STRUCTURE REVIEW

As previously outlined in Chapter 3, the DSR committee was established to examine various options for the CF to meet its commitments within its budgetary constraints. This review re-established the NATO commitment as the navy's first priority while continuing to emphasize the importance of the sovereignty role. This review therefore did little to provide any better direction on the level of effort to be devoted to each task. The one benefit that did result from the DSR was an increase in the defence budget. With the additional capital funding, the navy began an ASW modernization program for the *Sea King* helicopters and it began to lobby actively for an ASW platform to replace the *Argus*. As discussed in Chapter 5, the acquisition process for the CP-140 *Aurora* saw the joint cabinet task force on Capabilities and Resources for Sovereignty Control supporting the DND position of allowing the force structure to be determined by the collective defence role over that of sovereignty.

While the *Aurora* decision supported collective-security as the priority role, the sovereignty support task had certainly not been reduced or eliminated as a result of the DSR. It now fell to the navy to continue to meet all of its requirements in the midst of the period of hyper-inflation that gripped the world in 1975 and the growing 'commitment-capability' gap.

1975-1987 - COPING WITH A COMMITMENT-CAPABILITY GAP

In his review of this period, Dan Middlemiss highlights several interesting events that directly affected the navy's ability to support the new sovereignty role. Among these events was the OPEC oil crisis and high inflation. In 1974 and 1975, MARCOM's budget was cut 10 percent. When this cut was combined with the OPEC increase in fuel prices, it led to a dramatic decrease in navy operations over this period.[169] Admiral Boyle cut operations by one-third, cancelled the annual spring exercise off Puerto Rico, and cutout Northern sovereignty patrols for three months.[170] In the spring of 1975, after the Defence Minister, James Richardson, announced further cuts, Admiral Boyle painted a bleak picture to a group of Tory MPs visiting Halifax. He stated that his resources were

inadequate and if " we can't put up then we should shut up and surrender our sovereignty to the Americans."[171]

Finally, in 1977, the government announced the start of the CPF ship replacement program. It is important to note that the navy worked to have these ships designed as Anti-Submarine Warfare (ASW) platforms with anti-surface and anti-air missile defence systems to counter the Soviet threat. At the same time, work began on a submarine replacement program, the replacement of the navy's Auxiliary Oiler Replenishment (AOR) ships, a new mine countermeasures vessel program, and the *Sea King* replacement program. All of these programs held, as their *raison d'être*, support to the NATO role. The concept of collective defence determining the force structure was obviously still the driving factor. Even though these were encouraging announcements for the navy, the actual delivery dates for any of this equipment was not until the mid-1980s. Middlemiss states that, even though the navy's capital budget rose from 1978 to 1984, all the programs were subsequently delayed due to cash flow problems and competition with other DND procurement programs.[172]

As a result of these delays, the navy was forced to stretch out the capability of its aging fleet in order to meet the commitments. Therefore, while awaiting delivery of the new equipment, the navy resorted to costly, short-term stop-gap programs like the destroyer life extension program (DELEX), the submarine operational update program (SOUP), and the Tribal update and modernization program (TRUMP). This coping strategy of "must do - can do" was evident in the personnel side as well. In 1985, the navy was operating the same fleet as in 1954 but with 45 percent fewer personnel.[173]

At this point, DND began to reiterate that it could not meet all its commitments. In the Supplement to the DND Strategic Overview, 1984/85, DND stated that,

> "Canada's maritime forces are no longer capable of fulfilling simultaneously national requirements and international commitments. This situation results from financial constraints over the past decade which led to the failure to make timely provision for the modernization or replacement of obsolescent ships and other major combat systems."[174]

When the Mulroney Conservatives were elected, the navy waited in anticipation of the government's renewed interest in defence problems which was promised during the election campaign. The first sign of this new support came in the 1987 White Paper.

1987 WHITE PAPER

This White Paper was produced after extensive discussions with the military and it appeared to provide an effective solution to the sovereignty versus collective defence duality problem. The White Paper combined the collective security concerns with the domestic sovereignty requirements into one common concern focused on a perceived Soviet submarine threat. In addition, the White Paper formally acknowledged the commitment-capability gap and the bleak state of the C.F.'s equipment. This acknowledgement was followed by the identification of an extensive list of equipment that was to be acquired in support of the new combined role. The paper also introduced a realistic approach to defence funding. The situation finally looked to be taking a turn for the better, most especially as far as the navy was concerned. This, however, was short-lived as the government re-assigned the funding to fighting the deficit and the navy was returned to its more regular diet of budget cuts and resource reductions. The result was that both roles suffered equally throughout the remainder of the 1980s. Over this period, the navy began to pin its hopes on the eagerly awaited delivery of its first new CPFs, and the enhancement of its NATO capability. There was certainly no anticipation of the changes that would be wrought by the 1990 Gulf War and the end of the Cold War.

GULF WAR AND COLD WAR

The 1992 Gulf War was neither anticipated, nor planned for, and the roles the navy performed in responding to this challenge were not consistent with the existing defence policy priorities. General de Chastelain, the Chief of the Defence Staff at the time, best described the extent of the deviation from established defence policy priorities

as follows,

> "The Gulf Operation forced us to make rapid changes and introduce new procedures to sustain what eventually became a combat operation halfway around the globe in an area and as part of a coalition for which we had neither prepared nor planned."[175]

The navy, in pursuing NATO and sovereignty support aims, had become North Atlantic anti-submarine warfare experts. It had little experience or training for an operation based on anti-surface and anti-air threats in the Indian Ocean. Interestingly enough, it was the Canadian experience base derived from years of cooperative operations with NATO and commonwealth navies that provided the necessary background that allowed the Canadian naval ships to participate effectively as part of the coalition in the Gulf War.

With the Cold War unexpectedly coming to an end between 1990-1992, there was much uncertainty as to the future for navies and collective defence. In 1994, the United States Naval Institute compiled the results from a questionnaire sent to NATO navy personnel regarding what the most important naval developments of the coming decade would be. The answers were;

a. the need for balanced general-purpose forces;
b. the importance of technology;
c. the growing importance of joint and combined operations;
d. the growing importance of national roles in the coastal zones; and
e. the need to act within a fiscally restrained regime.[176]

This survey reflected a shift in focus for the world naval personnel. How that would be interpreted for the Canadian navy would be determined by the 1994 Defence Review and subsequent White Paper.

1994 DEFENCE REVIEW AND WHITE PAPER

As discussed in Chapter 2, in establishing this review, the government's intent was to conduct a joint defence and foreign policy review. Over the course of the review the committee was exposed to an extensive parade of witnesses and presentations. This testimony could be divided into two camps, the peace movement and the pro-defence camp. Among the pro-defence groups, the Conference of Defence Associations (CDA) were one of the first groups to take action. This action, in fact, actually begun in 1992. In anticipation of the promised defence review, the CDA released a paper supporting the need for defence policy review. This paper, "Canadian Security: A Policy for the 21st Century" provided such a solid opening position for the CDA's appearance before the review committee in April 1994, that the CDA was asked to produce a costing and time-frame for the force structure they advocated. In June, the CDA released this paper, "Canadian Security: A Force Structure Model for the 21st Century." This was due to the strong interlinks between the CDA and other groups such as the Naval Officers Association of Canada (NOAC).[177] Over the course of the review committees deliberations the navy continued to work with the Naval Officer Association of Canada (NOAC) to present a coordinated message to the committee. The NOAC then worked with the Maritime Defence Association of Canada and the Navy League to ensure that a coordinated single response was heard on every occasion a naval presentation was made to the committee. Captain(N) Eric Lehre states that the theme of this message was that the only rational option for the navy was to be developed into a modern, general-purpose naval force. These groups collectively argued that such a force structure would be well suited to support peacekeeping efforts.[178] The presentations from this faction highlighted the fact that this capability had been successfully demonstrated off Somalia, Haiti, and the former Yugoslavia. The groups also argued that this force structure could also continue to protect Canadian ocean sovereignty. This was a sensitive issue at the time given the collapse of the cod stocks in 1993. The gist of their message was that "only general-purpose forces could provide both the high capability combat and the low capability peacekeeping/ policing tasks with the same equipment."[179]

As noted in Chapter 2, this message was apparently heard and understood by the committee that concluded that "the general mobilization model for the armed forces was no longer appropriate, and that the real need was for unified combat-capable multipurpose armed forces. This theme subsequently became the centrepiece of the committee's report, "Security in a Changing World", released on November 2, 1974.[180]

The efforts of the defence review committee had been monitored by the Defence Department throughout the process and the findings and recommendations were broadly consistent with what the Government felt was acceptable. This made the task of producing the White Paper considerably easier. Even so, the fact that the 1994 White Paper was released a month after the Defence Review Committee's report raised questions regarding the potential of collusion between the committee and the department. Dr Stairs notes that while the Committee's analysis and recommendations were repeated in the White Paper, that,

> "Outcomes in the making of public policy are often the product of a happy convergence of multiple wills with multiple circumstances - of ideas, in short, whose time has come. It is not then clear that what ensues should be interpreted entirely as evidence of a politically engineered change of mind."[181]

Either way, the navy now had the force structure direction it believed was appropriate. How then did the navy respond to the new directions provided in the 1994 White Paper ?

1994-2000: ADJUSTING COURSE

The 1994 paper by Admiral Cairns entitled, THE NAVAL VISION: Charting the Course for Canada's Maritime Forces into the 21st Century, provides insight into the thoughts and long-range planning for the navy during this period;

> "... Maritime Command forces must be suited to all intensities of operations. They must be capable, not only of peacetime patrol and support to other government departments, but also United Nations operations in potentially threatening environments and, if need be, high intensity warfare. ... they must be capable of operating and addressing

> threats in all three dimensions of ocean space: above, on and under the surface. Such a force will preserve the navy as a positive instrument of national policy: one which allows us to perform stewardship obligations in home waters and grasp opportunities to contribute to global peace and security overseas."[182]

This paper indicated that, in order to meet national requirements, the balance of forces East and West would be adjusted to ensure the response capability would be equitably distributed between the Pacific and Atlantic as new and modernized ships were introduced over the next five years. The paper argued that the requirement for balanced maritime forces would be met through a range of platform life extensions, replacements, and upgrades. The Canadian fleet of the future would consist of the following split of capability: major warships - 9 east, 7 west; AORs - 2 each coast, submarines - up to 3 each coast; MCDVs - 6 each coast; and maritime patrol aircraft - 23 east and 8 west.[183] A quick review of these projected resources indicates that the combat-capable multipurpose balance of assets appears to be the objective. With this balanced force, the primary focus would be on collective defence and sovereignty support would remain in a subordinate role.

From 1994-1998, the navy implemented the details of this vision through a yearly strategic guidance document called Defence Planning Guidance (DPG). Over this period, the DPGs established the following general objectives for Maritime Command (MARCOM):

a. monitor and control activities;

b. assist other government departments;

c. provide humanitarian assistance and disaster relief;

d. provide search and rescue;

e. respond to territorial incidents; and

f. provide Aid to Civil Power.[184]

The Maritime Commander uses the DPG to produce the Maritime Capability Planning Guidance (MCPG). The MCPG is used by the Maritime Commander to provide the Commanders of the Maritime Forces Atlantic (MARLANT) and the Maritime Forces Pacific (MARPAC) with direction about missions, resources, and expectations over the next five years.

Again from 1994 to 1998, the MCPG established the following tasks as priority one roles,

a Defence, Surveillance and Monitoring: Deterrence and defence against challenges to Canadian Sovereignty;

b. Alliance Commitments: Contribute to collective defence; and

c. Support to Other Government Departments (OGD): Assist in protection of Canadian maritime sovereignty and jurisdictional interests.[185]

In February 1997, the CF began to develop a planning concept known as Force Planning Scenarios (FPS). This scenario-based capability planning process was designed to allow the CF the ability to better analyse future requirements and to assist in the development of an appropriate force structure. A series of eleven draft scenarios were developed and included in the DPG for 1999. The scenarios involving navy support to sovereignty are:

a. Scenario 1 - Search and Rescue: two sub-scenarios have been identified -. a rescue from a ship at sea; and searching for an overdue aircraft;

b. Scenario 4 - Surveillance/Control of Canadian Territory and Approaches: The proposed scenario uses drug smuggling/landings of illegal immigrants as catalysts and the CF is committed to working in cooperation with OGD to conduct surveillance and control operations; and

c. Scenario 8 - National Sovereignty/Interests Enforcement: The proposed scenario is centred on the theme of protecting Canadian natural resources from illegal and/or damaging exploitation. The mission is to assist OGDs in the enforcement of Canadian claims in the extended EEZ.[186]

Further on in the DPG, the Chief of Maritime Staff (CMS)* is tasked with meeting the following objectives in support of the scenarios:

a. Protect Canadian Sovereignty - CMS is to provide an appropriate response by maritime forces and assigned air forces on each coast within eight hours; and

b. Assist Other Government Departments - CMS is to maintain the capability to meet cooperative agreements in support of OGDs. Again an appropriate response by maritime forces and air forces is to be available within eight hours.[187]

For the navy, the CMS has taken these scenarios and objectives and used them to provide direction to the navy in the 1999/2000 MCPG. In this document, the navy has assigned each DPG 99 objective a priority level for operations. Within the priority one category, the following are examples of roles supported by the navy:

a. Operational Considerations: contingency operations, search and rescue, Canadian US naval exercises, NATO commitments, Pacific Rim exercises, Canadian National Joint Exercises; and defence, surveillance and monitoring activities; and

b. Other Government Department Considerations: aid to civil power, counter drug operations, promoting Canadian Security interests, promoting Canadian Foreign policy objectives, support to international trade, and support to nationally mandated objectives such as APEC, G7 Summit.[188]

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* In 1997, MARCOM was relocated from Halifax to Ottawa and merged with the NDHQ maritime staff. The new organization became known as Chief of Maritime Staff.

It should be noted that among the priority two and three examples, the following sovereignty support tasks are listed:

a. Priority Two: Department of Fisheries and Oceans Support, Search and Rescue Surveillance, and support to Canadian Law enforcement operations; and

b. Priority Three: Inter-departmental Concept of Maritime Operations (ICMO) support activities (hydrographic, oceanographic research).[189]

As evident from the direction provided in these documents, there appears to have been an internal adjustment by the navy in the priority of the sovereignty support role. While the past emphasis since 1971 had been on using the collective defence role as the guideline for force structure, the sovereignty support role has always been maintained as a priority one tasking (in keeping with the government's declaratory policy). This important shift in the formal status of the role should therefore be noted with interest.

Notwithstanding the change in direction for the navy, and the re-prioritization of the sovereignty support role, the navy is projecting the levels of sovereignty presence in Canadian waters as shown in Table 6-1:

Table 6-1: 1999 - Forecast Sea Days in Canadian Waters[190]

Formation	Warships	Submarines	Minor Vessels
Maritime Atlantic	381 sea days	63	450
Maritime Pacific	325 sea days	N/A	626
TOTALS	**706**	**63**	**1076**

Note: These figures do not include the days of dedicated support provided to DOE (155 sea days) and the RCMP (30 seadays).

SUMMARY

In the 1971 White Paper, sovereignty support assumed a major role, supposedly at the expense of the collective defence NATO role. This elevation in priority was presented to the navy without any compensatory decrease in commitments. As such, the navy adopted the approach of maximizing assets for the more demanding NATO role believing that the same assets could then easily meet the demands of the sovereignty support role. This approach could be seen in the *Aurora* acquisition process and in the definition process for the CPF.

The aftermath of the Gulf War, combined with the end of the Cold War, led to a shift in this philosophy. This shift was noted in 1992 by the CDS, General de Chastelain when he said that,

> "...the Cold War doctrine had been replaced by the concept of general-purpose combat-capable armed forces, stationed in Canada for the most part, ready to deploy anywhere in the world in Canada's interests."[191]

In 1994, DND took an active role in lobbying the Defence Review Committee to support this new role, fearing that a badly handled review could result in deeper cuts to the defence budget, and a loss of high end equipment such as submarines.[192]. Claire Sjolander states that the 1994 White Paper legitimized the development of the new post-Cold War role for the military,

> "... in the case of National Defence, Program Review under the guise of a white paper was successful; the cuts deemed acceptable within the mandate of a general-purpose combat-capable force defined by DND were translated into budgetary realities in the Martin budget exercise. The 1995 Budget was a clear signal that the Chrétien government endorsed the 'new role' defined by the military for itself." [193]

At the same time, the 1994 White Paper did reiterate the importance of the sovereignty support role. Three of the five roles assigned to the military in this document are concerned with sovereignty support and providing assistance to the OGDs.[194] However, the paper stopped short of re-assigning this role a number one priority. The new concept for the navy appeared to be a multi-purpose, multi-capable force structure

that must be prepared to handle a variety of roles. To the government, sovereignty support was now just one of these priority roles assigned to the navy. The events beginning with the Gulf War and ending with the new directions in the white paper appeared to be the "proof of the pudding" that the navy's continued concentration on the maintaining a force structure to handle to more demanding collective defence role over the period since 1971 had been the right decision.

As evidenced by the 1997 Maritime Commander's Operational Planning Guidance, the navy reflected this direction by listing all the roles as priority one taskings that had to be supported equally. This left the navy able to interpret the degree of support to provide to the roles as circumstances dictated.

Sovereignty support continued with first priority task status until the internal navy shift to the scenario-based program format. This shift was significant for two reasons vis-a-vis the sovereignty support role. Firstly, under the scenario system, the navy's responsibilities have become more generalized. The stated requirement now is only to provide an 'adequate' response within eight hours. Who is it that determines what is an adequate response level? Is it adequate for the navy to respond to a sovereignty support tasking by sending only whatever is left over at the time? It would appear so under this definition.

Secondly, the sovereignty support role has now been split into various components with only the RCMP component being maintained as a first priority task. The larger component of the support to DFO has been reduced in priority.

It would appear from this review that, from 1971-1987, the navy kept the sovereignty support task as a figurehead first priority tasking. In reality, the navy focused its efforts on maintaining the collective defence role. This reality was not due to any active resistance on the part of the navy, but more in response to the government's conflicted direction and insistence on maintaining both roles at the same level. The NATO requirements as the force structure determinant was a sensible approach given the much greater costs of maintaining a combat capability over just sovereignty support.

In 1987, these two roles were merged as one, but this was not to last. The Gulf War and Cold War end saw a significant replacement of the limited NATO role with the larger collective defence role of a combat-capable force prepared to deploy world-wide. Sovereignty support was maintained as a priority one task as before, but continuing budget and resource reductions were beginning to take their toll. The latest shift in priority for the bulk of the sovereignty support tasks may be a harbinger for further reductions by the navy in this area, as are the ongoing discussions to reduce the air support levels. Table 6-1 demonstrates that the navy does spend significant numbers of sea days in Canadian waters. This sovereignty presence must be considered within the total navy contribution to the role. However, it is difficult to quantify the value, or deterrent effect this presence provides. In the absence of any government defined minimum requirement, this level of support must be considered adequate to meet the first basic level of sovereignty support: protection of sovereignty from external military threats.

As defined in Chapter 2 , the second role for sovereignty support is protection of Canadian sovereignty from nonmilitary challenges in areas such as the fishery and the environment. There are fourteen other departments involved in the oceans area. The degree of the navy's interest and effort in pursuing this second sovereignty support role can be determined through a review of interdepartmental cooperation since 1971. This forms the subject matter of the next chapter.

CHAPTER SEVEN

INTERDEPARTMENTAL COOPERATION

INTRODUCTION

Cooperation between the departments involved in the ocean sector has been an area of continuing government interest since the Royal Canadian Navy was spawned from the Department of Fisheries and Marine in 1910. From this start point, the Royal Canadian Navy maintained a close working relationship with the Department of Marine and Fisheries. In fact, for the first few years, the same minister was responsible for both sectors. During the First World War, the ships of the Canadian Government Service were used to supplement the navy's meagre number of ships. Ships shifted back and forth between the two fleets, even serving in both capacities simultaneously on some occasions.[195] After the First World War, the RCN began to develop as a distinct naval entity. In 1922 the defence services were combined into the Department of National Defence. Under this reorganization, five naval services were transferred to the Department of Marine and Fisheries. These services were: the Radiotelegraph Service, Hydrographic Survey, Tidal and Current Survey, Fisheries Protection Service and Patrol of Northern Waters.[196] In the remaining interwar years, the RCN devoted the majority of its efforts to first trying to become established as a navy, and secondly, trying to survive the effects of the depression which saw the naval budget for 1934/35 cut by more than 38 percent and the Chief of the General Staff looking at eliminating the navy to save costs.[197] During this same period, the Government of Canada passed the Department of Transportation Act, recognizing the interdependence of various transportation modes by bringing them under a single federal authority. This included the Marine Services section of the former department of the Department of Marine and Fisheries.

The Second World War saw the recovery and buildup of the Canadian navy into the third largest fleet in the World. This did not last long as the post-war era was focused on two concepts. The first concept was that thermonuclear war was the only remaining

threat to national security. The second concept was that the enormously powerful US navy, "took away any pressing need for Canada to step into the breech."[198] As a result, the size of the Canadian navy shrank quickly. By the time Rear-Admiral Grant became Chief of the Naval Staff in September 1947, only eight ships were in active commission.[199] It was not until the Defence White paper of 1949 that a decision was made that "The main task of the navy would be, as in the last war, the protection of Canadian and allied shipping and Canadian Coastal Waters."[200] In support of this decision, Canada began to build its first new ships designed for Canadian Waters, the *St Laurent* class escorts, an icebreaker, and minesweepers.[201] The establishment of NATO further strengthened the navy's declared role. The government's commitment to Europe meant a commitment to securing the sea lines of communication to Europe in a war and NATO ASW convoy escort duty became the logical task for the RCN. Joel Sokolsky states that, " At this time the naval tasks of national sovereignty protection, continental defence of North America, and NATO were virtually indistinguishable."[202] Throughout the 1950s, the main focus of the RCN was on its NATO role. As the focus of this role centred on North Atlantic activity for the navy, sovereignty support was an automatic byproduct. The focus of this support, however, was defence against invasion with the other more domestic sovereignty issues now largely the domain of the Department of Marine and Fisheries and the Department of Transport (DOT). Within the DOT, a separate fleet of vessels had been developing since 1935 to handle the department's ocean responsibilities. In 1962, this fleet would officially become the Coast Guard.[203] At this point, Canada had developed three major fleets that were involved in different areas of ocean management: the navy, the Department of Fisheries, and the Coast Guard.

In 1962, the Glassco Commission was established to examine ways to reorganize all government departments in order to reduce duplication and excessive bureaucracy. As part of its study, the Commission examined the overlap between the requirements for the three government fleets. While noting that overlap existed, Glassco rejected any thoughts of amalgamating the three fleets, although it did suggest progressive consolidation of all civilian marine requirements under the Coast Guard.[204] Thus by

1971, there appeared to be much overlap and little coordinated interaction between the three major departments: National Defence, Transport, and (now) Oceans and Environment. As well, other government departments such as Immigration, Customs and Excise, and the Solicitor General (RCMP) were beginning to increase their involvement in the ocean sector. While there were limited examples of formal cooperation between the departments and each of these were organized on a case-by-case basis. This section will now trace developments in interdepartmental cooperation from 1971 to 1999. As introduced in Chapter 2, there are two levels of support provided to sovereignty by the navy:

a. support against external military threats, a exclusively military role; and

b. support to OGDs for nonmilitary challenges.

While this chapter will focus primarily on the support to OGDs, both types of support will be addressed in this chapter to arrive at an assessment of the navy's support to sovereignty.

1971-1975: POST-WHITE PAPER ACTIVITY

Arnell and Anderson contend that in the wake of the 1971 White Paper, additional policy guidance was required for the navy to be able to operationalize the requirements. While the new government policy ceded first priority to the protection of sovereignty, clarification was required on the scope and the purposes of the role.[205] To that end, a group of officials from the Privy Council Office (PCO), Treasury Board Secretariat (TBS), and DND formed a working group. This group was tasked with deciding how DND could best provide support to the OGDs. At the outset, the group determined that there would be no assignment or reassignment to DND of responsibility from other government departments. As such, DND would be required to:

a. support civilian departments in surveillance and control over Canadian territory; and

b. carry out surveillance and control in areas not covered by civilian departments.[206]

Follow-on discussions were held to determine how to accomplish this support for Fisheries, Energy, Mines, and Resources, Indian Affairs, Customs & Excise, Transport Canada, and the RCMP. At this point,

> "Although most departments believed their own activities adequately protected Canada's interests, they agreed that support from the Armed Forces in surveillance and control activities, especially in the North and off the coasts, and in providing facilities for the coordination of effort would substantially enhance the national capabilities in a number of areas.[207]

In 1975, as noted in Chapter 2, two Cabinet Committees were set up to provide recommendations on the minimum level of additional surveillance and enforcement capabilities, required by Canada to manage the proposed expansion of Canada's jurisdiction out to 200 nautical miles (nmi) in 1977.[208] These studies determined that, given Canada's participation in the North Atlantic Fisheries Organization (NAFO), there was no significant difference between the present and future requirements for surveillance and enforcement for the extended jurisdiction on the Atlantic coast. However, the requirements for the Pacific coast would increase under the expanded jurisdiction situation. The study went on to identify that the levels of sovereignty support shown in Table 7-1 were required to meet the requirements of the various departments involved in the oceans.

Table 7-1: Summary of Sovereignty Support Requirements

Task	Departments	Sea Days	Air Hours
Fishery Protection	DOE	2000	4200
Vessel Pollution	MOT	Secondary Task	1700
Mineral Resources	EMR, DINA	Nil	1000
Arctic Activity	DOE, MOT, DINA, RCMP	Nil	1300
TOTALS		**2000**	**8200**

These studies also acknowledged that neither coast, at that time, was meeting the minimum requirement. As well, the Department of Oceans and Environment (DOE) required support from DND and the Ministry of Transport (MOT).[209] In 1975, the navy was providing support to DOE in two ways: dedicated, and multi-tasked. Dedicated support involved naval resources being deployed directly on DOE tasks. Multi-tasked support meant that, while navy assets were deployed on collective defence tasks in Canadian waters, they would also provide a sovereignty presence in the area. They were also available to gather information and respond to requests for assistance. In 1975, DND was providing the following levels of support to DOE.[210]

Table 7-2 - 1975 DND Levels of Support to DOE

Type of Vehicle	Dedicated Time	Multi-Tasked Time
Ship	95 sea days	128 sea days
Tracker	940 hours	980 hours
Argus	500 hours	1000 hours

1975 - 1989: CANADA GAINS AN EEZ

The level of sea day support to Fisheries, shown in Table 7-2, remained constant throughout the remainder of the 1970's and 1980's. This is surprising given the sizeable increase in required area coverage that resulted from the passage of the 1977 Fishery Zone Protection Act.

Air hour support however, was reduced in 1976 after the retirement of six of the *Argus* fleet. This left DFO with a shortfall of about 500 hours. To fill this void, DFO began contracting civilian aircraft.[211] From 1976 to 1979 air support consisted of approximately 1,500 hours from the *Tracker*. From 1979 until 1990, this was supplemented by about 500 hours from the *Aurora* and *Challenger* combined.[212]

Naval support to Other Government Departments (OGDs) began to increase during this period under a type of agreement known as a Memorandum of Understanding (MOU). Similar to a contract, in a MOU, each department delineated its responsibilities, the degree of support to be provided, and the services expected from each party. The MOU had long been the method used to identify the levels of naval support provided to the Department of Fisheries. Now additional MOUs were established with the Department of the Environment (DOE), the Ministry of the Solicitor General (for the Royal Canadian Mounted Police), and Employment and Immigration. As a result, naval ships and aircraft began to routinely conduct pollution surveillance for DOE while deployed on other operations in Canadian waters. As well, the navy was made available to respond to requests for support from the RCMP for counter-drug operations and Immigration for illegal immigrants.[213] The establishment of this matrix of individual department by department MOUs, while serving the immediate purpose, was to prove very cumbersome and inefficient when put to the test, as previously indicated, during the *Concordia* incident. This incident highlighted the lack of an overall mechanism for interdepartmental coordination. This deficiency would subsequently be addressed as a result of two key committee reports, "Maritime Sovereignty" , and All the Ships that Sail.

"MARITIME SOVEREIGNTY" & ALL THE SHIPS THAT SAIL

In October 1990, the Standing Committee on National Defence and Veteran's Affairs (SCONDVA) completed a report entitled "Maritime Sovereignty". In reviewing the interdepartmental cooperation aspects, the report noted that,

> "The numerous instances of interdepartmental cooperation require some means of coordination. Approaches to coordination are almost as varied as the services provided, but are essentially of six types: takeover; integrated command; divided responsibility with consultation; divided responsibility without consultation; incidental response; and informal arrangement."[214]

By way of explanation, the SCONDVA committee identified that,

a. the takeover approach involved DND's right to invoke its responsibility following the declaration of the 1988 *Emergencies Act;*

b. the National Search and Rescue program jointly run by DND and the Coast Guard was the best example of an integrated command setup;

c. the incidental response referred to a general request for support made between departments through a formal director general to director general request;

d. informal arrangements were those established at the working level between departments; and

e. the remaining two areas of coordination - divided responsibility with consultation, and divided responsibility without consultation were established through the formal signing of a MOU.[215]

The SCONDVA, having delineated the various mechanisms in place for interdepartmental coordination, turned to a review of the effectiveness of this process. The report details the following conclusion, "Departments appear to cooperate and coordinate only because they have to, and set up different arrangements to govern each type of interaction. The end result appears to be a lack of coordination."[216]

In May 1990, at approximately the same time as the SCONDVA report was being presented to Cabinet, the President of the Treasury Board commissioned an independent study into the management and utilization of the Federal Government marine fleets. This study was conducted by Gordon Osbaldeston with the objective of identifying ways to improve tasking, management and utilization of the fleets of DND, Fisheries and the Coast Guard.

The report, All The Ships That Sail, found that there were 23 MOUs in place covering various aspects of interdepartmental activity. Osbaldeston's report also determined that there existed a requirement for additional resources across the federal government. The largest shortfalls were in fisheries management, research and marine science and hydrography. Somewhat paradoxically, Osbaldeston also identified that

excess capacity was available. This capacity, the study proposed, could be made available by more effective vessel utilization and increased multi-tasking. The committee's belief was that a new process was required. This process would bring fleet operators from the various departments together into a single forum where they could match requirements to availability. The study reviewed various alternative management schemes such as, fleet consolidation under DND, consolidation of civilian fleets under single agency, preserving the status quo, and/or rationalization of tasks and duties without any reorganization. The report indicated that, while consolidation of fleets was not recommended, major improvements in fleet usage were possible if coordination improved. The committee recommended the creation of a new forum for "buyers and sellers". This forum was to be called the Interdepartmental Program Coordination and Review Committee (IPCRC),

> "This committee would not have a managerial role with respect to the fleets themselves but would provide a forum in which capacity and supply can be matched with demand. ... In matters of ship acquisition, the military fleet should be justified on military grounds alone. The Interdepartmental Committee as such should have no direct role in whether or not ships are replaced or new ships acquired for any one of the fleets."[217]

It is important to note that the Committee recommended by Osbaldeston was to be based on voluntary interdepartmental cooperation and as such could only discuss, identify and recommend efficiencies in the processes. Other major recommendations from the Osbaldeston report were that:

a. the MOU system should be continued;

b. DND should be assigned additional responsibility for increased offshore patrol in support of sovereignty, fisheries' management, marine SAR and environmental surveillance;

c. DND should assist in meeting the RCMP requirements for preventive patrols where armed vessels are needed;

d. the Coast Guard should be significantly and fully multi-tasked to absorb demands and to more effectively and fully use their existing vessel capacities. As well, the Coast Guard should be assigned additional responsibility for inshore, coastal, and near shore patrol, including support for environmental surveillance, on the water, administration of marine regulations and support to meet the needs of other government departments, particularly the present demand for fisheries' management vessel support;

e. the demand for fisheries' management patrol should be provided through greater utilization of the available capacity of all three fleets; and

f. there should be a detailed examination of the marine communication and information exchange infrastructure to achieve effective interdisciplinary work.[218]

The Osbaldeston report was presented to the Treasury Board in October 1990 and an organizing committee at the Assistant Deputy Minister level was established to identify government program requirements for ship support and tasking. The IPCRC committee was subsequently established to take on the role identified by Osbaldeston.

1990-1999 - IPCRC AT THE HELM

One of the first actions taken by the IPCRC was to establish the buyers and sellers forum for ship services as recommended by the Osbaldeston Report. Subsequently, the IPCRC established five subcommittees to progress the requirements to standardize: Communications, Concept of Operations, Surveillance, Vessel Activity, and Hydrographic Committee.[219]

In looking at the navy's contribution, the IPCRC determined that, up to 1990, DND had been providing DFO with 95 dedicated sea days (60 east, 35 west), and 1500 air hours using *Aurora* and *Tracker* aircraft. In addition, DND had also been providing 20 dedicated sea days and 750 aircraft hours to the RCMP in support of drug

interdiction.[220] As a result of initial IPCRC discussions, there was an increase of dedicated support for DFO to 155 sea days. With the retirement of the *Tracker*, in 1990, the *Aurora/Challenger* time was increased to 1000 hours. The total air hours provided by the Maritime Air Group therefore was reduced from 1500 to 1000 and DFO increased the civilian contract again in an effort to recoup the shortfall.

At this point, dedicated navy support to the RCMP was also increased to 30 sea days. As well, liaison billets were established for RCMP personnel as part of the staffs at the Atlantic and Pacific Naval Command Headquarters.[221] Multi-tasked support varied as a factor of navy collective task sailing schedules.

While the support requirements were being established, the Communications Committee arranged for the procurement of digital encryption systems to support RCMP requirements, and it pushed for the standardized use of satellite communication systems, as well as secure telephones, fax machines, and a common data encryption standard.[222] The Concept of Operations Committee began working on a master document to act as an operations manual. The Surveillance Committee began an evaluation of the surveillance capability of the three fleets and a project to establish improved joint operations capability. This project included the development of a near-real-time picture system to track all vessel activity of interest in Canadian territorial waters.

In 1994, the IPCRC completed an assessment of its progress in meeting the recommendations of the Osbaldeston report. Its report, All the Ships that Sail - Two Year Assessment, identified that user departments were very satisfied with the enhanced degree of cooperation that had been developed, and that some reduction of excess capacity had been achieved through reassignment of tasks. However, the demand for resources had not been significantly reduced. The gains achieved through re-tasking had been offset by departmental cutbacks enforced under the new regime of fiscal restraint. These two factors resulted in a shifting, but constantly unfulfilled, requirement for more ship and aircraft services.[223] This study also re-examined the question of fleet merger of

the two civilian fleets. It found that,

> "With respect to the option to reconsider the consolidation of the two civilian fleets, there is clear indication that the IPCRC process had a beneficial impact on increasing the efficiencies of federal fleet management through increased interdepartmental cooperation. This success of the IPCRC process suggests that, as long as improvement continues, there is no need at this time to reconsider consolidation."[224]

Among the other successes noted were: the departmental purchases of standardized communications equipments, the production of an Interdepartmental Concept of Maritime Operations (ICMO) manual, and the development of a interdepartmental surveillance data management system. This system became known as the Canadian Maritime Network (CANMARNET). Further details regarding this system are provided in Chapter 8, Technological Capability.

In 1995, the government, in its continued efforts to try to deal with the deficit, privatized Transport Canada's airports and ports, and transferred the Coast Guard (CG) into the Department of Fisheries and Oceans (DFO). This merger resulted in a 40 percent reduction in the Coast Guard budget and a 25 percent reduction in the combined CG/DFO fleet. Out of roughly 170 vessels, 45 vessels were sold and their crews reallocated to other tasks[225]. In 1996, the IPCRC Oversight Committee initiated a review of the IPCRC structure to identify what changes should be made to reflect the new combined DFO/CG department. This led to the disbanding of the Organizing Committee at the ADM level. The principal management of the IPCRC was assumed by the Working Group. The chairmanship of this committee, which used to rotate between the three departments, now became a co-chair arrangement between DND and DFO. The Surveillance, Communications, Common Fleet, and Concept of Operations Sub-committees were subsequently merged into a single Operations Sub-Committee. A new Zonal sub-committee system was set up with an Atlantic, a combined Central & Arctic, and a Pacific Zone committee being established.[226] IPCRC then devolved authority to the Zonal committees for the balance of operational work leaving the central committee to focus on other issues. The MARLANT and MARPAC committees began operations in

1997. The combined Central and Arctic committee, however, has not yet started due to delays in identifying the DFO chairman. This committee is scheduled to begin in the summer of 1999.[227]

While the IPCRC continued to perform its market place function, by 1998 it had become even more obvious that the lack of excess capacity in any of the departments, identified in Osbaldeston - 2yrs later, was to be the norm for the near future. In fact, there were obvious shortages in some areas and departments were unable to meet even their basic tasks. For example, the Coast Guard determined that it no longer has sufficient resources to cover its three Search and Rescue zones in the MARPAC region on a continuous basis. The navy therefore began taking on some of those taskings under an informal arrangement charging the sea days against the DFO account. This has caused somewhat of a problem as the navy sea days were assigned for fisheries' support only. Discussions are now underway between the Coast Guard, and DFO, to resolve the situation.[228] DFO believes, if anything, it would like additional support days from the navy especially in the area of Conservation and Protection. Since the 1995 merger this department has been reduced from 69 vessels to 14 total for both coasts.[229] The Coast Guard, on the other hand, also have seen additional cuts in numbers of vessels and there are forecasts of a further 16 vessels being phased out in 2000.[230]

In other areas, IPCRC distributed Change 4 to the Interdepartmental Concept of Maritime Operations (ICMO) for interdepartmental review in July 1998. This manual outlines agreed procedures for different types of missions. It was developed due to the fact that for some missions no MOUs existed, whereas, for other missions numerous MOUs existed. Further, in many cases, the MOUs were vague and offered little guidance.[231] The ICMO contains the updated list of the MOUs shown in Table 7-3. A review of these MOUs shows the extent to which the IPCRC process has been successful in increasing interdepartmental cooperation.

Table 7-3 Memorandums of Understanding in Place, 1999

MOU TITLE	DND	RCMP	DFO	CCG
Drug Law Enforcement	X	X		
Security and Defence of Canadian Deep-sea and Inland Water Ports.	X	X		
Surface ship patrols and serial fisheries' surveillance	X		X	
Employment of CCG ships and aircraft in a war or emergency	X			X
Combatting Oil Spills	X			X
Assistance to RCMP Law Enforcement		X		X
Counter-Drug Operations		X	X	
Mutual Assistance between DFO and RCMP		X	X	
Interdepartmental Programme support between CCG and DFO			X	X
Provision of Search and Rescue Services			X	X

While the cooperation between the departments has improved as a result of the efforts of the IPCRC, the committee's original mandate was to provide the market place exchange function. The reductions in departmental assets, coupled with the devolution

of responsibility to the Zonal sub-committees, have all but obviated the need for the IPCRC central organization. As such, a decision was required regarding either a redefinition of the IPCRC role or disbanding the organization. DND took the position that the IPCRC was a useful organization and that it should now play a role in the development and implementation of the oceans strategy. To that end, in July 1998, a letter was sent by the Assistant Deputy Minister Policy to DFO proposing that within the development process for the Oceans Management Strategy, the IPCRC "could, for example, be made responsible for overseeing the coordinated system of surveillance and enforcement called for in Towards Canada's Oceans Strategy."[232] To date there has not been an official response to that letter and the future of the IPCRC is undecided.[233]

This chapter has examined various aspects of the support provided to the OGDs by the navy, and as noted in the 1990 and 1994 Osbaldeston reports, the government's overall sovereignty support requirements are not being adequately met. To what extent is this problem related to the navy effort? As noted in the two 1975 Cabinet studies, approximately 2,000 sea days and 8200 air hours are required to provide adequate support to sovereignty protection from non-military challenges. As mentioned previously, the navy has traditionally provided support in this regard in two ways. First, direct support through a number of negotiated sea days and air hours. Second, indirect support provided while on collective defence tasks in Canadian waters. In 1975, the navy's contribution of 95 sea days provided less than 5 percent of that requirement and utilized less than 1.5 percent of the navy's available resource time[234]. As well, only 1500 air hours of dedicated support were provided or 18 percent of the requirement. Adding in the multi-tasked support time from 1975, brings the contribution up to 11 percent on the sea side and 42 percent on the air side. While this does make both contribution levels larger, the multi-tasked sea days and air hours can only really be considered as part value, given that the ship or aircraft is deployed in the area on another task and providing support to sovereignty occurs only by happenstance.

Thus, while the navy was providing the agreed levels of support, the minimal amount of naval resources provided indicate that this task was certainly not being treated

as a first priority role. As well, these commitments never did increase when the territorial limits were expanded in 1977, despite the obvious increase in requirement. In fact, while the sea day commitments remained constant, the air hour commitments have were reduced when the *Tracker* and *Argus* went out of service.

As a result of the 1990 Osbaldeston report, sovereignty support was accorded a higher profile and the navy increased its level of support to the OGDs. However, the increased levels of support still only represented a very small contribution to the overall sovereignty support requirement and these levels are re-negotiated each year. For 1998, the number of sea days remained at 155, but it was proposed that the air support would be cut back to 700 hours. This proposal was considered unacceptable by DFO and after a series of discussions the figure was restored to 1000 hours.[235] For 1999, the sea day figure has again been established at 155 days, but the air hours total has not yet been finalized. Discussions are again underway in an attempt to have the number of air hours reduced.[236]

SUMMARY

The preceding review of interdepartmental cooperation demonstrated that there has been considerable improvement in this area since 1971. In that year, the departments had little interaction and the majority of cooperation was arranged at an informal level. Fisheries support was the principal area where navy support was delineated via the use of a MOU. Throughout the 1980's, a patchwork system of informal agreements, MOUs and other arrangements developed. The results of these efforts were best described by Captain Leslie Hutchins, Past President of the Ottawa Branch of the Naval Officers Associations of Canada, in a presentation to the SCONDVA in 1990,

> "Some of these have big fleets, some have little fleets, some have no fleets at all. They all operate as independent entities. If one examines arrangements made between these various agencies in the matter of responsibilities, what stood out – was that there was always some lack of coordination. It appeared to us that on occasion arbitrary decisions were made without regard to offices of collateral interest ... There is a degree of

> cooperation, but not total cooperation. In spite of these arrangements, the present managerial and administrative approach is insufficient to ensure totally efficient actions and conclusions."[237]

The SCONDVA report and the Osbaldeston study proved to be landmark documents in improving this situation. As a result of these reports, the government established the IPCRC and charged this group with implementation of the Osbaldeston recommendations. IPCRC took the recommendations of this report and engineered the necessary changes to dramatically improve the cooperation between the departments, standardize the equipment, procedures and practices and allow effective use to be made of shrinking resources. This committee has reacted well to the changes imposed by shrinking budgets and most recently to the CG/DFO merger. However, as noted in the two year review of the IPCRC efforts, the overall surveillance requirements are not being met, and the demand for additional services has not been reduced due to the continuing cutbacks in fleet capability.

The summary of sovereignty support from 1971 to 1997 shown in Table 7-4, demonstrates that while navy sea day support has increased over the period, air support has decreased since the retirement of the *Tracker* aircraft.[238] Notwithstanding this situation, the levels of support provided in sea days and air hours both, while meeting the levels agreed by the MOU fall far short of the levels necessary to meet the full requirement and are not in keeping with that expected for a first priority task.

While the level of actual on-site support provided may have been less than what the OGDs would like to have been allocated, there has been a major increase in the efficiency of that support to the OGD and on balance the total effect has been moving in a positive direction since the establishment of the IPCRC in 1992. As well, the improvements in the areas of equipment, procedures, and operations have produced notable successes as discussed previously.

Table 7-4 - Summary of Sovereignty Support to OGDs

Date	Agency	Maritime Command (Sea days)	Maritime Air Group (Air hours)	Comments
1975	DFO	Dedicated - 95 Multi-tasked - 128	Dedicated 420 - *Argus* 1480 - *Tracker* Multi-tasked 1000 - *Argus* 980 - *Tracker*	
1976-1979	DFO	Dedicated - 95	Dedicated 1480 - *Tracker*	6 *Argus* retired MOU developed
1979-1990	DFO RCMP	Dedicated - 95 Respond as asked	Dedicated 420 - *Aurora* 1480 - *Tracker* Respond as asked	*Tracker* retired in 1990 MOU updated in 1989
1992 IPCRC	DFO RCMP	Dedicated - 155 Preventative Patrol days assigned	Dedicated - 1000 - *Aurora*	DND & RCMP liaison positions established
1998[239]	DFO RCMP	Dedicated - 155 Dedicated - 30	Dedicated - 1000 - *Aurora* Respond to request 1280 hours available	

In conclusion, after twenty-one years of sporadic informal cooperation, the IPCRC came into being. This committee has developed a coordinated, controlled response capability that has linked the departments involved into a more effective response mechanism as evidenced by the release of Version 4 of the ICMO and the maturing of the organization into the Zonal Committee structure. However, this effort appears to be too little too late. IPCRC improved cooperation but could not achieve its main goal of reducing demand for services. At this point, five years into its mandate, the IPCRC is on the verge of being disbanded. The committee has been downsized and its day-to-day work devolved to the regional committees. With its experience, history of success, and its well established interdepartmental network, the IPCRC would seem the ideal candidate to be employed in the development of the framework and roles of the various departments under the Oceans Strategy. However, it appears that the slow progress on developing the Oceans Strategy may result in this committee being disbanded and the loss of an excellent interdepartmental liaison network. To sum up the history in this regard, it appears that since 1971, cooperation between the departments has been less than ideal, save for a brief period after the startup of the IPCRC. This Committee made great strides in having the departments work together more effectively, but its usefulness appears to have been undone by a combination of fiscal restraint and inactivity in redefining a role for the committee within the framework of the Oceans Strategy.

To what extent then has this cooperative effort been successful? In 1975, deficiencies in support coverage of 970 sea days and 2600 air hours were noted. Between 1975 and 1990 the budgets and resources of the navy in particular and the other departments in general were reduced. The 1990 Osbaldeston report identified that the shortfall in sovereignty support coverage still existed and the follow-on Osbaldeston report in 1994 again noted the deficit was not reduced in spite of the efficiencies implemented by the IPCRC process. Since 1994, the OGDs have also been subjected to large-scale budget reductions and the 1997 merger of D.O.E and the Coast Guard resulted in further large-scale cutbacks in budgets and resources. One area of

sovereignty support, however, has grown since 1971. That is the size of the requirement. The 1977 expansion of the fishery protection zone followed by the 1997 Oceans Act dramatically expanded the size of Canada's sovereign ocean area. In addition the ocean transportation industry has grown considerably over this same period. Increased ocean transportation brings increased pollution, both by routine dumping, or through increased accidents. Hayden and Crickard noted in 1994 that "Canada can expect 300 small chemical spills, 100 small oil spills, 10 moderate spills and one major spill annually."[240] This quote by Admiral Garnett provides an excellent summation of the increasing scope,

> "International trade created 36.6% of our GDP in the first three quarters of 1995; 17% of Canadian exports move by water. Given the likely expansion of NAFTA, the creation of the WTO, and the gradual move towards free trade in Asia-Pacific under APEC, Canada's international maritime trade will almost certainly increase in value and importance over the next twenty years. Despite recent problems with declining fish stocks, Canada's fisheries will, if anything, grow in importance. This is especially true if stocks fall elsewhere around the world. Stricter conservation practices could make our waters and straddling stocks increasingly important to other areas. Canada's other abundant seabed resources - hydrocarbons and minerals - are also likely to assume a far greater importance than at present if prices continue to rise. Clearly then, Canada's oceans are a valuable economic resource that deserve the protection of capable maritime forces."[241]

While cooperation between departments is critical, and standardization of procedures is essential to effective support to sovereignty, in the end it is the actual effort in the field that determines the success or failure of sovereignty support. This brings the discussion around to the resources and technology available for employment by the departments.

CHAPTER EIGHT

TECHNOLOGICAL CAPABILITY

INTRODUCTION

So far in Part II of this thesis, the analysis has focused on the degree of support the government provided to the navy, the navy's response to the sovereignty support tasking, and the degree of cooperation that existed between the government departments involved in this area. This chapter will review how effectively technology has been employed by the navy and the other government departments to provide that support to sovereignty. This review will use the following breakdown:

a. the navy;

b. Other Government Departments (OGD); and

d. the Canadian Maritime Network (CANMARNET)

During the period 1971-1999, there have been three main departments in Canada involved in sovereignty support: National Defence, Department of Fisheries, and the Department of Transport (Coast Guard). The following review, therefore, will focus primarily on the use of technology by these three departments. However, to complete the picture, a summary of the technical efforts of other involved departments (Solicitor General -RCMP, Customs and Excise, Environment Canada, etc) will be provided. As the navy is the largest contributor in this regard, this chapter will begin with an examination of the navy's technological capability during the period under review.

NAVAL DEVELOPMENTS

It should not be surprising that the navy, given its combat role, has the most sophisticated technology offering the greatest acquisition and identification capability. The following sections provide a brief generic overview of the technology utilized by the navy during this period.

Radar Systems - Canadian naval radar systems have primarily been ship-based. Since the 1970s, there have been four types of radar systems onboard naval warships: air warning, surface warning, fire control, and navigational radars. From a sovereignty support perspective, the air warning and surface warning systems were the assets primarily utilized on this task. In the 1970s and 1980s, maximum radar limits for acquiring air targets was typically in the 40-60 nautical mile (nmi) range and for surface targets, the maximum range was generally in the 20-25 nmi range. In the 1990s, a major leap in technology occurred in the navy with arrival of the first Canadian Patrol Frigate and with the completion of the midlife refits for the Tribal Class destroyers. Both classes of vessel were fitted with more advanced radar technology, which improved the detection capabilities of these ships. Air warning radar detection ranges were extended to 80-100 nmi and surface radar detection ranges increased to 25-30 nmi. It should be noted that these ranges are the maximums for the systems under ideal atmospheric conditions and that ship-borne radar performance is very dependent on ambient conditions. Both classes of ship were also equipped with *Sea King* helicopters. The helicopters greatly aided in the identification process and the helicopters' onboard radar system extended the radar coverage of the vessel out to 120 nmi.

In the 1994 Defence White Paper, DND indicated an interest in exploring the potential of space-based surveillance systems[242]. In 1995, the Canadian Space Agency launched the RADARSAT I satellite. This system has all the advantages of an earth-based radar, but as it is space-based, it does not have the same range or weather limitations. The navy began an investigation into the value of this sensor and determined that it provided useful information that could be used to focus the efforts of patrol assets. This was particularly useful when the system could identify that a search sector was empty. As RADARSAT data only costs $650 per picture and an *Aurora* costs $8000 per hour, the cost benefits alone are immediately obvious and the navy is currently obtaining data through a national standing offer.[243]

In the 1997 Maritime Command Operational Training (MARCOT) exercise, a portable RADARSAT ground station was rented from MacDonald-Detweiller. This station was set up in Halifax to support surveillance, photo reconnaissance, terrain analysis, environmental data and search and rescue operations.[244] Given the success of the ground station trial during the MARCOT, the navy has joined in an interdepartmental evaluation of the system with DFO, the Canadian Centre for Remote Sensing, the Department of Energy, Mines and Resources Canada and the Ice Centre.[245]

RADARSAT I, however, is limited in revisit capability, as there was only one satellite in orbit.[246] As well, the system addresses only the detection/classification aspect of the problem, requiring that some alternate method be used for identification. In 2001, MacDonald-Detweiller is planning to launch RADARSAT II. This satellite will transmit a stronger signal that can be received by smaller antennas, resulting in lower entry costs for operators and improved portability. RADARSAT II will also produce quality colour images that can be used to identify targets, classify sea ice, and differentiate types of land cover. As well, RADARSAT II can revisit a site twice as often as RADARSAT I, and it provides a tenfold improvement in resolution. The company expects that these improvements will have a major impact in areas such as defence, navigation, exploration, cartography, environmental monitoring, and disaster relief. [247]

In 1996, a collaborative project began between DND and a group of civilian companies headed by Raytheon. The objective was to develop a shore-based high frequency, surface wave radar (HFSWR) system capable of vessel and aircraft detection ranges out beyond Canada's EEZ. Demonstration systems were installed at Cape Race and Cape Bonavista in Newfoundland and the evaluation began. By the end of 1996, the system has successfully achieved over-the-horizon detection ranges of aircraft, ships, and icebergs beyond 250 nautical miles as shown in Table 8-1.

Table 8-1: HFSWR Evaluation - Preliminary Data [248]

OBJECT	RANGE IN NAUTICAL MILES **					
	50	100	150	200	250	300
Boeing 707			■			
Boeing 727		■				
Boeing 747					■	
Boeing 767				■		
C-130 Hercules			■			
Douglas DC-3		■				
Beech King Air	■					
Navy Frigate					■	
Rescue Cutter				■		
Offshore Trawler				■		
Small Iceberg 35M	■					
Large Iceberg 350M					■	

** Note: Each bar represents the span of detection ranges covering the maximum achieved at night to the maximum range achieved during the day.

In June 1997, a lightning strike severely damaged the transmitter. The evaluation was restarted in the fall of 1998, but problems developed with the tracking software. Work is now ongoing to try to resolve these problems. An operational evaluation is forecast for September 1999. During this evaluation, the HFSWR picture

will be transmitted to MARLANT HQ and North Bay for assessment by the end users.[249] In anticipation of a favourable result from this evaluation, the navy has conducted a feasibility study. This study determined that full East and West coast HFSWR coverage out to 250 nmi could be provided by 16 sites (10 sites E, 6 sites W) at a cost of $74.6 million.[250]

Sonar Systems - During this period, the principal focus for the Canadian navy has been the shipboard use of hull-mounted, active sonar systems. These systems operate by putting sound waves into the water and then capturing and analysing the sound waves that reflect from objects in the water, very much like underwater radar. Sonar systems, however, can also be used in a passive mode. Here the sonar receiver is used to pick up sound energy from the water. The operator studies the received sound signals looking for specific sound frequency patterns such as those generated by mechanical machinery or propellers. The same limitations imposed on radar by power and size of transmitter and receiver also restrict sonar effectiveness, but to a much greater degree. Typically, hull-mounted active sonar systems have maximum ranges of less than five nmi. Hull mounted passive systems can demonstrate greater detection ranges but this advantage is offset by the amount of self-noise generated by the ship as this masks target signals.

In the early 1980s, the US navy introduced a new type of sonar system known as the towed array sonar. This is a passive detection system that consists of a mile of small sonar receivers contained within a cable. This cable is towed behind the ship, thus greatly reducing the self-noise problem. The outputs from this series of sonar receivers are computer-linked to produce a composite signal capable of identifying noise from ships and submarines. While the exact range capabilities are classified, under the right conditions, target vessels have been identified at ranges greatly exceeding those of air warning radar. In Canada, the Defence Research Establishment Atlantic (DREA) developed and installed an experimental towed array system (ETASS) on HMCS FRASER in July 1986.[251]

DREA conducted evaluations on the Mark I and Mark II versions of the ETASS in FRASER up to 1994. The results from these evaluations formed the basis for the

production of the Canadian Towed Array Sonar System (CANTASS). The first production CANTASS was installed in HMCS ST JOHNS in August 1994 and all CPFs were subsequently fitted with the CANTASS system. A parallel project developed towed array sonar systems for submarines. That program resulted in all OBERON Class Submarines being fitted with SUBTASS.[252]

In the area of sonar development, the ETASS Mark III evaluation began an assessment of the next generation towed array sonar system. This array is being developed for the navy by Hermes Electronics to replace the CANTASS arrays (SQS-19) currently on all Canadian warships. It is intended to combine this array with a new data processor into a new system to be known as Canada's Towed Integrated Active Passive System (TIAPS) [253]

Regarding shore-based applications, the Canadian navy has participated in a joint Can/US/UK Integrated Undersea Surveillance System (IUSS) project since the 1960s. This project was formed to operate the Sound Surveillance Underwater System (SOSUS). SOSUS is a broad area, undersea surveillance system consisting of fixed arrays of passive hydrophones mounted on the ocean floor. The hydrophones in the Canadian section were designed to detect, classify, and track surface, sub-surface, and low flying maritime air activity in the Canadian Atlantic area known as CANLANT. These functions were conducted at United States navy (USN) run stations in Shelburne, Nova Scotia and Argentia, Newfoundland.

In the early 1990s, the USN, as a cost-cutting move, began to close down 80 percent of the SOSUS network.[254] As part of this reduction, they closed Shelburne and they planned to replace the IUSS stations in Argentia with a remote system that would transmit the information to Norfolk. Recognizing the importance of this information to the surveillance of the CANLANT area, the Department of National Defence negotiated a memorandum of understanding (MOU) with the USN. This MOU redefined the operational, administrative, and financial aspects of Canada remaining in the IUSS network. This resulted in a program to build a receiving and processing station in Halifax, which would receive the data from Argentia via satellite. This facility became

operational in 1995 and is known as Trinity Canadian Forces IUSS Centre (CFIC).[255] In setting up Trinity, the shore system facilities were upgraded to computer-based workstations. This significantly improved the system's ability to detect, track and classify submarines and ships.

There was one other shore-based application undertaken by the navy during this period. This involved research into the potential of Arctic ocean floor arrays. This research was initiated as a result of the 1971 White Paper which indicated that for the channels between the Arctic Ocean and Baffin Bay, and Baffin Bay and the Atlantic, the "Government is therefore undertaking research to determine the costs and feasibility of a limited subsurface system to give warning of any unusual maritime activity..."[256] As a result, a demonstration array system was installed in the narrows of Lancaster Sound. This system was found to be highly susceptible to scouring by icebergs and very expensive to maintain.[257]

The 1987 White Paper, reiterated government support for the use of ocean floor arrays in the Arctic, and a defence services project (M2500) was put in place to develop an Arctic Sub-surface Surveillance System (ARCSSS). A request for proposals was let to Litton systems and McDonald-Detweiler. These companies subsequently developed and installed two prototype systems. While encouraging progress was being made in overcoming the scouring problems, this program was put into abeyance in 1994, due to a lack of departmental funding and the belief that a reassessment of the post-Cold War threat was required.[258] At this point, the navy began to examine different methods to enhance its underwater target tracking capability. This investigation was an attempt to identify alternatives to the expenses associated with replacing the SOSUS array in the Atlantic or installing an ARCSSS type array system in the Arctic. Two different options were considered: unmanned underwater vehicles (UUV), and rapidly deployable arrays.

In the area of UUVs, International Sub Engineering and the Defence Research Establishment Pacific (DREP) jointly developed an air transportable vehicle known as *Theseus*. In 1996, in a joint Can/US evaluation, known as 'Operation Spinnaker', this UUV demonstrated the ability to lay a bottom-mounted fibre-optic array under the Arctic

pack ice north of Ellesmere Island.[259] The *Theseus* has been designed to be able to travel completely autonomously for 200 km under the ice and to return to its start point with a navigational error of .5 percent of distance travelled. With modifications to its payload, the vehicle has the potential for remote route survey, minehunting and rapid deployment of surveillance systems. The manufacturer suggests that longer missions are possible by replacing the battery system with a fuel cell, or an air independent propulsion (AIP) power system.[260]

The Canadian navy is also monitoring the USN development of a portable array system known as the Advanced Deployable System (ADS). This system is containerized and is quickly deployable from any vessel of opportunity. The ADS is designed to detect submarines, minelaying activity, and surface contacts in shallow water.[261]

In 1996, the USN proposed to Canada, a Transition to Full Partnership (TTFP) for the SOSUS network. This TTFP offered Canada the chance to become a full partner in the IUSS by taking over complete operational and financial responsibility for Trinity.[262]

The TTFP proposal by the USN appeared at a time when MARLANT was reviewing the many information sharing arrangements in place, or under discussion, with the USN Office of Naval Intelligence. This review resulted in the development of a separate project known as 'Minerva'. Under this project, Trinity would be developed into an all-source surveillance compilation centre for the Maritime Forces Atlantic (MARLANT). To achieve this objective, the Commanding Officer of Trinity was given the responsibility for the MARLANT Operations Centre, Intelligence Support, Acoustic Data Analysis Centre, photography, weather and environmental services. A similar project was begun in the Maritime Pacific Headquarters (MARPAC) under the project name of 'Athena'.

The basic idea behind Minerva and Athena was to collect information from various naval command, control, communications and intelligence (C3I) systems. This collected data would then be analysed, correlated and "data fused" by navy personnel with other government source data, such as that provided through CANMARNET to produce a single composite RMP.[263]

Communication Systems - In the 1970s and 1980s, the navy utilized three types of communication systems based on the frequency used to transmit the information:

a. High Frequency (HF) - used for long distance data and voice transmission primarily for ship to shore communication;

b. Ultra High Frequency (UHF) - used for medium distance tactical ship to ship, and ship to aircraft communication; and

c. Very High Frequency(VHF) - used for line of sight communications between ships in close proximity.

Beginning in the 1990s, the navy began to use Satellite Communication (SATCOM) systems. This resulted in great advances in the clarity, security, and range of communications. In addition, the greatly improved speed and capacity for data transfer led to the utilization of command and control information systems onboard ships. These systems could be provided snapshot updates of the RMP from ashore which could then be displayed onboard. As these systems have become cheaper and more capable, the navy has expanded its use of this system to include e-mail and data transfer capability.

Data Management Systems - The navy has always maintained two levels of information management: classified and unclassified. In 1970 the main medium of information transfer was via a message system that allowed information to be received and transmitted to the ships. This system was known as the Maritime Command Operational Information System (MCOIN I). The data was stored at the navy's headquarters and it consisted primarily of text. Contact information was extracted and manually plotted from both classified and unclassified sources to build and maintain the RMP. Over the period 1985-87, the next generation system MCOIN II was phased in. This system had a limited graphics capability that allowed automatic plotting of the RMP. In the early 1980s, the US navy began to develop an at sea RMP display system known as the Joint Operations Tactical System (JOTS). This was a classified contact display system that was fed manually to provide the ships with the same RMP information held ashore. This system was acquired and installed in the Canadian Fleet

in the late 1980s where it became known as the Naval Tactical Display System Afloat (NTDSA). In 1995-96, prototype work for the MCOIN III development got underway with the installation of a shore-based version of the NTDSA in Maritime Command Headquarters. This system was known as the Joint Maritime Command Information System (JMCIS). This system was brought online in 1997 as part of what became known as MCOIN II.5. This was a major step forward as the system offered the advantages of greater compatibility and information exchange capability with US agencies, a greatly improved direct plotting capability for the RMP, and the ability to communicate picture information with the NTDSA systems on the ships so they could maintain the same RMP held ashore.[264]

Turning to the unclassified component of data management, the navy began to develop Local Area Networks (LANs) of connected computers in 1993. This was done for administrative purposes within each of the headquarters and then between headquarters. In the MARLANT headquarters, this unclassified system was known as the Maritime Command Administrative Network (MCAN). Chosen as the initial host of the CANMARNET, in 1996, this system was established as a separate LAN in Halifax. A similar CANMARNET development was also established in MARPAC. Thus by 1997, the navy was using two principal systems to support the RMP,

a. the classified MCOIN II.5 LAN system running the JMCIS; and

b. an unclassified LAN system hosting the CANMARNET.

The MCOIN III implementation is the principal focus of the navy's near future efforts regarding database management. This project will further enhance the automated mechanisms for processing military messages and sensor data, thereby allowing operational staff to analyse, fuse, and present up-to-date information more efficiently, not just to coastal commands, but also to CMS in Ottawa.[265] In addition, MCOIN III will provide the core capability necessary to automatically integrate maritime surveillance data received from a variety of government sources such as that provided by CANMARNET. The MCOIN III project is forecast for completion in July 2001.[266]

Since 1990, the Canadian navy has remained at about the same size, but the composition of the fleet has changed dramatically. With the CPF, TRUMP, and MCDV ships all coming into service, sovereignty support on the surface is well served by the navy. The 1998 announcement of the purchase of the *Victoria* Class of Submarine will provide a definite boost to the undersea surveillance capability of the navy, especially with one of the submarines being stationed in the MARPAC region[267]. As well, the ongoing work between the Ballard corporation and the navy to develop an air independent propulsion system for submarines offers exciting potential for a non nuclear under-ice capability for these submarines.[268] However, during the transition period 1998 - 2002, there will be some decrement in submarine support given that two of the three submarines have now been tied up to provide the initial crews for training on the *Victoria* class. The next areas that need to be addressed for the navy are replacements for the aging *Sea King* and *Aurora* aircraft. While these aircraft continue to provide the required levels of support, the amount of time now being spent on maintenance and repair has increased past the point of cost-effectiveness.

As is apparent from the preceding review, the navy has developed and maintained a very extensive capability that not only supports effective detection and identification, but which is supplemented with satellite data exchange capability to maintain a RMP link with shore authorities.

OTHER GOVERNMENT DEPARTMENTS (OGD)

Prior to discussing specific departmental systems, a quick overview of the technology employed by the OGDs in support of sovereignty makes it immediately apparent that the scale here is exponentially reduced from that employed by the navy. There are some limited applications of radar, but no sonar systems at all. The departments utilize the same HF, UHF and VHF type communications systems and they also utilized SATCOM, although not to the same extent as the navy with regard to maintenance of an onboard RMP. The most common application in these departments

appears to be a number of separate data collection and management systems. This review will examine the status and developments for the OGDs as follows:

a. Fisheries and Oceans;

b. Transport - Coast Guard;

c. Solicitor General - RCMP;

d. Customs and Excise; and

e. Environment.

Fisheries and Oceans

In the Department of Fisheries and Oceans (DFO), the bulk of the sovereignty support work is conducted by a fleet of inspection vessels operated by the department. These ships are fitted with surface search and navigational radar systems. Thus they are restricted to 20 - 30 nmi in the range they can acquire vessel contact data. However, DFO was supported in the collection, patrol, and response capability via two sources - the navy and commercial contract. The navy provided air and ship support under the terms of a Memorandum of Understanding between the two departments. The levels of this support were discussed and agreed upon each year. These levels have been previously addressed in Chapter 7.

On the air support side, the bulk of the navy contribution in the 1970s was provided by the *Argus* and *Tracker*. While DFO desperately required air support, it discovered certain problems with the support provided. In a 1975 Memorandum to Cabinet regarding fisheries surveillance, it was noted that,

> "The aircraft (*Tracker*) currently utilized for fisheries surveillance is limited in its capability to provide the type of information necessary for credible surveillance and enforcement as it is not always able to provide evidence adequate for the successful prosecution of violators."[269]

Thus, in 1979 with the announced retirement of the Tracker, DFO began to develop its own "*Tracker* Replacement Plan". On the east coast, this resulted in the negotiation of a contract with Provincial Airlines (PAL) to provide additional

surveillance coverage to supplement that being provided by the *Aurora* and *Challenger* flights. Under this contract, PAL aircraft conduct surveillance flights using an integrated radar tracking data acquisition system known as ADAM (Airborne Data Acquisition Management). At the end of each flight, the data was provided to DFO on a computer diskette so that the information could be down loaded into a database system in St. John's, Newfoundland known as ASIS (Air Surveillance Information System). Data summaries and reports were produced and faxed to the central data repository for input into DFO's master database application, the Canadian Fisheries Information Network (CFIN). The information was also faxed to field offices, patrol vessels, and ODGs.

The CFIN system was established in 1992 by DFO as a national management system that linked the information from several departmental databases. The bulk of the data came from fishing license applications submitted by both national and international fishing vessels and companies. This information was supplemented by actual vessel position data information submitted by the fishery observers on paper reports, or through an observer reporting system known as OASIS. As previously mentioned, information from ASIS was faxed to the central collection centre and manually entered. The system also maintains the data on violations in a subsystem known as the DVS (Departmental Violations System). Two new enhancements are being developed for CFIN. The first is a personnel activity module known the Fish Enforcement Activity Tracking System (FEATS). The second is the Vessel Surveillance Information System. This system is a data collection system adapted from the Provincial Airlines "ADAM" system, but designed to go onboard the DFO patrol vessels.[270]

There are also two new DFO systems currently being evaluated: a GPS tracking system, and a system of electronic transponders. The GPS tracker project, known as "Trak Targets", was developed to make navigational evidence easier to gather and to present in court when dealing with fishing vessel violations. This system is designed to run on any PC computer. The computer is connected to a Global Positioning Satellite (GPS) receiver and to the digital output from a target tracking radar. Through this software, the computer displays an electronic navigation chart with lines representing the

limits of DFO fisheries zones. The position of the patrol vessel is accurately shown on this chart by using the GPS position for the ship. Using the radar output, all targets appear on the chart relative to the patrol vessel showing their true geographic position. The patrol vessel and target tracking data, including date and time, are stored on the computer and the data history can be replayed on any other computer. The data product from this system has already been used in court and has proven to be an excellent asset for presenting evidence. [271]

Another area being investigated by DFO involves the use of electronic transponders. These devices are installed on fishing vessels and they relay the vessel's GPS positional data back to the regulatory agency. In April 1998, the International Maritime Organization (IMO) approved an international standard for this type of transponder. As a result, the field is developing tremendously all over the world. These systems are becoming popular with the fishing companies because the transponders offer the crews the ability to transmit catch information back to the company and e-mail ashore to their families. In the summer of 1998, National Sea Products conducted a trial of these transponders using scallop boats in the Bay of Fundy in hopes of encouraging DFO to allow them to use these systems as opposed to having to pay for observers. A similar trial was also run on the West Coast in the salmon fishing industry. DFO was encouraged by the results noting only one drawback: while the transponders provided positional information, they cannot indicate what the ship was actually doing while there. To that end, a second trial was conducted to investigate the use of video cameras on the trawl deck.[272] DFO is reviewing the results of these trials, but as yet, has not made a decision on how to proceed with these devices. The current belief in DFO is that this type of system can only serve as an aid to the observers, not as an outright replacement.[273]

As mentioned in the navy review section, DFO is currently involved with DND in an evaluation of RADARSAT. DFO officials have monitored RADARSAT developments for several years, and they hold the same reservations as the navy with regards to revisit time and contact identification ability. However, DFO has now begun to use RADARSAT data to provide a quick check on vessel traffic in banned sectors.[274]

Transport - Coast Guard

Similar to DFO, the Coast Guard also maintains a fleet of support vessels equipped with surface search and navigational radars. The primary purpose of these vessels is to provide support to vessel traffic management and search and rescue. The Coast Guard's most significant contribution to sovereignty support came from the Vessel Traffic Clearance and Management System that was established in 1976. The Coast Guard utilizes this system to manage all cooperative vessel traffic within Canada's territorial waters. All vessels intending to enter Canadian waters require clearance approval before entering the 12 nmi zone. This is done via clearance requests that are sent to a central clearing section in Ottawa. Once the ship is cleared to enter Canadian waters, the information on the ship is entered into the appropriate regional database for either the east coast (ECAREG), the north (NORDREG) or the west coast (WCAREG). Once this data is entered in the database, it is available to the designated Coast Guard traffic control sites for the particular area. As the ship enters the territorial waters, it is required, by law, to contract the local vessel traffic control office for that area. This office maintains surveillance over that vessel until it departs Canadian waters again. This is done through a local Vessel Traffic System (VTS). The VTS system utilized by the West Coast is a joint venture shared with the United States Coast Guard in Puget Sound and it is based on a linked system of coastal radio and radar sites. The East Coast System has radar and radio port traffic control systems only in large ports such as Halifax. In areas where this fully positive control system is not available, ships are required to report by radio to the regional traffic control facility on arrival in Canadian territorial waters, once they have slipped for departure from a Canadian port, and on actual departure from the territorial waters. A similar radio check-in system was established for the North, the St. Lawrence, and the Great Lakes regions.[275]

In the late 1980s, the Coast Guard began the development of a replacement system for the vessel tracking and management system. This new system was to become known as the Information System on Marine Navigation (INNAV). The goal of this system was to integrate vessel traffic and data management information with waterway

management information into a layered graphic display. This system would initially merge the ECAREG, NORDREG, WESTREG systems and then incorporate the VTS systems of the West Coast, Great Lakes and the St. Lawrence. At a later date, it would also provide a seamless traffic management system for the major East Coast Ports Control centres similar to that in place on the West Coast.[276] This system was forecast for installation in Spring 1998. Due to design problems, this installation was delayed initially until Spring 1999. However, after a recent project restructuring, the deadline is to have an operational system in service late in 2000.[277]

Solicitor General - RCMP

The RCMP has very few resources available for ocean surveillance work. These consist primarily of small Boston Whalers and Rigid Hull Inflatable Boats (RHIB) for conducting local harbour work. As a result of an Osbaldeston recommendation, initial discussions about cooperative support between the navy and the RCMP led to the signing of a 1986 MOU. This agreement confirmed that a number of air and sea hours would be provided each year to the RCMP by the navy, again as previously discussed earlier.

In 1992, RCMP liaison positions were established in the navy's Atlantic and Pacific Headquarters. These positions were to act as a link in employing the navy resources available to the RCMP. As 99 percent of RCMP work starts on land, the primary data collection method for ocean issues is through a program known as Coastal Watch. This program attempts to educate the local populace to report unusual activity in their areas via the telephone. Other systems used by the RCMP include a locally maintained divisional intelligence bank, the National Crime Data Bank (NCDB), and the National Criminal Intelligence Bank. The NCDB has records of convictions, actual charges laid etc., while the intelligence bank has information on people not yet charged but under suspicion. The RCMP also used the US intelligence network centred in El Paso (EPIC). On the east and west coast, access to this information could only be acquired through the forwarding of a request to Ottawa.[278]

Customs and Excise

The primary source of information on visiting commercial ships came to Customs via faxes from the ship agents in the ports where the ships were due to first arrive in Canada. Customs Offices also received Coast Guard system printouts every morning by fax. This was one of the principal tools for setting up their work, and cross-checking their information. Customs also had access to several international customs databases, (US, Interpol, etc) and to the RCMP Police Information Retrieval System (PIRS).[279]

As regards the pleasure craft coming into Canada, Customs used the CANPASS System which has been established via a MOU with the US. Under CANPASS, pleasure craft that registered in the program used a toll-free number to call into Hamilton, Ontario to receive clearance. Once contacted, the CANPASS personnel would either clear them over the phone, or direct them to a designated spot for a check. Unregistered pleasure craft were required to call in as well, but they were always sent to a designated spot for a customs check. Once the Hamilton office cleared a vessel, the information would be faxed to the appropriate regional customs office. As one can imagine, the voluntary nature of this process means that there are large drawbacks to this system.[280]

Environment Canada

In the ocean, the focus of DOE work has been ocean dumping control with a jurisdiction for dumping in Canadian Waters out to the 200 mile limit. In this area, there are two types of operation: permit work and non-permit work. The majority of work of both types tends to be focused within 12 nmi. With permit work, ships are required to arrange permits for pickup, drop-off, or the transportation of hazardous goods. The requests and information are stored in a regional database. For non-permit (illegal) dumping, the Environment personnel generally respond to the results of inspections, intelligence or complaints. They utilize the resources of the Coast Vessel Traffic Management Centres such as Halifax, Saint John or St. John's for radar tracking of vessels and logging vessel movements. For operations beyond the 12 nmi limit, they request assistance from one of the other departments (DND, DFO, CG, etc.). The details

for this type of support service were worked out through local arrangement.[281]

With the navy and the OGDs expanding their information collection and tracking capabilities, it now remains to review the developments in the collation, fusion and distribution of this data through the CANMARNET project.

CANMARNET

The genesis of the Canadian Maritime Network (CANMARNET) began with the 1990 Osbaldeston Study. As a result of this report, NDHQ tasked Maritime Command in Halifax to conduct a feasibility study to determine how to share positional data information between DFO, the Coast Guard, and the navy. A prototype system was developed and stand alone terminals were provided to the Coast Guard and Fisheries for manual data entry. The navy agreed to extract and compile the data and transfer the resultant information back to the other two agencies. The trial only lasted six months because the Coast Guard and Fisheries participants felt that the requirement to re-enter their data into this system was a duplication of their work that did not offer any obvious return benefits. The navy felt that sufficient potential had been demonstrated by this prototype and as such, a second system was developed and trialed in 1994. During this trial, the CFIN and ECAREG files were faxed by Fisheries and the Coast Guard to the Maritime Command Operations Centre in Halifax. Here the data was manually entered by navy personnel into the MCOIN II system. Based on the results of that trial, the navy decided to establish the CANMARNET on the MCAN LAN, so that the OGDs could use an e-mail file transfer instead of faxes. This system was established in three locations: DFO St. John's, Coast Guard Halifax, and Maritime Command Headquarters. The Coast Guard and Fisheries now used dial-in modems to gain access to the CANMARNET system. The navy again took on the role of data management. They developed a software program to strip out the information from the CFIN and ECAREG files and input the positional data into the MCOIN II system. The navy also obtained authorization to directly access the CFIN database in Ottawa, so that information could be obtained on demand.

The first operational use of this system occurred in the "Turbot War" of 1995. During this operation, the CANMARNET terminal in St. John's proved to be extremely valuable in keeping DFO updated on the activities underway in the area and acting as a link between DFO and the navy. This CANMARNET link was used to transmit electronic photos, situational reports, and data files. This capability for information sharing between the departments had never previously existed.[282]

With the demonstrated success of the CANMARNET, the navy decided to establish the system as a stand-alone Local Area Network (LAN). At this time, the technology being demonstrated by the Internet offered some attractive features the developers believed could be used effectively in the system. Using web technology, the next version of CANMARNET was developed in 1995 as an IntraNet, an Internet style system restricted to registered users. In March 1996, a CANMARNET Regional Steering Group was established to guide the further development of the system. Under the guidance and focus of that steering group the number of involved departments and agencies grew to approximately 60 users, not just in the Atlantic area, but in Ottawa as well.[283] Next several additional features were added to the web site version. These included,[284]

a. MARLANT ship deployment information/schedules;
b. Aerial Surveillance Patrol Plans;
c. several databases that could be queried by CANMARNET subscribers;
d. copies of the navy's weekly overview briefings describing maritime activity; and
e. details of RCMP Coastal Watch Programme.

Each of the departments was encouraged to work with the navy development team to host a home page for their department on the CANMARNET. The RCMP was the first to develop its home page, quickly followed by the other agencies.

At this point, due to the classified nature of some of the information contained in the RMP, the full picture was only available to the navy. A query feature was

subsequently established through CANMARNET to allow the OGDs to request information on any vessel. These requests were processed by the navy personnel who passed on only unclassified information. In addition to responding to these departmental queries there were two additional levels of query developed for CANMARNET - an Alert Table and a Suspect Vessels list. The Alert Table is a list of hundreds of ships noted as being of interest to the navy, or one of the OGDs. If one of these ships is picked up by the system, an automatic alert signal is raised and the agency interested in the vessel is notified. The Suspect Vessel list is more actively managed and generally only contains 10-15 ships. This list is broadcast to all navy assets and an active watch is maintained by ships on station or in the area.[285] Two other features were added to the CANMARNET in 1997. The navy purchased query access to the Lloyds of London Vessel Database and it also began to develop a Merchant Ship Database for the CANMARNET. Both of these services were made available to the OGDs. This has become one of most useful aspects Discussions were also started on moving to direct connectivity between departmental computers. As well, the navy began to investigate how to incorporate HFSWR and RADARSAT data into the RMP.

At this point, CANMARNET is a centrally hosted system consisting of a collection of networked PCs and servers connected to a bank of modems for dial-up external use. The number of users on the system has now grown to 74, thirteen of which are MARLANT Headquarters staff. The remainder are spread across various federal agencies including: Fisheries & Oceans, Coast Guard, Revenue Canada Customs, Rescue Coordination Center, Transport Canada, Environment Canada, Citizenship & Immigration, RCMP, CSIS, and the Transportation Safety Board.

MARLANT users are provided with personal computers and direct network access to all system resources. Dial-up users are provided with a user account but they must provide their own PC and modem. Functionality differs slightly between dial-up and networked users. Those that are dial-up have access to e-mail, file transfer, and WEB-based information. Users who are connected to MARLANT's internal backbone now have access to the Merchant Ship Characteristics database and are able to view the

unclassified RMP from the Global Command and Control (GCCS) server. To enhance the access capabilities of the OGDs, the CANMARNET development group is investigating the use of a software package called the Enhanced Linked Virtual Information System (ELVIS). By utilizing this software, all of the OGD users would be able to access the unclassified RMP on the MCOIN system through their PCs.[286]

The navy believes that in the longer term, expansion of the user community is central to the continued health of the CANMARNET. However, to achieve any significant growth will require some type of direct network to network connectivity between the navy and the major participating departments. To that end, the CANMARNET developers are investigating the hosting of the CANMARNET on a system known as the Government Enterprise Network (GNET). This GNET is an existing government LAN that links the networks of more than eighty federal and provincial organizations. The principal benefit of being connected to GNET would be the capability to communicate and access the applications, services, and data offered by all the connected networks. Use of the GNET would allow easier access to many of the CANMARNET current users and would reach many potential new users without substantially increasing the impact on maintenance resources.[287]

One other area that is currently being re-examined is the connectivity with MARPAC's version of CANMARNET. Initially viewed as a requirement, the link between coasts was rarely used. As such, it went out of service and the rationale for the connection is under review.[288]

During the past year, general awareness of CANMARNET has risen within DND and the OGDs, as more agencies have had the opportunity to see the system in action. One of the more striking examples of this type of use was during the Swiss Air tragedy in September 1998. The CANMARNET became the central information tool for forwarding information between all the various departments involved. The established network of personnel in place was also extremely effective in providing support to the Transportation Safety Board. While the RMP compilation proved to be very valuable, the CANMARNET was also used to exchange briefing and summary data. The power of

data fusion was also demonstrated during this operation. Data as diverse as RADARSAT pictures, side-scan sonar information, laser line scan, flight path analysis, and tidal drift computer simulations, were combined with physical evidence from the surface, sub-surface and land teams in order to establish the probable sites for debris exploration. In addition, the information collected and collated by the CANMARNET operators at the MARLANT Operations Center was used to establish an Internet website. The information on this website was enhanced with daily RMP situational snapshots, briefing summaries, photos from the onsite participants, and selected video coverage. The CANMARNET operation demonstrated that exceptional benefits were available from this type of technology. As well, the simple transfer of information to the website proved to be a very positive public relations move. The site had over 1 million hits the first month alone.[289]

SUMMARY

As evident from this review, the role of technology in the area of sovereignty support is to provide sufficient equipment to allow an acceptable level of detection and identification of vessels operating within Canadian waters. In this regard, the navy certainly led the government in the sophistication and capability of its technology. Starting with a basic level of capability in the 1970s (radar, sonar, communications), the navy continued to introduce technological advances that enhanced its sovereignty support role. This process began with the radar and sonar advances that accompanied the introduction of the CPFs. The advent of SATCOM and computer driven command and control systems again moved the navy's technological capability to a higher level with regards to detection, identification, and management of the data that comprises the RMP. The evaluations begun by the navy into HFSWR and RADARSAT offer evidence that the navy is continuing to move forward in this regard.

At the same time, the technology utilized by the OGDs during this period was very limited in capability. The major data acquisition applications for these departments were based on voluntary reporting systems and data collection was centralized in the

interior of the country. Data query and retrieval of historic information was a question of formal request with a minimum 1-2 day wait for the information to be returned.[290] Despite the advent of the computer revolution in the late 1980s, the fax machine remained the tool of preference for data transfer between sections in DFO, the Coast Guard, Customs, Environment, and the RCMP. The INNAV project is the only major upgrade application being pursued at the national level in these departments. Other initiatives such as ADAM and Trak Targets were developed only as stand alone regional applications.

By banding information from different reporting systems together to strengthen the surveillance picture through 'data fusion,' the Minerva/Athena concept offers great potential for the navy. Through the extension of the original CANMARNET development, this same type of advantage was also offered to the OGDs. The concept of centralized contact data management goes a long way towards effective data sharing and marked improvement in the maintenance of sovereignty.

The decision to purchase the *Victoria* class submarines is a major step that dramatically enhances the navy's underwater capability. The new submarines will be a decided boost to the navy's ability to provide sovereignty support, especially on the west coast. The Arctic, however, remains a large hole in the sovereignty blanket. Similarity, the advancing age of the MARLANT array system threatens the underwater sovereignty support capability in the Atlantic EEZ. The *Theseus* and rapidly deployable arrays investigations offer some interesting potential in this regard, but these developments are still at the exploratory stage.

With the underwater aspects of sovereignty support being addressed by the navy, priority government action on replacements for the *Sea King* and *Aurora* is now necessary if the navy's surface support aspect of sovereignty protection is to be maintained. However, if the HFSWR and RADARSAT II projects deliver on their forecast potential, the navy will have access to some very inexpensive and effective tools that would greatly enhance the monitoring aspects of the surveillance task.

While there are some interesting developments underway regarding improvements to the OGD technology, these are mostly small scale. There does not appear to be a plan for central linkage or fusion of the data. The electronic transponder investigation seems to offer the greatest potential for a cheap and effective adjunct to observers and patrol vessels. These types of systems have demonstrated their effectiveness around the world, not only in the fishery, but also in automatic scientific data collection and transmission from buoy fields, as emergency position locator systems, pollution tracking devices, and for tracking migratory animals.[291]

The continuing delay in implementing the INNAV system is troubling. This system design was started in the 1980s and the technology being employed in the system is rapidly becoming obsolete, even before it can be deployed. In addition, the system currently has no capability to input CFIN data. Thus, even when deployed, it will still only serve half of the DFO community.

As demonstrated by the unfortunate Swiss Air incident, September 2, 1998, the CANMARNET has evolved into an exceptionally powerful and versatile tool that is rapidly adaptable to the demands of the users. With the enhanced engine power that will be provided by the MCOIN III installation and the cutting edge web technology being introduced though innovations such as the ELVIS, this system appears to be staying in the technological forefront and continually enhancing its usefulness to the navy and the OGDs. The move to establish the CANMARNET on GNET should solve the major drawback of limited access for non-MARLANT clients and offer all clients an exceptionally powerful service.

While this review of technology has demonstrated the power available to enhance the effectiveness of data processing, it should not be forgotten that technology alone cannot serve as a complete replacement for the human components in the process. The key element in the chain is the knowledgeable analyst who filters, analyses, and fuses the data provided by the various technologies into a useful end product.[292] The Swiss Air incident demonstrated this point exceptionally well. At least a dozen different technologies were being employed at the site. Each system provided a small piece of the

puzzle. Without the data fusion and cooperation network established by the CANMARNET links, the processing of this information would have been done under a stove pipe arrangement, perhaps with little sharing or data correlation. The real secret to the success of this operation was not only the technologies themselves, but the efficient merging of these data products into a useful fused tool that was invaluable to the decision makers. As well, the CANMARNET data was rapidly disseminated to the public through the Internet.

This chapter completes the analysis of the degree to which the factors of Government Support, Naval Response, Interdepartmental Cooperation and Technological Capability have contributed to the disparity between the Government's declared sovereignty position and its response to actual challenges to that sovereignty. Prior to drawing conclusions in this regard, Chapter 9 will draw together a brief summary of the findings and analysis to this point.

CHAPTER NINE

SUMMARY OF FINDINGS AND ANALYSIS

INTRODUCTION

In 1971, the actions of the Trudeau government resulted in a major shift in the focus for the navy. This shift in primary role, from collective-defence to sovereignty support, was motivated by a number of different factors, both emotive and substantive. The emotive, 'defend your country' and 'stand up to the Yankees' (and the foreigners) issues were experienced during the *Manhattan*, *Polar Sea*, *Concordia*, and *Estai* examples. The substantive issues revolved around the government's desire to cut back defence spending, as well as Trudeau's belief that the CF should be focused more on Canadian issues and less on a 'crusading' international role.[293] This shift, however, would not prove easy to accomplish. As Dan Middlemiss and Joel Sokolsky note,

> "Political leaders in Ottawa may sense these domestic pressures from time to time and may feel obligated to respond. ... But it is difficult to translate this emotional concern over sovereignty into defence policy decisions and procurements that are distinct from those associated with Canada's collective-defence roles. It is also difficult to decide what role DND and the CF should play in sovereignty protection, as opposed to that played by other governmental agencies, such as those concerned with fisheries, transportation, and the environment."[294]

The difficulties associated with this role switch became evident during incidents such as the attempted arrest of the *Concordia* which demonstrated coordination problems between the departments. The "Turbot War" was another instance wherein the solution, while effective, was just short of piracy and appeared to be driven by the Fisheries Minister, Brian Tobin. While the navy was involved in these incidents, its function was initially not well defined. The role of 'threat of last resort' seemed to evolve over the course of the events. However, along the way, navy credibility suffered from the restrictions imposed on its ability to apprehend individuals engaging in illegal activity in Canadian waters. Later instances, such as the case of the *Dame Blanche*, were managed much more effectively with the navy effectively acting as a final reserve option.

After introducing the theme and structure of the thesis in Chapter 1, Chapter 2 began by defining the terms and requirements of sovereignty support. One of the key issues identified was that there are two types of sovereignty support provided by the navy:

a. protection of sovereignty from external military threats; and

b. protection of sovereignty from nonmilitary challenges.

It was also noted in that chapter that both of these aspects must be considered in order to gain a full appreciation of the contribution of the navy to sovereignty support.

Chapter 3 reviewed the government's declaratory policy regarding sovereignty since 1971. This review concluded that the government recognized the importance of the task as witnessed by the Arctic Waters Pollution Act, the extension of the fishery protection zone, and its declared support for the LOS and UNFA conventions. The review also traced the most recent activity surrounding the Oceans Act, noting the slow progress to date on the development of an Oceans Strategy. Chapter 4 charted a brief history of the government's response to a series of significant sovereignty challenges that occurred over the last thirty years. This chapter also examined the degree to which the government's actions during those events matched its declaratory policy. The conclusion, from that policy versus action comparison was that while the governments espoused strong support for the sovereignty support role, it provided mixed messages to the navy concerning its role and the priority of that role in the support of sovereignty. The sovereignty support provided the OGDs by the navy, except for some small successes, was inconsistent. As well, the confusion over the employment of the navy when Canadian sovereignty was being challenged damaged its credibility.

While deployed on collective-defence tasks in Canadian waters over this period, the navy has provided a sovereignty presence. However, this presence is a byproduct resulting from efforts focused on other tasks. While this has been of value in the broader scheme of sovereignty support, it has not helped resolve the more difficult questions that arose from the inconsistencies of the policy and the problems with actual events.

Therefore, after establishing that the match between policy and action has been less than ideal, Part II of the thesis began an analysis to determine the extent to which the factors of Declaratory Policy, Government Support, Naval Response, Interdepartmental Cooperation, and Technological Capability contributed to this mismatch. This chapter will provide a synopsis of the declaratory policy and sovereignty events chapters, followed by a summary of the salient points from each of the analysis areas before proceeding to the last chapter for conclusions and recommendations.

DECLARATORY POLICY

In attempting to assess what factors may have led to the 1971 Government decision to change the CF's primary role, Bruce Thordarson provides one rationale,

> "...the decision to emphasize sovereignty appears to have been inspired by the belief that defence policy had to be based on national interests that were more North American-oriented than were contributions to world peace and security through participation in NATO."[295]

It is also useful to recall that Prime Minister Trudeau questioned the value of a military role outside of Canada and he wanted to reduce costs. He believed that the change of focus from the NATO role to the sovereignty support role would achieve all his objectives. Sovereignty support was to be the CF's prime mission. Trudeau made this very clear in his speech in Calgary, "Our first priority is the protection of Canadian sovereignty, in all the dimensions that it means."[296] Once Trudeau had decided that Canada's main national interest would be the development of a national Canadian identity and independence rather than peace and collective security, it was inevitable that support to NATO would be reduced. This move was further supported by the government's perception that Canada's influence in NATO was dwindling. The economic recovery of the European nations and the reduction in the perceived USSR threat also fuelled the drive to reduce Canada's contribution.

Thus the official government 'party line' was that the defence focus could be shifted because the threat had been reduced. Douglas Bland, contends that the official

position offered for the change in roles was just a guise to cover the real rationale, a defence need-resources imbalance.[297] The government faced severe fiscal constraints, coupled with an economy in recession in an era of high inflation. Thus, reducing the size of the perceived threat would allow the government to reduce defence commitments and save money.

Why did Trudeau want to replace the NATO role with support for sovereignty as the first priority for the Armed Forces? Thordarson states that Trudeau, in his Calgary speech, explained that the redefinition of the roles of the Canadian Forces was intended to reassure the CF personnel, and 'especially' to convince the public, that there was a valid role for armed forces in Canada.[298] This role was in keeping with Trudeau's Canada first philosophy and it was supported by the growing Canadian public sentiments regarding better control, use and management of the country's oceans. This move was also supported by Canada's participation in the UN development of the Law of the Sea, and the potential of expanding the scope of sovereignty protection to encompass an EEZ.

However, the resolve that led to this shift was not long lasting. The first crack appeared in the 1974/75 Defence Structure Review (DSR) wherein the primacy of the NATO role was restored. However, as can be seen in this C.R. Nixon "double speak" explanation of the situation after the DSR, sovereignty support was to be maintained at the same level, "NATO is the one that determines the nature of the force. That does not change the fact that the sovereignty and surveillance one is [the] one [that] the government gives priority."[299]

The importance of the sovereignty support role was reiterated in the 1987, and 1994 White Papers. Middlemiss and Sokolsky state that in 1987, the role was re-enforced to counter the perceived increase in the Soviet threat to North American and in response to growing public concern over sovereignty protection.[300] As an aside, the very fact that it took sixteen years for the release of another white paper paints a telling picture regarding the commitment of the government to seriously address military issues. Wu and Fetterly noted, "The sixteen-year gap between the two white papers reflected the low priority accorded to the military by both the federal government and Canadian

Parliament."[301] Professor R.B. Byers adds that, "A sixteen year hiatus between white papers constituted an abdication of political and governmental responsibility"[302]

The end of the Cold War, saw a shift away from the primary NATO support focus of the navy. This change was first evident in 1992 as can be seen in this comment by the Chief of the Defence Staff, General de Chastelain, "the Cold War doctrine had been replaced by the concept of general-purpose combat-capable armed forces, stationed in Canada for the most part, ready to deploy anywhere in the world in Canada's interests."[303]

The 1994 Defence Review and White Paper legitimized the development of this new post-Cold War role for the military. In examining these two events, Claire Sjolander says that,"National Defence will do everything it once did and more, all wrapped in the packaging of peacekeeping, but fiscal realities and the end of the Cold War's 'peace dividend' will require it to do everything on much less."[304] Sovereignty support was still being considered as a priority task, but now it became just another of the priority tasks assigned to the multipurpose navy.

Fred Crickard notes that since 1990, the federal government's focus on oceans policy has moved from resource development to marine conservation and from maritime defence to sovereignty and law enforcement. Crickard argues that by 1997, maritime defence and naval policy had returned to the priorities set out in the 1971White Paper.[305] The thrust of the Oceans Act and the DFO position established in the Oceans Management Strategy discussion paper support Crickard's premise. However, two years later, the lack of anything other than that discussion paper and promises of a consultation process indicates that the development of an Oceans Management Strategy is not being pursued with any great degree of urgency.

SOVEREIGNTY CHALLENGES

The objective of Chapter 4 was to determine "What evidence has been provided by actual events regarding the match between declaratory policy and action since 1971." The events covered in this chapter, from the voyages of the *Manhattan* to the *Estai*, Operation Ambuscade, and the arrest of the *Dame Blanche*, provided the various

Canadian governments with a diverse set of challenges. In virtually every case, it is safe to say that the challenges were not anticipated and no great degree of government planning or foresight was in evidence. This forced the government into a reactive mode. As a result, far-reaching decisions, such as the decision to arrest the *Estai*, appear to have been made on the spur of the moment. While the end result may have been an improved Canadian position vis-à-vis new legislation, the reality is that there was little apparent pre-planning so that activity matched declared objectives.

For the navy, the crucial questions regarding its role were never satisfactorily addressed at the start. In point of fact, the role became even more confused as events such as the *Concordia* incident undercut the navy's credibility. Each event involving the navy was, in reality, more of a trial than a programmed response. As each event developed, the navy and the various government departments invented procedures and practices until eventually the two parties arrived at the concept of employing the threat of the navy vice risking escalation from actually using naval force. As noted by F.S Northedge, " if a nation has to use force, the purpose of the operation has already broken down."[306] The bottom line is that, without a clearly defined role with well defined goals, the support provided by the navy during these incidents was inconsistent. As well, the reactive response mode, utilized by the government in the majority of this cases, demonstrated that the match between policy and action was not good during this period.

GOVERNMENT SUPPORT

In the 1971 White Paper, the government made a fundamental shift in the navy's primary role from collective-defence (NATO) to sovereignty support. Joel Sokolsky indicates that this shift highlighted two important factors,

> "Canada began to downgrade its NATO maritime roles, including convoy escort, simultaneously with an upgrading of the importance of those roles by the alliance. Yet, characteristic of the Trudeau government's approach to collective security, it did not withdraw from any alliance commitment nor even eliminate those roles which it was apparently no longer willing to fund adequately.[307]

As noted by Sokolsky, the government wanted to retain both roles and fund neither adequately. This lack of funding, Kennedy contended, was a historical reality faced by the CF since the 1960s.[308] This truth was compounded by the results of the Defence Structure Review (DSR) which saw both continued reductions in the navy's budget and substantiation for additional sovereignty roles for the CF. The theme of trying to meet too many requirements with too few resources was also very evident in the process leading to the selection of the *Aurora* as the replacement for the *Argus*. The initial decision to purchase the ASW *Aurora* with the civilian surveillance equipment demonstrated support for the two roles. When budgetary pressures came to the fore the sovereignty support equipment was eliminated. As well, fewer aircraft were purchased than originally announced, and certainly fewer than the number considered necessary to meet the requirements. This process was an excellent example of the continuing government trend of shortchanging the defense department. As noted by Rossotto, "... either the government did not really believe what it said or it was not willing to face the economic sacrifices which were required." [309] This funding starvation process continued throughout the 1970s and early 1980s leading to the development of the infamous 'commitment-capability gap.'

The 1987 White Paper attempted to address both the sovereignty support questions, and the 'commitment-capability gap' problem. This attempt ran into the 'bottom line' of financial restraint, lasting only two years before the navy support situation reverted to the norm of further reductions in resources with no comparable reductions in responsibilities.

The aftermath of the Gulf War, combined with the end of the Cold War, saw another redefinition of the navy's primary role in the 1994 White Paper. This time, the navy was to be developed into a combat-capable, multipurpose fleet available to respond to any and all taskings. History, however, would repeat itself. In 1995, the navy's budget was again reduced as part of the government's plan to combat the deficit.

Turning to procurement strategy, since 1971, the focus of the major equipment acquisitions has been in support of the collective defence role with sovereignty support

requirements a definite afterthought, if even considered at all. As the CFP, TRUMP and MCDV ships came into service, the Canadian navy improved its ability to support its collective defence requirements. By default, the navy also had sufficient surface capability to provide support to sovereignty. Even so, the *Victoria* class submarines will be a welcome boost to the undersea support areas of both requirements. Replacements for the aging *Sea King* and *Aurora* aircraft are now necessary to complete the picture. That the navy is in such a good position regarding equipment is remarkable considering that, from 1971 to 1999, the storyline for government support to the navy has been one of continuous cuts, reductions in the numbers and capabilities of equipment, and delays in all major equipment purchases. While the navy definitely has the equipment to meet the sovereignty support role, this role is now just one of many that may be demanded by the government. The involvement of Canadian navy ships in blockade and support operations in the Gulf, off Bosnia, and most recently off Yugoslavia, are indicative of the new taskings that are becoming commonplace and that reduce the resources available to meet the sovereignty support requirements. Against this background of governmental 'ask much, give little', the response of the navy to these varied demands forms an essential part of the final picture.

NAVAL RESPONSE

The 1971 White Paper, presented sovereignty support to the navy as its primary role, without any decrease in its collective-defence NATO commitments. Given a lack of direction regarding the amount of effort to expend on each of its tasks, the response of the navy was to attempt to maximize assets for the more demanding NATO role and use what was available to address the sovereignty support requirements. This approach was evident in the navy's approach during both the *Aurora* and CPF projects.

Throughout the 1970s and 1980s, as budgets became tighter and the assets of the navy became older, reductions affecting both roles were undertaken. After the end of the Cold War, there was a shift in naval philosophy to try to develop into a combat-capable, multipurpose force, a role first undertaken by the navy during the Gulf War.

The 1994 White Paper formalized the new approach for the navy while maintaining sovereignty support on the same par as collective defence. From 1994 to 1998, this direction was translated faithfully into the navy's principal planning document, the MCOPG. In the 1999 MCOPG, the navy shifted to a new scenario-based format. This format changed the level of navy effort provided for sovereignty support. The navy's responsibilities in this area became more generalized and the bulk of the tasks associated with sovereignty support were reduced to priority 2 and 3. This shift in priority coincided with discussions between the Air Force and DFO regarding the reduction of air support. While a reduction in naval support has not been discussed formally, it is certainly an option being considered at the staff level, given the myriad of tasks expected of the navy and the continuing efforts of the government to reduce the navy's budget.[310] While the support to the OGD aspect of sovereignty support appears to be on the wane, the navy continues to provide a visible sovereignty presence in Canadian waters. In 1993, the Osbaldeston follow-on report noted that the navy had approximately 2300 sea days available to support all taskings.[311] The 1800-odd sea days spent in Canadian waters (Table 6-1) represents about 80 percent of the total time available. This is a considerable portion of the navy's effort that appears as sovereignty presence. However, the value of that time to sovereignty support is difficult to establish, given that this time is spent primarily in pursuit of other tasks.

INTERDEPARTMENTAL COOPERATION

From the 1910 birth of the navy until the 1935 formation of the Department of Transport, the Departments of National Defence, and Marine Services and Fisheries worked very closely with one another, often interchanging vessels. From that point onward, the navy developed into a fleet focused on support to collective-defence. This was evident first in the convoy work against the Germans during World War II and then in the Cold War ASW support provided to NATO.

During this same period, two other separate fleets developed, fisheries under Marine Services and the Coast Guard under the Department of Transport. Each had its

own work requirements, there was little overlap between tasks and little demand for cooperation. By 1971, these three departments had very little interaction, with the majority of cooperation occurring between the navy and Marine services for fisheries support. However, as budgets declined during the 1970s and 1980s, departments were forced to look for external assistance. This led to the development of a system of informal agreements, MOUs and other arrangements, but there was no overall coordination of these efforts. The end result was that, "There is a degree of cooperation, but not total cooperation. In spite of these arrangements, the present managerial and administrative approach is insufficient to ensure totally efficient actions and conclusions."[312]

As a result of the 1990 SCONDVA report on maritime sovereignty, and the Osbaldeston study, this situation began to improve. This led to the establishment of the IPCRC, a formally structured, interdepartmental coordination body. The IPCRC coordinated a series of necessary changes dramatically improving the cooperation between the departments, standardizing the equipment, procedures and practices and allowing more effective use to be made of shrinking resources. The major problem with the IPCRC was its inability to eliminate, or even reduce the shortfall in required surveillance support identified in the Osbaldeston report. Despite the Committee's best efforts, continued government cutbacks to all three fleets meant that the remaining total capacity in all departments was insufficient to meet all the sovereignty support requirements. This situation, coupled with the startup of the Zonal system in 1996, has led to questions regarding the future of the IPCRC. DND suggested to DFO that the IPCRC could, and should play, a role in the implementation of the Oceans Strategy but as of yet no formal response has been received by DND.

Thus, from 1971 to 1990, the history of interdepartmental cooperation has been one of sporadic informal interaction. Once the IPCRC was created, it worked towards the development of a coordinated, controlled response capability linking the involved departments into a more effective response mechanism. This produced tangible results in many of the areas of interdepartmental cooperation, save for the most important. The

work in coordinating buyers and sellers never did achieve its original goal of reducing the overall shortfall in sovereignty support services. By 1994, government cuts to all departments obviated the need for a central market committee, as there were only buyers left.[313] As such, the future of the IPCRC is now in doubt. However, beyond the mere tangible products produced by the IPCRC, the liaison network that has developed between the departments through the IPCRC is of great value, and it would be a shame to lose this network should DFO not manage to integrate the IPCRC into the Oceans Strategy development work.

Turning to the navy's contribution to OGD support, the question that must be asked is, "Did the navy provided the required level of support? In Chapter 7 it was demonstrated that over the period in review, the navy met its MOU requirements. Therefore the answer, technically and legally, must be yes, the navy provided the required support. However, from a Canadian perspective, one must look at the total picture of the support required. Both of the Osbaldeston reports indicated that the collective navy-OGD efforts were not meeting the requirements for sovereignty support in our oceans. The navy's portion of this total was very small, even if all the multi-tasked time is added into the mix. Therefore, it must be considered that the navy's contribution did not meet the broader requirements and it has not been at a level consistent with a first priority task level.

TECHNOLOGICAL CAPABILITY

To reiterate from Chapter 8, the role of technology in the area of sovereignty support is to provide sufficient equipment to allow an acceptable level of detection and identification of vessels operating within Canadian waters. There is certainly no question that the navy has led and continues to lead the other departments in all areas of this category. Possessing the most sophisticated and capable technology , the navy is also leading the way regarding the pursuit of technological advancements. This effort is aimed at enhancing its own fleet capability, and strengthening its onshore capabilities through the utilization of new technologies such as HFSWR, and RADARSAT. The goal

appears to be a continuous effort to improve the navy's capability to detect, identify, and manage data pertinent to the RMP.

The technology utilized by the OGDs is very limited in capability and is principally focused on voluntary reporting and data collection systems centralized in Ontario and Quebec. Outside of the two main database management systems, CFIN and ECAREG, the fax machine is the prime method of data transfer for DFO, the Coast Guard, Customs, Environment, and the RCMP. While there are several small scale locally driven projects such as ADAM and Trak Targets, the INNAV project appears to be the only major upgrade application being pursued at the national level in these departments. However, the continued series of delays in implementing the INNAV is worrisome due to its technical obsolescence and its inability to incorporate CFIN data.

The navy's Minerva/Athena concept brings the new concept of 'data fusion' front and centre, and work to date has illustrated the power of the concept. This development was driven primarily in support of improving the RMP for the collective-defence role and, as such, the core of the system is based on the MCOIN III, NTDSA and JMCIS systems.

The CANMARNET development spun off as a sideline of the MCOIN work when the OGDs were approached for data feeds. However, as demonstrated by the events surrounding the Swiss Air disaster, the CANMARNET has evolved into an exceptionally powerful and versatile tool that is rapidly adaptable to the demands of the users. With the addition of the further capabilities offered by ELVIS and GNET, the CANMARNET continues to provide an excellent example of innovation, while maximizing the effectiveness of a limited budget. At this point, CANMARNET has been driven primarily by the navy. While the OGDs have been highly supportive of the CANMARNET concept, there has been limited interest shown by the other departments in expanding their involvement or contributing financially to the future developments of the system. If greater OGD interest does not develop in CANMARNET, the navy will be well served by this development, while the OGDs will continue to struggle with outdated, inefficient, incompatible technology.

As previously discussed, sovereignty in the Atlantic and Pacific appears to be well supported with respect to surface coverage assets. Priority government action on replacements for the *Sea King* and *Aurora* is now necessary if this level of sovereignty protection is to be maintained. However, if HFSWR and RADARSAT II deliver on their forecast potential, the navy will have access to some very inexpensive and effective tools that will greatly enhance the monitoring aspects of the surveillance task.

In the area of underwater support, the age of the Atlantic underwater array system threatens the underwater sovereignty support capability in this EEZ. The *Theseus* and rapidly deploy able arrays investigations offer some interesting potential, but these developments are still at the exploratory stage. The *Victoria* class submarines will be a welcome enhancement to the navy's underwater capability, most notably in the Pacific. The AIP development work offers some exciting potential for the submarines to acquire an under-ice capability for the Arctic Ocean. This area, except for a limited number of *Aurora* sovereignty flights, is completely unsupported. While the current strategic situation may provide justification for this approach today, the future will no doubt bring increasing demands for resource recovery in this area. As well, the newly created territory of Nunavuit is a wild card yet to be played as regards any increased sovereignty protection requirements.

CHAPTER TEN

CONCLUSIONS

INTRODUCTION

The concept of sovereignty involves, "the prevention of trespass, the provision of services and the enforcement of national and international law within (Canadian) territory, waters, and airspace."[314] Since 1910, the Canadian Navy has provided support to sovereignty in two ways:

a. protection from external military threats; and

b. protection from nonmilitary challenges in areas such as fishery and the environment.

The Canadian Navy traditionally has addressed the protection from external threats requirement through support to the NATO collective defence arrangement. Support to OGDs has been accomplished through various interdepartmental agreements.

The support provided can be categorized into three areas: surveillance, patrol and response. There is a certain degree of crossover between the roles when a naval vessel is deployed in Canadian waters on a collective defence task. Against this background, the objective of the thesis was to review critical documents and events to demonstrate that:

a. support of sovereignty by the navy has been a declared government role that has grown in scope and importance to Canadians since 1971; and

b. for a variety of reasons, the role has not been effectively supported by the government or put into full operation by the navy.

Given these two conditions, the thesis would achieve its purpose by explaining why there has been a disconnection between this declared government objective and the subsequent action by the navy. These three areas form the basis for the development of conclusions in this, the final chapter of the thesis.

IMPORTANCE OF SOVEREIGNTY TO CANADIANS

Beginning with the election of Trudeau in 1969, Canadian sovereignty became a declared priority of the Canadian government. The focus of this priority was on Canada's oceans and from 1971 - 1999, this priority appeared to grow in declared importance for the various Canadian governments. This is evident in the policy line beginning with the Canadian participation in the Law of the Sea Convention, the 1972 Arctic Waters Pollution Act, and the 1977 Fishery Protection Zone Act. In 1997, the government reiterated the importance of the ocean issues with the passage of the Oceans Act and the drive to create an appropriate strategy to finally tie together the various departments and agencies. The government is also continuing to work towards the ratification of the UN LOS and UNCLA conventions. While the maintenance of Canadian oceans sovereignty has remained a priority for Canadians since 1970, the scope of the task of supporting sovereignty has grown in the aftermath of government legislation that expanded Canadian jurisdictional claims in 1977 and 1997.

In an open letter to Canadians, David Anderson, the Minister of Fisheries and Oceans summarizes the past and future importance of the ocean sovereignty to Canadians,

> "Canada's three oceans - Pacific, Atlantic, and Arctic - are far more than an important backdrop to Canadian history. Entire Canadian communities, industries and many livelihoods depend on them. At the same time, rapid expansion of marine resource use, marine trade, research, and technology have dramatically increased both the pressures on oceans and marine resources, and on the challenge of managing them."[315]

Against this backdrop of increasing importance and declared government intent to manage the sovereignty challenge more effectively, this next section of this chapter will draw conclusions regarding the levels of support the government provided the navy to progress this first priority tasking.

GOVERNMENT SUPPORT TO SOVEREIGNTY SINCE 1971

From the time of the birth of the Royal Canadian Navy in 1910, the navy had developed into a force focused on the primary goal of providing support to the NATO collective defence alliance. The Trudeau government, with its Defence in the 70s, attempted to change this primary focus to one of providing support to sovereignty. The White Paper made the responsibility for surveillance and control over Canadian territory, water, and airspace the new first priority for the CF. While support to NATO was moved down in the priority list for the navy, it is important to note that the requirement was not reduced in scope. The decision by the Trudeau government to place sovereignty as the first priority role for the CAF can be attributed to either:

a. *detente* and the loss of Canadian influence in the European NATO sphere;

b. Trudeau's desire to refocus defence policy on Canadian-based activity;

c. a need to identify fiscal savings in government spending;

d. Trudeau's inability to comprehend a "valuable" role for the CAF; or

e. government response to growing Canadian public interest in ocean issues.

In reality, the decision was likely based on a combination of all these factors. To what degree did each factor contribute to the overall decision? Given Trudeau's natural "Canada-first" focus, his antipathy towards the CAF, and the requirement to reduce Government expenditures, it appeared to be a natural fit for the focus of the CAF to be turned to supporting a Canadian sovereignty role with a reduced budget.

After the 1971 White Paper, the navy struggled under its budgetary pressures to try and maintain its roles. MARCOM's capital expenditure budget reached a post-war low in 1975, and operations had to be cut back due to the low levels of funding available.

This reality was most appropriately noted by the members of the Standing Senate Committee on Foreign Affairs in 1983,

> "The failure to provide MARCOM with additional equipment designed for the purpose of sovereignty surveillance and its related wartime tasks becomes truly baffling when the enormous additions to Canada's maritime jurisdictional claims since publication of Defence in the 70s are taken into account."[316]

For the Navy, the period from 1971 to 1999 saw a continued series of budget cuts, reductions in numbers and capabilities of equipment, and delays in all major equipment purchases. The government has failed, at virtually every turn, to provide the budgetary support necessary to meet the requirements it had specified. This was not simply limited to the sovereignty support role, but to the entire spectrum of tasks asked of the navy during this period. Specifically in the area of sovereignty support, the equipment acquisition programs never seriously addressed the sovereignty support requirements, considering these requirements as add-ons and nice to have only.

The government policy record on sovereignty support went from the initial strong position of Trudeau to the greatly reduced support seen in the 1994 White Paper. On the one hand, in 1997, the government appeared to recognize the importance of the ocean issues with the passage of the Oceans Act and the drive to create an appropriate strategy to finally tie together the various departments and agencies. However, since that promising start, the actual progress on developing the strategy has not been at all encouraging. It has been over two years since the process began and, to date, the only concrete product has been a discussion paper. In 1998, the UN Year of the Ocean, the delays by DFO, in just staging the preliminary series of discussions, gives little assurance, that this strategy development occupies any degree of priority within that department. As well, the longer the ratification process for the LOS and UNFA Conventions drags on, the less committed the government appears in support of its declaratory policy in the Oceans Act.

During this review period, the evidence clearly indicates that the government embarked on a process of increasing the navy's commitments, while reducing its resources. What conclusions are evident from the navy's response to these events?

THE NAVY'S RESPONSE

From 1971-1987, the Navy was overtasked and underfunded. While attempting to keep the sovereignty support task as a first priority tasking, the resources available were focused on maintaining the more demanding collective defence role. In 1987, these

two roles were merged, but this was not to last. As a result of the Gulf War and the end of the Cold War, the navy could no longer focus on a single role, but was required to develop a multi-functional, multi-purpose capability to be able to respond to the variety of activities being requested by the government, (blockage, peacekeeping, humanitarian aid, contingency operations). Sovereignty support by this point had become merely one of a series of tasks. In general, even the expanded support requirements resulting from the Osbaldeston review were not too demanding on naval resources and the navy was able to meet the requirements easily. One way of looking at this situation is to say that these required numerical levels of navy support were negotiated each year under the terms of the MOU and these levels reflected the OGDs requirement. When this level of support was subsequently provided, it could be concluded, that the navy had met its requirements. The alternative perspective is to state that the navy's goal in the voluntary MOU negotiations was to commit to only a minimum level of support to the OGDs. As these resources were provided to the OGDs free of charge there was little incentive to offer more. This strategy allowed the navy to retained resources for support of the NATO tasks. If the navy had truly believed that sovereignty support was its premier task, this would have not have been the case and the levels of support provided by the navy would have increased long before the Osbaldeston report was written. In Chapter 1, the following question was raised: Did the navy actively resist replacing NATO with sovereignty protection as its first priority? The answer from this analysis must be no, the navy did not actively resist the switch in roles. The NATO role was not reduced in scope in the 1971 White Paper, the government frequently wavered in support for the sovereignty task, and the navy received no direction regarding the level of effort the government expected on this task. With the remainder of the NATO community still strongly believing in the Soviet threat, it is understandable why the navy took this approach. In fact, the navy's foresight in maintaining the NATO emphasis proved to be fortuitous. When the Gulf War requirement erupted, the collective defence experience gained in the NATO forum allowed the navy to quickly and easily transform itself to meet this new role.

Thus, the response of the navy, from 1971 to 1994, was to acknowledge the priority of the sovereignty support, but to support the role only to the extent that it would not affect its collective defence requirements. However, this was not due to any attempt at active resistance, just an attempt to make the best arrangements for dealing with too many tasks and too few resources. As can be seen from the 1999 DPG, and the MCOPG documents, the continued reductions in the navy's budget have now resulted in the sovereignty requirements being provided to the OGDs being diluted, and the priority reduced. With only the RCMP support requirement maintaining a first priority ranking, the bulk of the sovereignty support requirements have now been relegated to the second or third priority tier. In addition, the discussions underway to reduce air hour support to DFO may be a harbinger of future cutbacks that will see sovereignty support drop further back in the priority listing.

Thus, overall, the navy's response to the sovereignty support role was much the same as the government's. The navy acknowledged the role as its number one priority, knowing that the agreed commitments were not that demanding. The navy then evoked the 'preparations for collective defence' strategy to allow it to pursue the collective defence aims. The navy did provide collateral support to sovereignty while deployed on collective security taskings but the value of this sovereignty presence is difficult to quantify. The support provided to OGDs was consistently in accordance with the levels negotiated but the amount was not sufficient to overcome the deficits noted in the Osbaldeston reports.

INTERDEPARTMENTAL COOPERATION

As noted in the Osbaldeston and SCONDVA reports, cooperation between departments during the early 1970s and 1980s was inconsistent. The establishment of the IPCRC was a positive step that enhanced the ability of the various departments to work together more efficiently through standardization of equipment, procedures and delineated MOU levels of support. As indicated by the Osbaldeston - Two Years Later report, these improvements appeared to be too little, too late. Government cutbacks in

all departments resulted in the acceptance that the overall requirement for sovereignty support was not being met because there were too few resources left in any of the departments.

Considering the developments in the area of interdepartmental coordination, it is obvious that there has been a maturing of this process under the leadership of the IPCRC. This maturity is evident in Change 4 to the ICMO and by the start up of the Zonal committee system. However, the inability of the Central & Arctic Committee to get up and running is disconcerting. This apparently indicates that Arctic sovereignty issues are no closer to being addressed and still do not merit any great degree of priority in the government focus.

This IPCRC maturing process has had one drawback in that it appears to have removed the core rationale for the continued existence of the committee itself. The approach to DFO, by DND, regarding a new role for the IPCRC in the development of the oceans strategy, makes eminent sense. The lack of DFO response to this offer now threatens the continued existence of the IPCRC. This committee is a working example of exactly what the ocean strategy process wants to develop - an interdepartmental network focused on ocean issues. With the mountain of work needed to define, develop and implement an oceans strategy, it is inconceivable why the IPCRC has not already been closely woven into the development process.

So have the navy and the other government departments have been successful in establishing or maintaining any meaningful long-term cooperation efforts? Again the answer must be no. From 1971- 1992, cooperation between the departments was ineffective. The IPCRC made great strides in improving the cooperation between the departments. IPCRC, however, failed to meet its primary objective of reducing the overall needs versus resources deficit. The greatest successes of the IPCRC were in the area of equipment and procedure standardization. It also developed a communications network that was available to quickly address cross-department support issues. With this committee on the verge of being disbanded, it is hard to quantify the process as a success and, in all likelihood, IPCRC will not even be around for the implementation of the

Oceans Strategy. Thus, the brief seven year period during which IPCRC has effectively managed cooperation between the departments, is coming to an end and cooperation between departments will suffer further.

However, some of the IPCRCs greatest successes came in the area of technological standardization and enhancement and it is appropriate to attempt to determine what conclusions are evident in this area?

TECHNOLOGICAL CAPABILITY

As noted in the technology review section, outside of the navy equipment and systems, the capability present in the rest of the departments was very limited. The efforts by those departments in this regard were minimal, uncoordinated and outdated. The main focus of these departments centred on voluntary reporting systems that certainly call into question the ability of these departments to deal with the uncooperative segment of the surveillance continuum. While these current systems do not meet the requirement, the technology review demonstrated that developments, such as HFSWR, and RADARSAT, offer the opportunity for all the departments to meet their sovereignty support requirements in the aftermath of the effects of departmental downsizing.

The CANMARNET development continues to provide the brightest light regarding the marriage of technology and interdepartmental cooperation. Through the use of cutting edge technology and innovation, this project has been driven by the navy on a very small budget The concept has also maintained a flexibility that allows it to quickly incorporate the information from new technology sources, such as RADARSAT and HFSWR. By combining the efforts of the various departments into this central data fusion process, the navy has demonstrated that efficiencies can be made in picture management, allocation of patrol assets, and in providing a focal point for operations. The main drawback at this point is that the composite RMP is not available to all the other departments, and the information is only available through request via selected terminals. This meant that few of the departments involved in providing the data for the CANMARNET actually used the resulting product.

The main conclusion regarding technological capability must be that while the technologies in use by the navy are excellent, the systems in use by the other government departments today, are inadequate, incompatible, and incapable of supporting the requirement. Thus collectively this area must be considered a failure.

This summary has demonstrated that each of the four factors have contributed to the disparity between the government's declared sovereignty position and its response to actual sovereignty challenges. To what extent have each of these factors contributed to the mismatch between policy and action ?

COMPARATIVE IMPACTS

Each of the four major factors has played a part in the development of the mismatch between declared government policy and subsequent action. Were the contributions equal or was there any one factor that should be considered the over riding contributor to this mismatch?

The government support provided to the navy is certainly a major factor not only as regards the amount but also the direction provided with that support. While Trudeau may have honestly believed the Russian threat was diminishing, he was alone in that belief among the NATO allies. The NATO group, led by the US, had been unhappy with Canada's contribution to NATO for a long time. In the aftermath of the 1971 White Paper, this pressure continued to mount, leading to the apparent government reversal of positions in the 1974 DSR. This reversal, accompanied by the events surrounding the *Aurora* acquisition and the CPF projects, sent conflicted messages to the navy concerning the government's commitment to the sovereignty support role. Nonetheless, regardless of the clarity of the role messages, the one message continuously sent with relentless emphasis was that DND and the navy would have to do more with less. High inflation, oil price increases and soaring deficits resulted in a situation wherein defense budgets and resources were continuously reduced in real terms. When the Cold War came to an end, reap the 'peace dividend' became the rallying cry and the military could now have any role it wanted, provided it cost less.

In examining the navy's response, the core issue revolved around the role it envisioned for itself. Since the inception of the navy in 1910, it had developed into a member of a collective defense force arraigned against very real and visible enemies. With NATO staffs gravely concerned about the growing strength of the Russian submarine fleet, it is understandable that the Canadian naval staffs were reluctant to accept Trudeau's assessment that the threat had passed, and the navy should now focus on sovereignty protection. The navy believed that participation in NATO was sovereignty protection in its purest sense, that is, protection against external military threats. Relinquishing this in favour of increasing its support to OGDs was seen as the start of a downhill slide to a constabulary force, akin to an armed coast guard. It is not surprising that the navy quickly latched onto the concept of having NATO requirements determine the force structure. This was seen as the best compromise solution, allowing both sets of requirements to be met. This approach was combined with two other coping strategies. The first one was to double count sea days spent in Canadian waters on collective defense tasks as sovereignty support against military challenges. The second strategy was to negotiate for minimal sea day support to the OGDs under the MOUs. These three approaches combined into an effective strategy that allowed the navy to maintain its primary focus on collective defense, while at the same time satisfying its sovereignty support requirements. This strategy also allowed the navy to shift focus post-Cold War to the combat-capable multipurpose role with relative ease.

The review of cooperation between departments indicated that, except for the current successes achieved through the IPCRC, there has been no great achievements in this area. The *Concordia* and *Estai* incidents demonstrated this fact and the Osbaldeston reports support the premise that cooperation was virtually non-existent in 1990. While improved by 1994, the departments were now left with too few resources to coordinate. As such, this is a minor factor that only serves to highlight the fact that lack of government commitment and funding was not limited to DND alone. The dismal state of the Oceans Strategy development must be considered the crowning example of this unfortunate situation.

Technological capability is a critical factor, but again only as a support factor that reflects the effects of government support. In 1970, the departments were technologically incapable of building, maintaining and utilizing an RMP. Today, the navy has developed that capability and has dragged the OGDs into the picture. The CANMARNET development has progressed primarily in support of the navy's collective defense role. The OGDs have been provided input, access and information support services at no charge as a result of this development. This situation offers the only hope the OGDs have of progressing towards a coordinated RMP system capable of supporting their non-military challenge requirements. If the HFSWR, RADARSAT II, ELVIS and GNET developments develop as forecast, the OGDs will gain immeasurable benefit, and the navy will improve its collective defense capability.

The situation following the 1971White Paper, regarding support to sovereignty, therefore, was one of confused government policy and actions, naval reluctance to change, limited interdepartmental cooperation and inadequate technology. The current situation remains one of confused policy and government action, a naval focus on the multi-tasked general purpose role, improved cooperation, and a naval core of technology capable of supporting the task, but with little interest outside the navy. There are two main factors responsible for this situation. The first factor, and the one most responsible for the disconnect, is that of government support. Since 1971, the government has increased the navy's tasks, dramatically cutback its resources, and continuously expected all assigned tasks to be met. The second factor responsible for the mismatch has been the navy's steadfast maintenance of the collective defense role as its number one priority. If the navy had truly shifted its focus in 1971, and had reconfigured itself into a constabulary navy, the shortfalls in OGD sovereignty support would most likely have been met. Remember, however, that the 1971 White Paper only reduced the priority of the collective defense role, it did not eliminate it. Therefore, it would have been interesting to see how Canada would have responded to the demands of the Gulf War, and what role the navy would now be expected to play in events, such as Yugoslavia, and Somalia. Thus, while government support has to be considered the largest contributor

to the current sovereignty support situation, the navy must also share some of the blame for the disconnection. Given the events of the post-Cold War, it is probably a good thing the navy did not wholeheartedly take the politicians at their word.

This section has paused in each of the main analysis areas to determine the comparative impact of the four factors on the performance of the government and the navy regarding the sovereignty support role. Prior to providing an overview perspective regarding the topic now and near future, it is useful to provide a summary review of the conclusions.

SUMMARY OF CONCLUSIONS

Following from this analysing of policy, events, government support, response of the navy, interdepartmental cooperation and technological capability, the following conclusions can be drawn:

a. the protection of Canadian sovereignty has increased in scope and importance for Canadians since 1970;

b. the government remained consistent in declaring sovereignty support to be a priority tasking for the navy. This role, however, was given to the navy in 1971, as an additional task with no reduction in the navy's other commitments and few, if any, additional resources.

c. the navy provides support to sovereignty on two levels: support against military challenges, and support to non-military challenges.

d. messages sent to the navy through events such as the 1974 Defence Structure Review, the *Aurora* acquisition, and the 1989 budget, called into question the government's commitment to its own declaratory policy;

e. the government re-established the priority of ocean issues with the passage of the Oceans Act in 1997. However, the follow up development of the Oceans Management Strategy has not maintained that same priority;

f. The navy, being overtasked and underfunded, consistently worked to maintain its focus on meeting the NATO commitment first, at least up to the end of the Cold War. After 1994, the navy's focus shifted to maintaining a multi-purpose, multi-function fleet structure that could respond to any tasking. By this point, sovereignty support had become just another of the navy's priorities;

g. while the navy's role within the Oceans Management Strategy is being examined, the navy has strengthened its multi-functional approach under the new scenario-based planning system. This has also resulted in a reduction in the scope and levels of support provided to the sovereignty support role;

h. the unique interdepartmental network successfully established by IPCRC would be ideally suited as part of the Oceans Strategy development process. Unfortunately, this capability is in danger of being lost due to the slow progress in the development of the Oceans Management Strategy;

i. the technology utilized by the navy during this period was far superior to that available in the OGDs. As a result, the navy is more than capable of providing the level of sovereignty support required to manage the deficiencies in coverage. The required degree of coverage was never negotiated into any of the MOUs.

j. the government's claim to sovereignty is not strongly supported by its ability to provide surveillance, patrol and response. Atlantic area coverage provided the strongest picture, while the Pacific area had limited undersea capability. Given the government's inability to function under the ice, Arctic undersea sovereignty claims cannot be supported;

k. the navy led, and continues to lead, the OGDs in the exploration and utilization of enhancing technologies, such as HFSWR, and RADARSAT II. The navy driven Minerva/Athena/CANMARNET initiatives offered

the greatest opportunity for tangible improvements. CANMARNET is demonstrating the value inherent in the data fusion concept, and with the ELVIS and GNET enhancements, it has the potential to become the focal point for an extremely effective cooperative interdepartmental surveillance system; and

l. the government's claim to sovereignty has been strengthened by the submarine acquisition program especially in the Pacific area. Further government activity to replace the *Sea King* and *Aurora* must follow if the support gains achieved through the submarine purchase are not to be eroded away; and

m. pending some action on an alternative to an ARCSSS type array system, the Arctic remains a major deficiency in the sovereignty coverage blanket. Similarly, a decision must be made regarding the SOSUS array system in the Atlantic if the sovereignty support levels are to be maintained in this area.

In examining this situation regarding the navy and Canadian sovereignty, the easy answer must be that, while the government maintained the priority of the role, it did not provide adequate support to the navy. In spite of this lack of support, the navy met all its requirements. However, the requirements agreed upon in the various MOUs were not that substantial. This allowed the navy to maintain its NATO focus during the Cold War and to count all the time spent in Canadian waters as sovereignty support. Time and events appear to have demonstrated that the navy's approach was the correct one. It allowed the navy to easily adopt the multi-functional response posture post-Cold War.

The navy did actively work to improve cooperation and arrangements between the departments and it led the way in technical enhancement and innovation through initiatives such as the CANMARNET. This technological progress provided some recompense for the reduction in patrol resources. While the potential gains from new technology are real, it must be noted that improving technology, by itself, is not the full answer to ensuring success. The key to the process is having the trained analysts in place

to perform data-fusion and maximize the cost-effective value of the RMP. As well, manned patrol and reactive assets are still the best surveillance tools in the inventory and new technology should not be considered a complete replacement for these tools.

This set of circumstances creates an interesting situation. With the policy direction mired, a major interdepartmental cooperation vehicle on the verge of being dismantled, and the navy attempting to reduce its commitment to the sovereignty support role, the future for sovereignty support does not look bright. The physical patrol and resource assets of the OGDs are stretched to their limits. The navy has also been stretched to the point where it has been forced to cutback support to the OGDs in favour of the new multi-tasked role currently favoured by the government.

The one area perhaps offering any hope is that of technology. In pursuit of its multi-functional role, the navy is driving several major projects that offer the potential of obtaining an integrated, low cost system for sovereignty support. HFSWR, combined with RADARSAT and the GNET version of CANMARNET, offers the potential for a truly integrated network capable of producing an effective RMP. This would allow the involved departments to focus their remaining resources on more selective patrol, and response aspects of the sovereignty support problem. This type of system could be effectively established in the Atlantic and Pacific regions, leaving only the Arctic lacking adequate coverage. While technology, such as rapidly deployable arrays or UUVs towing sonar arrays, could enhance the situation in this area, it is unlikely in the near future that surveillance of this area will increase in priority to the point wherein the government would authorize the funding necessary to obtain the desired control ability.

Currently, the lack of government priority in defining the navy's role under the Oceans Management Strategy has resulted in a situation where the sovereignty support role is being supported to the degree demanded by the government but only as a consequence of the navy fulfilling its multi-functional role. As Admiral Garnett stated,

> Canada's Navy must be prepared to take on a wide variety of missions. As it is presently configured, the Navy provides Canada's government with a highly flexible tool, able to take on virtually any task required and do so on a global basis."[317]

The Canadian navy is currently focused on meeting the above global requirements, and this has the Navy in good stead as far as meeting the minimal requirements of providing sovereignty support to the OGDs. The collateral strategy of navy time spend in Canadian waters continues to provide support against military challenges. This situation should remain the case for the near future as well. However, this level of support is certainly not in keeping with what has been described as a first priority task. This level of effort, however, is apparently considered sufficient by the government. In general, there appears to be enough activity being conducted in the sovereignty support area for the government dictum to be 'Don't ask the question if you you don't want to know the answer.'

This study has addressed and analysed the basics of the sovereignty support question. In doing so, it has identified two areas that are in need of further research. The first area centres on the question of how much sovereignty protection is enough. To what extent can information management technology replace the patrol asset. The second area requiring further investigation involves determining the effectiveness of Canada's current sovereignty protection efforts. What percentage of the illegal fishing, pollution, drug smuggling incidents are being detected, deterred by Canada's current efforts. Is this a good return for the associated costs? What do the most recent cases of the illegal Chinese immigrants being smuggled into British Columbia indicate regarding the effectiveness of the protection of Canadian sovereignty?[318] These are difficult questions perhaps requiring a level of analysis at the PHD level.

The sub-title selected for this thesis was "New Solutions for Old Problems,". This study has demonstrated that the old problems of providing support to sovereignty that existed in 1971, (government support, navy resolve, cooperation and technology) have remained in place throughout the period, exacerbated by the expansion of the requirements and the continued reduction of navy resources. Any new solutions must meet two objectives: improve the support capability, and reduce the expenditure requirements. Technological solutions, such as the CANMARNET, offer advantages in

both areas, but these solutions must be supported by personnel who understand how to effectively utilize the technology. As Commander Knight stated,

> "Determining the way ahead for the application of new technology to maritime surveillance can and should be the subject of intense discussion among government departments, resulting in a unified strategy for maritime surveillance and information management.[319]

Perhaps the solution is the new force structure approach agreed for the navy in the 1994 White Paper, the combat-capable, multipurpose force able to respond to any and all taskings. One might argue that this new solution is, in fact, just the formalization of the approach utilized by the navy since the 1970s in response to the shifting "do everything with nothing forever" demands and support history of the government. This solution has served the navy well during this period, and the fuzziness of 'be ready for anything' may be the best new solution to the traditional problem of how does a navy deal with the vagaries of government demands. As Geoffery Till said,

> "Because they operate forces of almost infinite flexibility and because they often cannot find people willing to tell them what to do, sailors have tended to go in for what critics call, 'parametric planning'. They resist being tied down to one scenario lest it unsuits them for another and prefer to rely instead on the inherent flexibility of sea power to provide necessary options. The sailor's instinctive aversion to the specific and almost mystical faith in the capacity of a first-rate balanced fleet to cope with virtually anything can be distinctly irritating to the unsympathetic... This necessary woolliness is sometimes seen as an attempt to make a virtue out of vagueness and invites suggestions that naval planners ought to improve the quality of their prophecy rather than seek to persuade treasuries to allow them to develop the flexibility need to cope with its failures. Nonetheless, the point is that naval planners will probably have to make even more use of this once and perhaps still criticized approach in the future."[320]

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