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Canada

Canada's Coastlines:
The Longest Under-Defended Borders in the World

Standing Senate Committee on
National Security and Defence

VOLUME 2

October 2003

TABLE OF CONTENTS

APPENDIX I
ORDER OF REFERENCE 1
APPENDIX II
SUMMARY OF MARITIME SECURITY POLICIES OF 15 NATIONS 3
APPENDIX III
MARITIME SURVEILLANCE ACTIVITIES OF PROVINCIAL AIRLINES LIMITED 54
APPENDIX IV
THE REGISTRATION AND LICENSING OF VESSELS IN CANADA 59
APPENDIX V
FEDERAL STATUTES RELATING TO PORTS 61
APPENDIX VI
THE TOP 10 CANADIAN PORTS BY TONNAGE HANDLED 63
APPENDIX VII
THE TOP 10 NON-NORTH AMERICAN PORTS FOR CANADA BY TONNAGE SHIPPED 64
APPENDIX VIII
TOP 10 COMMODITIES SHIPPED FROM INTERNATIONAL PORTS TO CANADA'S TOP 10 PORTS 65
APPENDIX IX
CANADIAN COAST GUARD FLEET 72
APPENDIX X
GOVERNMENT AND PRIVATE ASSETS INVOLVED IN MARITIME SURVEILLANCE AND SEARCH AND RESCUE 79
APPENDIX XI
THE CUTTER RECOMMENDED BY JOHN DEWAR AND THE UNITED STATES COAST GUARD OPTION 95

APPENDIX XII
THE RATIONALE BEHIND THE 12, 24 NAUTICAL MILES ZONES AND EXCLUSIVE ECONOMIC ZONE 100
APPENDIX XIII
COMPARISON OF THE COST OF SATELLITE SURVEILLANCE, AERIAL SURVEILLANCE AND GROUND-BASED RADAR SURVEILLANCE 103
APPENDIX XIV
AIR CANADA PILOTS ASSOCIATION 105
APPENDIX XV
WHO THE COMMITTEE HEARD FROM 110
APPENDIX XVI
EXHIBITS 130
APPENDIX XVII
MEDIA ACTIVITIES 137
APPENDIX XVIII
BIOGRAPHIES OF COMMITTEE MEMBERS 139
APPENDIX XIX
BIOGRAPHIES OF COMMITTEE SECRETARIAT 156
APPENDIX XX
INDEX I

(There are two volumes to the report)

APPENDICES

Order of Reference

Extract of the *Journals of the Senate*, Wednesday, October 30, 2002:

The Honourable Senator Kenny moved, seconded by the Honourable Senator Losier-Cool:

That the Standing Senate Committee on National Security and Defence be authorized to examine and report on the need for a national security policy for Canada. In particular, the Committee shall be authorized to examine:

(a) the capability of the Department of National Defence to defend and protect the interests, people and territory of Canada and its ability to respond to or prevent a national emergency or attack;

(b) the working relationships between the various agencies involved in intelligence gathering, and how they collect, coordinate, analyze and disseminate information and how these functions might be enhanced;

(c) the mechanisms to review the performance and activities of the various agencies involved in intelligence gathering; and

(d) the security of our borders.

That the papers and evidence received and taken during the First Session of the Thirty-seventh Parliament be referred to the Committee;

That the Committee report to the Senate no later than February 28, 2004, and that the Committee retain all powers necessary to publicize the findings of the Committee until March 31, 2004.

After debate,

With leave of the Senate and pursuant to Rule 30, the French version of the motion was modified in paragraph (b) to read as follows:

"b) les relations entre les divers organismes participant à la collecte de renseignements, comment ils recueillent, colligent, analysent et diffusent ces renseignements, et comment ces fonctions pourraient être améliorées;".

After debate,

The question being put on the motion, as modified, it was adopted.

Paul C. Bélisle

Clerk of the Senate

Summary of Maritime Security Policies of 15 Nations

The Australian Maritime Security Approach

This appendix discusses the Australian approach to maritime security.

Coastline Length and Dimensions of Exclusive Economic Zone (EEZ):

Australia's Exclusive Economic Zone (EEZ) measures 6, 664, 107 km^2. Its coastline is 66, 530.3 km long.

Organizations Responsible

- Coastwatch, which is responsible for Australian maritime surveillance.
- The Australian Defence Force (ADF)

Coastwatch – General Description:

Instead of a coast guard, Australia has "Coastwatch." It is a division of the Customs Service, having been transferred from the Department of Transport in 1988.

Coastwatch manages and controls Australia's civil coastal and offshore maritime surveillance and response program. It does

not defend Australia's boundaries (this is the ADF's job), or monitor its many large ports (another division of Customs handles this).

Coastwatch has no assets or legislative responsibilities to fulfill. It exists only to serve the aggregate needs of its government clients.

Coastwatch relies on contracted Dash 8 aircraft, ADF Orion P3-C surveillance aircraft and armed Fremantle Class Patrol vessels, and Customs' 8 National Marine Unit Bay class vessels. The Customs vessels (which have a 200 nautical mile range) are unarmed, but the Customs personnel who crew them do carry arms.

Australia's civil agencies can intercept ships and make arrests. According to Rod Stone, Coastwatch Director of Operations, "the Navy only infrequently become involved in providing support to the civil powers in offshore interceptions and apprehensions." The exception is the ongoing Operation Reflex in the north, which targets illegal people smuggling out of Indonesia.

<u>ADF Support</u>:

Aside from Operation Reflex, the ADF contribution to the civil maritime surveillance and response program comprises 1, 800 sea days from the patrol boat fleet, and 250 hours per year from the fleet of Orion P3-C maritime surveillance aircraft. The P3 hours are used to extend the Coastwatch's reach into areas that cannot be covered using its contracted Dash 8s.

The Coastwatch-ADF relationship has been significantly strengthened in recent years. In 1999, the undetected arrival of several ships off the coast led to calls for the military to take over maritime security. Instead, the link between the ADF and Coastwatch was tightened. The most obvious manifestation of this is that the head of Coastwatch is a serving rear admiral. The Coastwatch also has a strong connectivity with the defence intelligence community that adds considerably to its ability to be in the right place at the right time. This, considering Coastwatch's vast area of responsibility, is essential to its success.

The Brazilian Approach to Coastal Defence

This appendix discusses Brazil's approach to maritime security.

Coastline Length and Dimensions of Exclusive Economic Zone (EEZ):

The area of Brazil's Exclusive Economic Zone (EEZ) is 3,442,548 km^2. Its coastline is 33,379 km long.

Organizations Responsible:

Brazil does not have a Coast Guard. Coastal sovereignty is the responsibility of:

- The Brazilian Navy
- The Brazilian Police Services

The Brazilian Navy:

If the Navy discovers something illegal during a 'routine' inspection, it will escort the vessel to the nearest port. All naval ships used for patrolling are armed. The Federal Police are the authority for criminal activities at sea.

The Brazilian Navy is divided into 8 Naval Districts. The Navy's primary role is sovereignty protection. It is also responsible for all buoys and marking, charting, search and rescue (with assistance from the Air Force when required),

fisheries protection, ship certification and inspection, and pollution prevention.

The Navy provides logistical and medical support to the remote areas of Brazil where the only access is by water. In many remote areas of the Amazon, the only medical / dental services available is that provided by the Navy or the Army.

Naval personnel are well armed and constantly patrol the rivers and ocean. They routinely stop and board vessels to verify that paperwork and safety equipment is in order. These inspections are often more than just 'paperwork' inspections, especially in the Amazon and the south where smuggling is a serious problem. Drugs, arms, animals, and timber are the major illegal trafficking activities.

Brazilian Police:

The Navy works closely with state and federal police authorities. If, during an inspection, contraband is found, the vessel is escorted to the nearest local authority for arrest. Because the Brazilian military does not have power of arrest, it requires someone from the State Police or from the Federal Police to make the arrest.

The Federal police are responsible for all criminal activities done on the high seas. Unfortunately the Federal Police are ill equipped and insufficiently manned to properly patrol the area of responsibility. Pirating occurs on the inland waterways, especially between Manaus and Belem, and on the high seas. These acts of pirating are rarely reported, but information is received from the military attachés of the nations whose ships were illegally boarded.

Chile's Maritime Security Approach

This appendix discusses Chile's approach to maritime security.

Coastline Length and Dimensions of Exclusive Economic Zone (EEZ):

The area of Chile's Exclusive Economic Zone (EEZ) is 3,415,864 km^2. Its coastline is 78,563.2 km long.

Organization Responsible:

The Directorate General of the Maritime Territory and Merchant Marine (DIRECTEMAR) is responsible for Chilean maritime security.

DIRECTEMAR:

DIRECTEMAR is a branch of the Chilean Navy. It has a territorial branch, the most important part of which are the Port Authorities, and a maritime branch, which has two specialized directorates.

Land Branch - General:

DIRECTEMAR is headquartered in the port city of Valparaiso. The headquarters is connected on-line through the Datamar Network. In addition, DIRECTEMAR is able to monitor shipping 24-hours a day using its Garfimar graphical system. Grafimar provides DIRECTEMAR with a real-time picture of the exact position of all vessels in Chilean waters. DIRECTEMAR is thus able to stay in contact with and circulate data to its 16 Local Port Authorities and 60 Port Captain Offices. DIRECTEMAR can also send information to Chilean or foreign ships using its Maritime Telecommunications Centre.

Valparaiso is also home to DIRECTEMAR's training centre. The Marine Instruction and Training Centre (CIMAR) has a state-of-the art virtual reality bridge simulator. The simulator can display any weather condition and any port, straight, channel, or bay on a 210º wrap-around screen. CIMAR trains foreign and Chilean sailors. The latter, for example, must take the appropriate CIMAR course before they can work in the Chilean Antarctic.

Land Branch - Port Authorities:

Port Authorities have been established from Arica, which is near the Peruvian border, to the Chilean Antarctic. The Port Authorities maintain the beacons, fog signals, buoys, racoons and lighthouses so that the navigation routes and communication links remain safe and secure. This is especially vital in the Strait of Magellan, which is a dangerous area for mariners.

The Port Authorities are responsible for all activities that occur in their ports. Special attention is paid to the loading and unloading terminals at Iquique, Puerto Patache and Puerto Patillos. In addition, the Port Authorities enforce the law in their zones. The Port Captain's Offices and Sea Major's Offices on which they rely perform this function.

The Port Authorities also take to the sea to conduct surveillance and sovereignty patrols. They conduct surveillance using 10 general-purpose patrol boats (which have a .50 calibre machine gun and a top speed of 22 knots. The Port Authorities monitor and conduct interceptions and arrests on Chile's territorial waters. This means that DIRECTEMAR, which is essentially the Chilean coast guard, is militarized. In Chile's 200-mile EEZ, DIRECTEMAR's patrolling is co-ordinated with rest of the Navy. Resource protection patrols in the 200-mile EEZ is a permanent Navy task.

The Port Authorities use aircraft to patrol isolated and inaccessible areas, and to monitor aquaculture and non-commercial fishing activity. Cessna Skymasters are used to patrol monitor areas in order to provide authorities with current information on local conditions. Helicopters, divers and patrol boats are also employed to protect swimmers. DIRECTEMAR has 5 helicopters and 8 aircraft.

Maritime Branch:

DIRECTEMAR has two technical organizations. The Directorate of Maritime Interests and Aquatic Environment (DIRINMAR) is a regulatory body. It exercises control over marine ships, personnel and resources. Dirinmar ensures that merchant and fishing vessels comply with Chilean safety standards. It is also responsible for marine environment protection and conservation, marine resources, maritime education and certification, and nautical sports.

The Directorate of Marine Safety and Operations (DIRSOMAR) is responsible for maintaining the safety and security of maritime personnel and shipping. It carries out searches and rescues and provides emergency assistance to the civil population. In addition, Dirsomar handles maritime signalling, vessel inspections, the shipping control centre, and police and risk prevention.

The French Approach to Coastal Defence

This appendix outlines France's approach to maritime security.

Territorial Dimensions

The area of France's Exclusive Economic Zone (EEZ) is 706,443 km^2, and its coastline is 7,329.8 km long.

Organizations Responsible

France does not have a Coast Guard. Instead, the following have a role in maritime security:

- Le Secrétariat Général de la Mer (Ministry for Naval Affairs)
- Le Préfet maritime
- The Navy
- Les Centres régionaux opérationnels de secours et de sauvetage (CROSS)

Le Secrétariat Général de la Mer

The government has an inter-ministerial committee, presided by the Prime Minister, that defines maritime doctrine and policy in France. It is known as the Comité interministériel de la mer (CIM). Its permanent office, le secrétariat général de la mer (SGMer), is directly responsible to the Prime Minister.

Le Préfet Maritime

France relies on the Préfet Maritime system (which has Atlantic, Northern Sea / English Channel and Mediterranean Sea zone) to coordinate and thus adequately protect its coastline. The Préfet Maritime is a serving French Navy admiral with military and civilian tasks. He / she therefore has both military and civilian resources.

The Préfet Maritime's polices his zone of responsibility. She / he is charged with defending national sovereignty, law and order, and protecting people and property. He / she coordinates the actions of diverse administrative resources.

For non-military missions (i.e. anti-narcotics, illegal immigration, police at sea, and pollution control), the Préfet Maritime reports to the Prime Minister through the Secrétariat Général de la Mer. Le Préfet Maritime also co-ordinates with other ministries, including the Ministries of the Interior, Defence, and Transport.

Within its area of responsibility, the Préfet Maritime system has authority over the vessels and aircraft that belong to the different ministries that compose the Secrétariat Général de la Mer. It is organized around regional Maritime Operations Centers: Toulon for the Mediterranean, Brest for the Atlantic, and at Cherbourg for the English Channel and the North Sea. In the French Departments and Territories overseas, there are members of the local Prefectures who are designated as délégué du gouvernement pour l'action de l'État en mer. Their responsibilities include search and rescue, medical evacuations, maritime assistance, control of navigation, combating drug smuggling, terrorism and pollution, and ship seaworthiness.

All Préfet Maritime vessels are armed (non-military vessels have a small machine gun) and can board ships. Only "gendarmerie officers" (discussed below) and customs officials can make arrests.

The Navy:

The Navy has, in addition to its primary strategic responsibilities of deterrence and offensive action (prevention and force projection), a protection role that includes coastal defence. Central to state intervention at sea, the Navy has responsibility for surveillance and the protection of the maritime approaches to the national territory and overseas territories.

The Navy maintains a permanent posture along the French coastline. Semaphores watch the inner coastal waters while patrol vessels and specialized aircraft deal with the outer fringes of the coastal waters. This enables France to face emerging threats such as illegal immigration or terrorism. The Navy is also in charge of controlling pollution incidents and providing heavy ocean-going all-weather capabilities for: search and rescue, policing (including navigation, fisheries protection, countering drug smuggling, enforcing taxation and customs regulations), and maintaining public order.

The "Gendarmerie Maritime," under the command of the Chief of Naval Staff, consists of 1, 100 men and 30 sea-going units (patrol boats). Spread along the littoral, they are responsible for surveillance and protection of the maritime approaches. Gendarmerie Maritime also perform general policing duties in territorial waters and in the exclusive economic zone under the authority of the Préfets Maritimes. Having both military and

judicial statutes, they have the authority to lay charges in the event of a breach of justice. Their role extends to inland waterways, protecting shipping traffic, conducting rescues, providing assistance to people or property, enforcing fishery regulations on land, and policing Naval property.

CROSS

In addition to the Navy, other governmental organisations are instrumental in security of France's territorial waters. For example, The Préfet Maritime has at his disposal stations known as les Centres régionaux opérationnels de secours et de sauvetage (CROSS). They observe and register shipping movements in France's territorial waters, coordinate search and rescues activities, maintain the security of shipping, protect the environment and fisheries, control radio-communications, and transmit meteorological information.

The principal CROSS stations are located near Cherbourg, Toulon, and Brest. They use the European SpatioNav system to gather information and should in future be able to display real-time information.

Approach to Maritime Security in India

This appendix discusses India's approach to maritime security.

Coastline Length and Dimensions of Exclusive Economic Zone (EEZ):

The area of India's Exclusive Economic Zone (EEZ) is 2,103,415 km^2. The length of India's coastline is 17,181.3 km.

Organizations Responsible:

- **Indian Coast Guard**
- **Indian Navy**

Indian Coast Guard:

The Coast Guard reports to the Ministry of Defence. At its head is the Director General of the Coast Guard, who works out of the Coast Guard Operational Command. Subordinate to the Director General are the 3 regional Commanders who operate the 3 Coast Guard divisions.

The Coast Guard is an armed, but non-military, maritime security unit. It can board and inspect ships, and can detain ships. Suspect ships are lead into the nearest port and are handed over to the law enforcement authorities. Although it is not militarized, the Coast Guard would operate with the Navy in the event of war.

The Coast Guard is charged with protecting the national interests of India within the country's maritime area. Its roles include protecting offshore installations, structures and devices; aiding fishermen; preserving the maritime environment; assisting Customs officials with anti-smuggling operations; and enforcing maritime regulations.

The Indian Coast Guard is responsible to the National Maritime Search and Rescue Co-ordinating Authority (NMSARCA) for search and rescue. Under NMSARCA, search and rescue is divided into three regions with subcenters in various port cities.

In the performance of its duties, the Coast Guard regularly cooperates with several Ministries, including Agriculture, Defence, Fisheries, Customs, and Home Affairs (security). It also heads the National Committee for Offshore Security Coordination that was formed by the Ministry of Petroleum and Natural Gas.

The Coast Guard is equipped with 3 Advance Offshore Patrol Vessels (AOPVs), 9 Offshore Patrol Vessels (OPVs), 8 Fast Patrol Vessels (FPVs), 15 Inshore Patrol Vessels (IPVs), 14 Interceptor Boats (IBs), 7 Interceptor Crafts (ICs), and 3 Hovercrafts.

The Coast Guard also has an air station, and a fleet of 24 Dornier aircraft, 17 Chetak helicopters, and 2 Advanced Light Helicopters. The Coast Guard aviation arm carries out aerial surveillance of the Indian EEZ, ensures that pollution prevention measures are respected, assists fishermen, and conducts search and rescue flights.

Indian Navy:

Naval ships and aircraft assist with maritime security and also assist, when necessary, in search and rescue, and provide diving assistance to civil authorities.

The Navy employs about 55,000 personnel and has 8 destroyers, 10 frigates, 14 submarines, 34 corvettes, 48 light vessels, and 18 minesweepers. The navy is building several other vessels, and some of these will be shared with the Coast Guard.

Approach to Maritime Security in Israel

This appendix discusses Israel's approach to maritime security.

Coastline Length and Dimensions of Exclusive Economic Zone (EEZ):

The length of Israel's coastline is 204.9 km. Israel does not have an Exclusive Economic Zone (EEZ). But, if it claimed one, this zone would be 21,933 km^2.

Organizations Responsible:

- Administration of Shipping and Ports
- Israel Defence Forces (IDF) - Navy
- Israel Police, Coast Guard, and Civil Guard
- The Customs and Value Added Tax (VAT) Department

The Administration of Shipping and Ports:

This Administration operates under the Ministry of Transport. It has jurisdiction over maritime transportation, ports, marinas, the operation of all vessels, and the certification of seamen. The Administration exists in order to provide the proper infrastructure for maritime shippers, to assist the national merchant fleet, and to provide certified maritime manpower.

Israel established a Port State Control system in 1997 to ensure that the foreign ships calling on Israeli ports are seaworthy. International Maritime Organization (IMO) and International

Labour Organization (ILO) guidelines were observed when the system was established. The Administration aims to inspect tankers and passenger ships arriving at Israeli ports, as well as 25% of container ships and cargo.

Israel Defence Forces (IDF) – Navy:

The Navy is largely responsible for maintaining control of the eastern Mediterranean Sea, and for ensuring safe passage along the coast of Israel. It is essentially concerned with providing coastal security and preventing the infiltration of terrorists.

Israel Police, Coast Guard and Civil Guard:

Israeli police patrol along the coasts of Israel with the Coast Guard, which is part of the Patrol and Security Department of the police force. Israel's border police, also a division of the Israel Police, inspect persons arriving through Israeli ports. Finally, the Civil Guard, a volunteer organization, assists police in watching the coasts.

The Civil Guard is subdivided into several units, two of which are particularly relevant to typical coast guard functions. First, there is a Maritime Police Civil Guard that provides assistance to maritime police officers with patrol duties, policing, and search and rescue in the Sea of Galilee and Mediterranean Sea. Second, an Environmental Civil Guard helps to enforce regulations with Environment Ministry inspectors, and to raise the public's awareness of environmental issues pertaining to the coasts.

The Customs and Value Added Tax (VAT) Department:

This government organization inspects cargos and manifests and also cooperates on crime prevention and terrorism with the police. For example, they have a Senior Deputy Director General of Investigations, Drugs, Intelligence and Seizures.

Approach to Maritime Security in Italy

This appendix discusses Italy's approach to maritime security.

Coastline Length and Dimensions of Exclusive Economic Zone (EEZ):

Italy has claimed an Exclusive Fishing Zone (EFZ), which includes the right to all living resources within 200 nautical miles of the coast, of 155, 629km^2. The length of Italy's coastline is 9,225.8 km.

Organizations Responsible:

- Italian Coast Guard
- Customs Service
- Police Guards
- Navy

Coast Guard:

The Italian Coast Guard was created in 1989 under the Captain of the Port Authorities (Capitanerie di Porto), which is part of the Italian Navy. The organization is divided into two sections. The Coast Guard works with the Ministry of Defence as well as the Ministries of Transportation and Navigation and of Fishing.

The Coast Guard's central command section is divided into 7 departments: personnel, legal affairs, plans and operation, naval and air vehicles, logistic, navigation safety, and

informatics and advance technology service. The central section also co-ordinates the activities of the Operation Centre of the Ministry of Transportation and Navigation.

The Coast Guard's Mediterranean Sea tasks are run out of the Operation Centre. The Centre provides an immediate response to emergencies on territorial and international waters 24 hours a day, seven days a week. It is also the site of the Italian Maritime Rescue Coordination Centre (IMRCC), which is responsible for the organization and coordination of search and rescue.

From the Centre, the Coast Guard combats marine pollution, commands operational sea and air units, operates the Aerial Remote Sensing Service (which gathers data for marine environment protection and monitors all activities at sea), and manages the Automated Search and Rescue System (ARES) for tracking the location, navigation plan, and destination of Italian and foreign vessels at sea.

The Coast Guard operates a maritime unit with the Ministry of Environment, and has another unit with the Ministry of Fishing. The Coast Guard cooperates with the "Carabinieri", which is a police force under the Ministry of Defence that shares the control of the coast.

The Coast Guard also has a land-based section that includes 13 Maritime Directors, 50 harbour offices, 45 maritime support offices, 138 local maritime offices, 131 "Safe Beach" units, 3 aircraft squadrons, 1 helicopter squadron, 4 air bases, 1 satellite tracking station, 2 LORAN C radio stations, and 2 diving units.

The Coast Guard has about 10, 000 personnel. Its 391 ships vary in size, and are stationed at 118 bases in Italy. Among its vessels

is the state of the art 52 meter cutter, the Saettia, which was commissioned on the 134th anniversary of the Capitanerie di Porto in Muggiano on 20 July 1999.

The Coast Guard's Flight Service possesses 12 Piaggio P166 DL3 aircraft fixed-wing aircraft. They are used for medical evacuations, search and rescue, and aerial remote-sensing services operations. The rotary-wing component consists of four Agusta Bell AB412 helicopters. They are used for search and rescue and medical evacuations.

Customs Service:

The Customs Service has a paramilitary force (Guardia di Finanza) of 60,000 personnel. They operate a fleet of 336 vessels. The largest are 50 meters length. It also has an aircraft fleet consisting of 2 ATR-42MP aircraft, 18 A-109s, about 60 MD / Nardi 500 MCs, 12 AB-412s and 10 PD-166Ss.

The "Carabinieri":

Italy's "Carabinieri" are a 105, 000 person strong paramilitary police force. They operate a helicopter fleet, 164 patrol boats, and also have jurisdiction along Italy's coast.

Navy:

In addition to the Coast Guard, the Navy has 38,000 personnel, and a variety of vessels including submarines, an aircraft carrier, frigates, destroyers, and corvettes.

Approach to Maritime Security in Japan

This appendix discusses Japan's approach to maritime security.

Coastline Length and Dimensions of Exclusive Economic Zone (EEZ):

Japan has claimed an Exclusive Economic Zone (EEZ) of 3,648,393 km^2. The Japanese coastline is 29,019.7 km long.

Organizations Responsible:

- Japan Coast Guard
- Japan Maritime Self Defence Force
- National Police Agency

Japan Coast Guard:

Japan's Coast Guard (previously the Maritime Safety Agency) is an arm of the Ministry of Transport. It operates out of 11 regional headquarters, each headed by a Commander. A Commandant heads the whole organization, which includes an academy and training centre.

The Coast Guard is divided into an administrative unit and 5 Departments: Equipment and Technology: shipbuilding and construction of Coast Guard aircraft; Guard and Rescue: maintenance of public order at sea, oil pollution response, and search and rescue; Hydrographic and Oceanographic: provision of navigational charts, surveys, observation,

publications and information that are required to ensure navigational safety; and Maritime Traffic: implementation of navigation safety measures, and construction, maintenance and operation of aids to navigation.

The Coast Guard is able to inspect and detain ships in Japanese waters. Its vessels are armed, but for constitutional reasons these arms are removed when travelling on the high seas. The Coast Guard has become more robust since December 2001, when a violent incident involving a North Korean ship took place in Japanese waters.

Japan Maritime Self Defence Force (JMSDF):

Japan has the second-largest navy (i.e., the maritime branch of the JMSDF) in east Asia. In recent years, it has proved willing to respond forcefully to threats on its waters. In March 1999, the navy fired warning shots at a foreign vessel in Japanese waters for the first time in 54 years.

The JMSDF's operations can be divided into two main types: protecting maritime traffic and securing Japanese territory. The JMSDF emphases preparedness in order to protect maritime traffic from attack by enemy submarines, surface ships, and aircraft through surveillance, escort operations and defence of ports and straits. Protection of Japanese tankers is difficult because Japanese ships are not armed when in international waters. Of particular interest is the fact that Japan imports most of its oil from the Middle East. In order to do so, tankers must pass through the Strait of Malacca, which suffers from the highest incidence of piracy in the world.

In the case of aggression against Japan, the JMSDF is prepared to contribute to the defence of Japan by attacking surface ships, aircraft, and laying mines.

National Police Agency:

The National Police Agency and the Japanese Coast Guard respond to illegal activities and suspicious ships.

If a situation is too difficult for police authorities, such as an armed attack, the JMSDF will take control. Japanese law was amended in October 2001 to allow the military to use weapons, as a last resort, to stop suspicious ships that have refused to permit an on-board inspection.

The Netherlands Approach to Maritime Security

This appendix describes the approach to maritime security in The Netherlands.

Coastline Length and Dimensions of Exclusive Economic Zone (EEZ):

The Netherlands claims jurisdiction over the living resources off its coast. Its Exclusive Fishing Zone (EFZ) extends for 200 nautical miles and measures 50,309 km.[2] The Netherlands coastline is 1,913.8 km long.

The EFZ of Aruba is 2789 km^2. The coastline of the Antilles is 361.2 km. Aruba's coastline is 107.1 km long.

Organizations Responsible:

In The Netherlands, responsibility for maritime security is shared by:

- The Royal Netherlands Navy, which has operational command of the Coast Guard;
- The Immigration and Naturalization Service, whose tasks include the development of border control policy;
- The Royal Marechaussee (a police service with military status), which is the key policing agency in all ports except Rotterdam; and

- The Rotterdam-Rijnmond Seaport Police, which is charged with port and border security at the world's largest port.

Part one reviews these organizations in the order presented above.

Navy and the Coast Guard:

The Royal Netherlands Navy has operational command of the Coastguard in The Netherlands and The Netherlands Antilles and Aruba in the Caribbean. The Coastguard Service is a collaborative organisation of the Ministries of the Interior, Defence, Justice, Transport and Public Works and Water Management, Finance and Agriculture, Nature Management and Fisheries.

The Netherlands Coastguard Centre, situated in Ijmuiden, Netherlands, acts as the operational centre. The Centre plans and co-ordinates the tasking of all operational units involved in Coastguard activities. There are 13 main Coastguard duties that can be separated under the following 2 headings:

- Provision of Services: Assistance and Search and Rescue (SAR); Distress, emergency and safety radio communication; The limiting and handling of disasters and incidents; Vessel Traffic Services (VTS); Aids to navigation; and maritime traffic research.
- Maritime Law Enforcement: General Police duties; Customs and Excise supervision; Border control; Upholding the environmental laws; Upholding the laws regarding sea fishing; Upholding the laws regarding

nautical traffic; and Upholding the laws regarding ships equipment.

The Director of Coastguard makes operational agreements with departments. Under these agreements, the departments make available to the Director material, financial resources and personnel. Besides this, two policy plans are developed each year. One is for the provision of services, which is drafted by the Ministry of Transport and Public Works, and one is for the law enforcement tasks drafted by a North Sea Law Enforcement contact group. In these plans, the departments make clear which policy results they expect for that year.

The Director of the Coastguard combines the resources from the operational agreements, with the needs as set out in the annual policy plans. These are then united into one integrated operational plan. In this way expectations and resources are combined as efficiently as possible.

In The Netherlands Antilles and Aruba, the Coastguard Centre is located on the Island of Curaçao. Its tasks include general police duties (including combating drug trafficking), border control, customs, environmental and fisheries supervision, assistance and disaster relief.

Immigration and Naturalization Service

The Immigration and Naturalization Service, in consultation with the Department of Justice, develops border control policy. The Rotterdam-Rijnmond Seaport Police and Royal Marechaussee are accountable to the Immigration and Naturalization Service for its implementation.

Royal Marechaussee

The Royal Marechaussee is one of the four services of The Netherlands armed forces. It is essentially a police organization with military status.

The Marechaussee is responsible for border control in The Netherlands on all airports and in all seaports, except the Port of Rotterdam (see below for information on the Rotterdam-Rijnmond Seaport Police).

The Marechaussee's tasks that relate to coastal security include the turning away of undesirable aliens and detaining suspects, enforcing judgements, and providing emergency travel documents. It also looks after the transfer of aliens who are being deported to a foreign authority.

Rotterdam-Rijnmond Seaport Police

Rotterdam is the largest port in the world. Rotterdam-Rijnmond Seaport Police is responsible for the policing in this port city.

Rotterdam-Rijnmond Seaport Police have a fleet of 13 vessels of different sizes, speeds, drafts and seaworthiness. Its 40 patrol vehicles are used mainly to patrol wharves and terminals. Rotterdam-Rijnmond Seaport Police's core tasks include environmental enforcement, border security, shipping safety, port safety and security, and combating organized crime.

A key task for the Rotterdam-Rijnmond Seaport Police is border control and security. All crewmembers of ships calling at the port of Rotterdam are checked. Detected stowaways are held in

an area reserved for illegal aliens and then returned to their country of origin. The vessels of the Rotterdam-Rijnmond Seaport Police Europoort Section patrol the Haringvliet and Grevelingen estuaries, and are suitable for mid-sea operations and assisting the Coastguard at sea.

New Zealand's Approach to Maritime Security

This appendix discusses New Zealand's approach to maritime security.

Coastline Length and Dimensions of Exclusive Economic Zone (EEZ):

New Zealand claims an EEZ of 4,053,000 km^2 (the 4th largest area in the world), which includes several small islands territories. New Zealand's coastline is 17,208.6 km long.

Organizations Responsible for Maritime Security:

The New Zealand government and volunteer organizations that contribute to maritime security are:

- The Maritime Safety Authority (MSA), which is concerned with marine safety regulations and resources;
- The New Zealand air force and navy, which conduct maritime surveillance;
- The 24-hour volunteer Coast Guard, which handles search and rescue; and,
- The Civil Aviation Authority.

The roles of these agencies are reviewed below. However, it should be noted that New Zealand initiated a comprehensive Maritime Patrol Review in 2001. This means that some of the structures and arrangements described below may change. The objective of the review is improving coordination.

MSA:

The MSA is a Crown entity with the status of a body corporate. The Director of Maritime Safety heads the Authority. He / she is responsible to a five-person body appointed by the Governor-General on the recommendation of the Minister of Transport, which is responsible for overseeing the Authority. Two of the body's members are appointed after consultation with the maritime industry; the other three represent the public interest in maritime matters.

The MSA is part of an integrated search and rescue organization that works with the police, Navy, Air force, and the Civil Aviation Authority. The Royal New Zealand Coast Guard also plays a role, and is usually first on the scene.

The MSA works with the Department of Fisheries, the Department of Environment, and the Department of Conservation to ensure the protection of marine resources.

Air Force:

One of the Royal New Zealand Air Force's (RNZAF) key responsibilities is to conduct patrols in New Zealand's 200-mile EEZ and the southern Pacific Ocean. Other tasks carried out by the Maritime Patrol Force include resource protection, disaster relief reconnaissance, and search and rescue in New Zealand the South Pacific.

No. 5 Squadron at RNZAF Base Auckland uses six P3-K Orion long-range surveillance aircraft to fulfill this maritime surveillance role. The squadron comprises 75 aircrew and 70 support and maintenance personnel. No. 5 Squadron's P3-K

Orion has a 6, 000 km range and can remain aloft for up to 8 hours. It has a relatively high transit speed to operating areas. Of the more than 500 marine search and rescues that occur in New Zealand each year, RNZAF Orions are typically involved in seven.

Navy:

A key task of the Royal New Zealand Navy is asserting sovereignty over the resources in New Zealand's EEZ. New Zealand's oceanic area of interest extends well beyond its EEZ and far into the Southern Ocean. As a result, an oceanic surveillance and patrol capability is considered a vital component of New Zealand's defence requirements.

The current fleet is used for coastal patrol, hydrographic surveying, diving support, and mine counter-measures.

Coast Guard:

The Royal New Zealand Coast Guard is a nationwide 24-hour marine search and rescue service. It operates from a network of 65 affiliated units, strategically located around the coastline and major lakes of New Zealand.

The Coast Guard has 2, 500 active volunteers and 12, 000 supporter members. The Coast Guard has 75 dedicated rescue vessels. Most of them are Rigid Hull Inflatable Boats (RIB's) averaging 6.8 meters in length.

The Auckland Coast Guard Air Patrol owns a Cessna 182, and the Coast Guard has access to flying club aircraft at 8 other

locations. The Air Patrol's main task is aerial surveillance during a search and rescue incident.

Civilian Aviation Authority (CAA):

The CAA participates in search and rescue and operates the National Rescue Coordination Centre (NRCC). Like the MSA, it is responsible to the Ministry of Transport.

The resources from other agencies that are used by the CAA when necessary and as available are:
Aircraft

- Military: P3K Orion, C130, Iroquois Helicopters
- Civilian: New Zealand civil aircraft, both fixed wing and rotary, are available for search and rescue operations.

Surface Vessels

- Military: Navy Vessels
- Civilian: Merchant vessels, Royal New Zealand Coastguard Federation vessels, Police launches (at Wellington and Auckland), and fishing vessels.

The Norwegian Maritime Security Approach

This appendix reviews Norway's approach to maritime security.

Coastline Length and Dimensions of Exclusive Economic Zone (EEZ):

The area of Norway's Exclusive Economic Zone (EEZ) is 1,095,065 km^2. The length of Norway's coastline is 53,198.6 km.

Organizations Responsible:

- The Royal Norwegian Air Force
- The Royal Norwegian Navy
- The Norwegian Coast Guard
- The Naval Home Guard

The Royal Norwegian Air Force:

Coast Guard operations and maritime surveillance are among the Air Force's missions. The air force has two P-3N Orion patrol aircraft for use by the Coast Guard. These aircraft are equipped with monitoring equipment. The air force has 6 Lynx mark 86 helicopters that are used by the Coast Guard.

The Air Force's four P-3C Orion aircraft have depth charges and torpedoes, and are tasked with coastal surveillance. The Air Force also uses 12 Sea King mark 43 helicopters as a search

and rescue platform. This aircraft can carry up to 20 people in an emergency.

The Royal Norwegian Navy:

The Navy's principal tasks include surveillance and control of inshore waters, exercise of sovereignty in Norwegian waters, Coast Guard duties including coastal administration and search and rescue, and the protection of Norwegian interests on the high seas.

Another part of the Norwegian Navy is the coastal artillery. The coastal artillery's main task is to block fjords leading to strategic towns and harbours.

The Coast Guard:

The Coast Guard is the third part of the Norwegian Navy. It is responsible for search and rescue, environmental and sovereignty patrols, and making its inspection services available to other government agencies and the civil community. This entails maintaining a presence in the Norwegian Economic Zone, the Fishery Protection Zone, and in Norwegian coastal waters.

The Coast Guard can, by law, board and inspect any vessel in Norwegian waters that it wishes. It also has the authority to make arrests and seize a ship if it finds that fishing quotes have been exceeded, that there is illegal equipment on board, or some other problem. Its vessels are armed but the personnel usually are not. However, if denied access to a vessel, the Coast Guard has the power to forcibly board it.

The Naval Home Guard (Naval HG):

The Naval HG has roughly 4,900 members divided into 10 sectors and 31 areas. The main task of the Naval HG is the surveillance, identification, monitoring and reporting of any activity at sea along the coast. The Naval HG can mobilize approximately 235 vessels, 77 high-speed craft and 74 coastal reporting stations. The units are armed with 12.7 mm heavy machine guns. On mobilization, the Naval HG is placed under the command of the Commander of the armed forces for North Norway and South Norway (COMNON and COMSONOR).

Approach to Maritime Security in South Africa

This appendix discusses South Africa's approach to maritime security.

Coastline Length and Dimensions of Exclusive Economic Zone (EEZ):

South Africa has claimed a 200 nautical mile Exclusive Fishing Zone (EFZ) measuring 1,450,596 km^2. South Africa's coastline is 3,750.8 km long.

Organizations Responsible:

South Africa does not have a coast guard. The main coast guard duties have been divided among the following:

- South African Police Service
- The Department of Environmental Affairs and Tourism;
- The Department of Transport;
- The National Sea Rescue Institute (NSRI);
- The South African Maritime Safety Authority (SAMSA); and
- The Department of Defence.

South African Police Service:

The South African Police Service has been entrusted with maritime law enforcement. In order to do so, it operates seven 12 ton vessels, four 5 ton vessels, and nine 4 metre vessels.

Department of Environmental Affairs and Tourism:

Marine environmental protection is primarily the responsibility of the Department of Environmental Affairs and Tourism. However, the South African Police Service handles law enforcement, and the Department of Transport is responsible for oil pollution prevention.

Environmental protection within the ports has been contracted to Portnet, a private company. Infrequently, the Department of Environmental Affairs and Tourism will assist in a clean-up effort.

The Department of Environmental Affairs and Tourism uses four 29 metre vessels with a range of 5, 000 nautical miles and one aircraft to combat oil pollution. Pentow Marine Ltd. operates these assets under contract to the Department.

Department of Transport:

The Department of Transport is responsible for the overall co-ordination and management of the South African Search and Rescue Organisation (SASAR). The members of SASAR are the Department of Transport, the South African National Defence Force (SANDF) (i.e., the Navy and Air Force), the South African Police Services, Portnet, and the National Sea Rescue Institute (NSRI).

The Department of Transport does not have the aircraft or vessels, and depends on the other departments and agencies (especially the SANDF and the NSRI) for these.

The National Sea Rescue Institute (NSRI):

NSRI employs 18 people. The rest of the organization, over 650 men and women, are volunteers. It has 24 rescue bases located along the coastline and one inland base. NSRI has 50 rescue craft, which range from a 13 meter deep-sea vessel to a 4 meter surf craft. Its primary role is search and rescue along the coastline and up to 50 nautical miles seawards. NSRI also teaches water and boating safety to schools, scout groups, yacht clubs, and others.

The South African Maritime Safety Authority (SAMSA):

SAMSA is a growing organization operates under the Department of Transport. SAMSA's mandate includes ensuring the safety of life and property at sea, preventing oil pollution, and promoting South Africa as a maritime nation. Although primarily an administrative unit involved in licensing, ship registration, and accident investigation, it also maintains South Africa's search and rescue capability and counter-pollution response.

The Department of Defence:

The Navy is charged with the protection and defence of South Africa's maritime claims, and it assists SAMSA when resources permit.

Approach to Maritime Security in Spain

This appendix discusses Spain's approach to maritime security.

Coastline Length and Dimensions of Exclusive Economic Zone (EEZ):

Spain's Exclusive Economic Zone (EEZ) is 683,236 km^2, and the coastline is 7,268.1 km (this includes coastline for the Canary Islands).

Organizations Responsible:

Spain has no Coast Guard. Maritime security is performed by:

- The Guardia Civil (Spanish Civil Guard)
- The Spanish Navy

These organizations are discussed below. There is also a short note about operations of these organizations in the Canary Islands, and the Straight of Gibraltar.

The Guardia Civil:

The Guardia Civil is a paramilitary police force. It reports to the Ministry of Interior and the Secretary of State for Security. Depending on the issue, the Guardia Civil can receive orders from the Ministry of Economy and Finance and other ministries. The Guardia Civil is responsible for law enforcement, including ensuring that fishery and environmental regulations are respected. Its personnel possess small arms, and their 15 patrol ships (which are 22 meters length) can intercept and board ships.

Another Spanish police force, the National Police (Policia Nacional), do not have their own coastal boats and have to seek assistance on an as-needed basis from other services. Customs (Aduana) has a few small patrol ships.

Navy:

The Navy's role is to protect Spain and to act when a problem emerges that is too complex or dangerous for the Guardia Civil to handle. The Spanish Navy, with support from the Air Force, is responsible for the coast guard function. Navy ships are armed, and it has the power to detain suspect vessels.

The Navy is well positioned to help when called upon. It is based at three main locations on peninsular Spain (El Ferrol, Rota and Cartagena), and maintains small patrol crafts at the Balearic and Canary Islands. This suggests that the Navy plays an important part in the protection of the Islands.

The Navy can assist other departments, such as the Environment

Ministry. The Ministry of Agriculture and Fisheries does not have its own enforcement fleet. The Navy's assistance is sought when necessary.

In addition, the Army plays an important role in terms of coastal defence on land. There are some coastal defences manned or at least maintained by the Army.

The Canary Islands and the Straight of Gibraltar:

In the Canary Islands, the Navy co-operates with Spanish, Italian and British vessels to patrol against illegal immigration from Africa. The Spanish Navy also sails in the Strait of Gibraltar area in defence of national sovereignty (there are territorial disputes with Morocco over small islets) and to interdict illegal immigrants (with the support of small police vessels). The Navy also protects Strait of Gibraltar shipping against terrorism.

United Kingdom Approach to Maritime Security

This appendix discusses the approach to maritime security in the United Kingdom (UK).

Coastline Length and Dimensions of Exclusive Economic Zone (EEZ):

The UK coastline is 19716.6 km long. The UK has claimed an exclusive fishing zone (EFZ), rather than an exclusive economic zone. Its EFZ extends to 200 nautical miles and measures 753, 752 km^2.

Organizations Responsible for Maritime Security:

There is no UK Coast Guard that is comparable to the Canadian Coast Guard. The following government and volunteer agencies handle coast guard functions:

- The Maritime and Coastguard Agency;
- Trinity House;
- Fisheries departments;
- The Royal Navy;
- Her Majesty's Customs and Excise; and
- Port Authorities.

There is little national coordination between these agencies except when a special situation develops. Their roles are examined in sequence below.

The Maritime and Coastguard Agency (MCA):

The MCA is a part of the Department of Transport. The MCA carries out port state control of non-UK ships, investigates and prosecutes breaches of merchant shipping legislation and develops and sets ship and seafarer standards through legislation, Marine Notices and Codes of Practice. It also provides assistance to other emergency services such as police, fire and ambulance.

MCA personnel are unarmed civilians with no power to intercept ships or make arrests; however, their surveyors have the authority to board and inspect ships. They can order the detention of any vessels that do not meet the required safety standards. MCA has few vessels and they are not armed.

The work carried out by the MCA includes search and rescue, survey and inspection, and counter pollution and pollution prevention. The MCA's maritime survey and inspection branch is responsible for setting the standards for the inspection and surveying of vessels.

Her Majesty's (HM) Coastguard (which is a part of the MCA) formulates civil maritime search plans. It is not connected to the Royal Navy on a day-to-day basis; however, HM Coastguard would assist the Royal Navy during wartime if required. It can request assistance from dedicated search and rescue assets and vessels that happen to be in the area.

Assets are provided by several agencies. The volunteers of the Royal National Lifeboat Institution provide sea-based search and rescue. Royal Navy and Royal Air Force helicopters assist in the air. And finally, the Coastguard operates four Sikorsky S-

61N helicopters on charter from Bristow Helicopters. They can stay aloft for about 4 hours and have a 180-mile radius of action.

Trinity House:

Trinity House maintains marine aids to navigation and provides pilotage services for UK coastal waters. Its personnel are civilian and unarmed.

Fisheries Control and Enforcement:

Four UK government departments are involved in fisheries protection: the Ministry of Agriculture; Fisheries and Food; Welsh Office of Agriculture, the Scottish Office of Agriculture, Environment and the Fisheries; and the Department of Agriculture for Northern Ireland. In addition to the patrols conducted by the Royal Navy, these departments have a few small vessels of their own. Their personnel are not normally armed but can make arrests.

The Royal Navy:

Royal Navy's Fishery Protection Squadron undertakes coastal fishery protection and the patrol of Britain's offshore gas and oilfield installations duties. The four Island Class patrol vessels fulfill their fishery protection tasks outside the 12-mile coastal limit, and carry out regular surveillance patrols. They are armed and have a 16.5 knot top speed.

Currently employed around the UK on fishery protection are Her Majesty’s Ships Guernsey, Anglesey and Cattistock.

Her Majesty's Customs and Excise:

The mostly shore-based Customs and Excise seeks to prevent smuggling. They have some inshore vessels to facilitate their inspections.

Port Authorities:

The ports have their own security police.

United States Approach to Maritime Security

This appendix outlines the United States approach to maritime security and coastal policing.

Coastline Length and Dimensions of Exclusive Economic Zone (EEZ):

The Unites States Exclusive Economic Zone (EEZ) is 8,078,169 km^2. The United States coastline is 133,312 km long.

Organization Responsible for Maritime Security

- United States Coast Guard (USCG)

The USCG

The USCG is a military organization within the Department of Homeland Security. The Commandant reports directly to the Homeland Security Secretary. However, the USCG works closely with the Under Secretary of Border and Transportation Security and maintaining its independent military service identity. Following a declaration of war, or when directed by the President, the Coast Guard would operate as an element of the Department of Defence.

The Coast Guard has five fundamental roles:

- Maritime Safety: Eliminate deaths, injuries, and property damage associated with maritime transportation, fishing, and recreational boating;
- National Defence: Defend the nation as one of the five U.S. armed services. Enhance regional stability in support of the National Security Strategy, utilizing the Coast Guard's unique and relevant maritime capabilities;
- Maritime Security: Protect United States maritime borders from all intrusions by: (a) halting the flow of illegal drugs, aliens, and contraband into the United States through maritime routes; (b) preventing illegal fishing; and (c) suppressing violations of federal law in the maritime arena;
- Mobility: Facilitate maritime commerce and eliminate interruptions and impediments to the efficient and economical movement of goods and people, while maximizing recreational access to and enjoyment of the water; and
- Protection of Natural Resources: Eliminate environmental damage and the degradation of natural resources associated with maritime transportation, fishing, and recreational boating.

National Defence

The Coast Guard's national defence role is to support military commanders as outlined in a memorandum of understanding signed by the Secretaries of Defence and Transportation in 1995. Four major national defence missions have been assigned to the Coast Guard: maritime interception, deployed port operations / security and defence, peacetime engagement, and environmental defence operations.

Maritime Security

As the nation's leading maritime law enforcement agency, the United States Coast Guard has broad, multi-faceted jurisdictional authority in this area.

The *Posse Comitatus Act* forbids United States military forces from enforcing domestic laws. This role has been assigned to the Coast Guard. There are provisions, however, for the military forces, particularly the US Navy, to provide assistance. In such cases, the Coast Guard will embark a Law Enforcement Detachment to conduct actual searches, seizures and arrests. Numerous additional federal statutes give the Coast Guard the authority it needs to board, search, confiscate and arrest suspected law-breakers. This is often done in conjunction with the US Customs Service and the Drug Enforcement Agency.

The Coast Guard's maritime defence roles relate to a series of specific tasks:

- Protect ports, the flow of commerce, and the marine transportation system from terrorism;
- Maintain maritime border security against illegal drugs, illegal aliens, firearms, and weapons of mass destruction;
- Ensure that rapid deployment and resupply of military assets, both by keeping Coast Guard units at a high state of readiness, and by keeping marine transportation open for the transit assets and personnel from other branches of the armed forces;
- Protect against illegal fishing and indiscriminate destruction of living marine resources, prevention and response to oil and hazardous material spills--both accidental and intentional; and,

- Coordinate efforts and intelligence with federal, state, and local agencies.

The Coast Guard monitors safety on all types of vessels, including foreign ships, which are within the waters of the United States. Most of the ships in US ports are foreign-flag ships that must comply with comprehensive safety standards issued by the International Maritime Organization (IMO). The USCG imposes a system of port state control inspections to ensure that substandard ships are denied access to US waterways. Coast Guard Captains of the Port have the authority to board and examine vessels, to detain them in port, or to order them out of port, if necessary, to ensure the safe operation of the waterways.

No other government agency or organization has the extensive variety and inventory of cutters, vessels, aircraft, and command-and-control systems as the Coast Guard, or the expertise necessary to perform the five core roles. These assets include: 36, 000 active duty personnel, 8, 000 reservists, 232 cutters (greater than 65′), 211 aircraft and 1,400 small boats.

Coast Guard vessels assigned to maritime security and national defence roles are armed. Many are equipped like naval vessels, and have surface-to-surface missiles, torpedoes and large calibre guns. The personnel involved in law enforcement activities are armed, and have expertise regarding the boarding and seizure of vessels.

Maritime Surveillance Activities of Provincial Airlines Limited

This appendix considers aerial maritime surveillance that has been contracted out.

Background

The Airborne Maritime Surveillance Division of Provincial Airlines Limited (PAL) commenced operations for the offshore oil exploration industry in the early 1980s. Its relationship with the Department of Fisheries and Oceans (DFO) began in 1986 as a trial program for alternate service delivery for maritime surveillance.

PAL entered into the first of its three five-year contracts with DFO in 1989. It was the first private company contracted to carry out maritime surveillance. PAL received this task because the former service provider, the Department of National Defence (DND), had decided that its CP-121 Tracker coastal patrol aircraft would be retired in 1990. This forced DFO to turn to industry for its marine surveillance requirements. The current contract with PAL expires in October 2004, but funding for the DFO program was increased in December 2001 and will be sustained at the new level until at least 2010.

Contracts

As with all government contracts, Public Works and Government Services Canada is the Contract Authority. However, PAL is under contract to DFO, meaning that DFO has direct control over the services it provides and the data it collects. PAL flights are considered (by DFO) to be not PAL patrols but DFO patrols.

The arrangement entered into in 1989 was modified after the 11 September 2001 terrorist attacks on the United States (US). The federal government provided funding for a National Marine Security Initiative in its December 2001 budget, enabling DFO to "increase the scope and frequency of its surveillance flights over critical approaches to North America. This will enhance Canada's capacity to identify and address potential marine threats." About $ 60 million in spending was committed over five years to increase maritime intelligence gathering and to protect Canadian ports and other critical infrastructure.[1]

This allowed DFO to increase its utilization of PAL aircraft and intensify its data collection on non-fishing boats like bulk carriers, freighters, and container and cruise ships. When the contract was retendered in January 2003, the new funding package was extended to 2010. Transport Canada explained on 22 January that DFO will be "expand[ing] its air surveillance program. Augmenting the existing air program is an efficient and cost-effective way for Canada to obtain intelligence on marine vessel activities… This will mean more air patrols on both coasts inside and outside Canada's 200-mile limit. It will

[1] Department of Finance Canada, "Budget 2001 – Enhancing Security for Canadians (also published as Chapter 5 of the Budget Plan)." Available at: http://www.fin.gc.ca/budget01/booklets/bksece.htm. Accessed on 2 June 2003.

also mean that patrols can be conducted at an enhanced level to gather information for security purposes, in addition to increased fisheries enforcement and pollution detection."[2]

Aircraft

PAL utilizes three fully equipped King Air 200 aircraft. About 6, 000 hours is flown on the three aircraft each year. They are available to DFO around-the-clock.

Each of the aircraft possesses radar, forward-looking infrared, data management, night vision, and satellite communication capabilities. Two of the PAL aircraft are capable of flying for 6.5 hours, while one has longer-range fuel tanks and can fly missions of about 7.5 hours. The aircraft will be equipped with Automated Identification System (AIS) receivers in 2003.

The Missions – General

PAL does not see the military as a competitor. Rather, PAL provides a service – domestic maritime law enforcement – that enables the navy to concentrate its scarce assets on other tasks. While PAL cannot conduct interceptions / arrests, the DFO personnel who are always on board can do so. No one on a PAL aircraft is armed.

[2] Department of Transport Canada, "Backgrounder – Highlights of New Marine Security Initiatives." Attached to "Government of Canada Announces up to $172.5 Million in New Marine Security Projects," News Release GC001/03 (22 January 2003). Available at: http://www.tc.gc.ca/mediaroom/releases/nat/2003/03-gc001.htm. Accessed at: 2 June 2003.

DFO regularly schedules PAL flights. The aircraft are usually focussed on fisheries and conservation missions, but at the same time their physical 'presence' in remote areas has a deterrent effect because ship captains know that Canadian authorities are looking for them and are aware of them. The flights also detect and identify marine targets of interest. On 19 July 1999, for example, a routine DFO patrol from Canadian Forces Base (CFB) Comox in Vancouver detected the first Chinese immigrant-smuggling ship off the British Columbia coast.

The Missions – Where, What Information, and for Whom

DFO patrols are conducted using PAL aircraft along the Atlantic and Pacific coastline. The aircraft are based on the east coast, but one operates from CFB Comox on the east coast from June to September.

According to Ken Penny, a Senior Program Officer within DFO's Enforcement Branch, the Atlantic patrols are conducted in the south from the Canada / US border to the lower one third of the Labrador coast in the north. Occasionally, patrols are flown from the north to the Davis Strait area. Seaward within this area, patrols are flown to and in some cases beyond Canada's 200 mile extended economic zone. A major objective is to monitor foreign fishing activity on the Nose and Tail of the Grand Banks and the Flemish Cap. On the Pacific side, patrols are conducted between the Canada / US borders in the north and south. Generally speaking, patrols in the west are not conducted seaward for more than 50 to 60 nautical miles.[3]

[3] Ken Penny, "DFO Air Surveillance Program," electronic mail message to Grant Dawson, (Tuesday 3 June 2003).

For the most part, ship identification information (names and numbers) and their position, heading, and activities are recorded. Digital pictures are often taken. Information is also routinely gathered on iceberg and marine mammal locations, ice and environmental conditions, and pollution events.

This is primarily intended to meet DFO's requirement for fisheries enforcement, but DND is a significant user of the information. Special efforts have been made to pass the data to the Canadian Forces intelligence systems on both coasts in real-time so that the military can develop a clear picture of the activity on the marine approaches to Canada. The Canadian Forces Maritime Operational Information and Surveillance Centres in CFB Halifax and Comox receive the information by satellite from the PAL Surveillance Information Centre. DND requirements have been incorporated into the patrol schedules. PAL data is also provided to the Royal Canadian Mounted Police, Citizenship and Immigration Canada, and the Atmospheric Environment Service on an as-needed basis (which is not often).

The Missions – Limitations

During the development of the National Marine Security Initiative, DFO proposed three options for marine security improvement. However, the funding was sufficient only for enhancing DFO's existing program structure. While added security benefits have and are being provided, this has resulted in part-time coverage of the west coast, and inadequate coverage of the northern areas of the east coast.

The Registration and Licensing of Vessels in Canada

This appendix discusses the registration and licensing of vessels in Canada.[4]

Registration

This practice falls under the Canada Shipping Act (CSA). The 1987 version of this Act was revised and updated in 2001. The new Act received Royal Assent in November 2001 but had not come into force as of 2 July 2003 because Transport Canada is making the required regulations.[5]

Under the Canada Shipping Act, any commercial or pleasure vessel of 15 gross tons (which roughly equates to a 12 meter ship) or more must register with Transport Canada. Generally, the vessel owner must be Canadian. The '15 tones' figure is an arbitrary number that is in acceptance in the industry, and is considered to be a fair division between those vessels that have to be registered and those that have to be licensed.

CSA, 2001 will require commercial vessels smaller than 15 gross tons to register with Transport Canada. Currently, the Canada Customs and Revenue Agency (CCRA) licenses these vessels on behalf of Transport Canada.

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[4] See Transport Canada, How to Register a Ship or Boat in Canada, (February 2000).

[5] David Johansen, "Bill C-14: The Canada Shipping Act, 2001," Library of Parliament Research Branch Legislative Summary LS-393E, (Ottawa: May 2001).

Registration is different from licensing because it provides legal title, and it affords vessels with a unique name and number. Vessels equal to or less than 15 tons can be registered to obtain these benefits, but this is not mandatory.

Registered vessels receive a Certificate of Registry that must be renewed periodically. This Certificate must be on board the vessel at all times.

Licensing

A Small Vessel License from CCRA is required for most non-registered vessels that are principally maintained or operated in Canada. Licenses are required for:

- commercial vessels that do not exceed 15 gross tons (as mentioned, this is being changed); and

- pleasure crafts that do not exceed 15 gross tons and are equipped with a 7.5 kW motor or more than one motor, the combined power of which is 7.5 kW or more.

This requirement includes personal watercraft. Vessels with less powerful motors may also be licensed.

Registration or a license is not required for vessels registered in another country, amphibious vehicles for which a provincial automobile license is required, Canadian Forces ships, and lifeboats.

The process for the registration and licensing of vessels is the same across Canada.

Federal Statutes Relating to Ports

This appendix lists the federal statutes that relate to ports. According to the Consolidated Statutes and Regulations of Canada, updated to 31 December 2002, there are 51 relevant statutes:

1. Canada Marine Act
2. Canada Shipping Act
3. Quebec Harbor, Port Warden Act
4. Maintenance of Ports Operations Act, 1986
5. West Coast Ports Operations Act, 1994
6. West Coast Ports Operations Act, 1995
7. Marine Liability Act
8. Canada Shipping Act, 2001
9. Federal-Provincial Fiscal Arrangements Act
10. Canada Transportation Act
11. Privacy Act
12. Harbour Commissions Act
13. Access to Information Act
14. Payments in Lieu of Taxes Act
15. Marine Insurance Act
16. Health of Animals Act
17. Canadian Environmental Assessment Act
18. Firearms Act
19. Geneva Conventions Act
20. Criminal Code
21. British Columbia Grain Handling Operations Act
22. Canada National Parks Act
23. Coasting Trade Act
24. Plant Protection Act

25. Prince Rupert Grain Handling Operations Act
26. Public Sector Compensation Act
27. Navigable Waters Protection Act
28. Quarantine Act
29. Saguenay-St. Lawrence Marine Park Act
30. Western Grain Transition Payments Act
31. Canadian Environmental Protection Act, 1999
32. Energy Administration Act
33. Excise Act
34. Foreign Missions and International Organizations Act
35. Canada Labour Code
36. Pension Act
37. Pilotage Act
38. Public Service Superannuation Act
39. Blue Water Bridge Authority Act
40. Fishing and Recreational Harbours Act
41. National Defence Act
42. Trade-marks Act
43. Coastal Fisheries Protection Act
44. Merchant Seamen Compensation Act
45. Canada Post Corporation Act
46. Comprehensive Nuclear Test-Ban Treaty Implementation Act [Not in force]
47. Export and Import Permits Act
48. Income Tax Act
49. James Bay and Northern Quebec Native Claims Settlement Act
50. Shipping Conferences Exemption Act, 1987
51. Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation Act

The Top 10 Canadian Ports By Tonnage Handled

This appendix lists Canada's top 10 ports, raked according to tonnage handled in 2002.

	2001 Total	2002 Total	Percentage Change
Vancouver	37, 825	33, 297	-12.0
Come-By-Chance	7 966	16 445	106.4
Saint John	12, 394	12, 871	3.8
Sept-Îles / Pointe-Noire	9, 479	8, 602	-9.3
Montréal / Contrecoeur	9, 032	8, 444	-6.5
Québec / Lévis	6 738	7 403	9.9
Port Hawkesbury	11 580	6 917	-40.3
Newfoundland Offshore	3 676	6 721	82.8
Port-Cartier	3, 828	6, 627	73.1
Halifax	6 869	6 041	-12.1
Fraser River	5, 536	5, 882	6.3
Nanticoke	6 041	5 848	-3.2
Hamilton	3, 618	4,104	13.4
Thunder Bay	3, 317	3, 262	-1.6
Howe Sound	2, 604	2, 439	-6.3
Port-Alfred	1, 895	2,172	14.6
Baie-Comeau	1, 990	1, 852	-7.0
Sault-Ste-Marie	1, 648	1, 755	6.5
Sorel	2, 209	1, 728	-21.8
Windsor (Ont.)	1, 964	1, 708	-13.0
Sub-total	140, 209	144,118	2.8
Other ports	40, 751	37, 093	-9.0
Grand total	180, 961	181, 211	0.1

The Top 10 Non-North American Ports for Canada by Tonnage Shipped

This appendix lists the top 10 non-North American ports for Canada ranked according to tonnage shipped. They constitute 12% of Canada's imports from all foreign ports (including United States ports).

It should be noted that the table below ignores shipping from countries (such as Norway and the United Kingdom) that did not provide Statistics Canada with a complete breakdown by port of their sea trade with Canada. Since the focus of the table is on non-North American trade, the table also ignores the significant United States ports.

Non-North American Port	Tonnage Shipped in 2002
Rotterdam	8, 357, 193, 859.00
Antwerp	4, 755, 576, 340.00
Tokyo-Yokohama	3, 990, 450, 509.00
Arzew (Algeria)	3, 589, 894, 617.00
Kaohsiung (Taiwan)	2, 660, 733, 133.00
Pohang (South Korea)	2, 499, 309, 268.00
Hamburg	2, 451, 720, 366.00
Puerto Bolivar (Colombia)	1, 943, 356, 000.00
Puerto La Cruz (Venezuela)	1, 820, 824, 120.00
Port Talbot (United Kingdom)	1, 766, 573, 000.00
Ras Tanura (Saudi Arabia)	1, 730, 077, 446.00
Chiba (Japan)	1, 675, 253, 864.00

Top 10 Commodities Shipped from International Ports to Canada's Top 10 Ports

This appendix lists the top 10 commodities, sent from international ports in 2001, which were unloaded at Canada's top 10 ports.

This appendix highlights the wide variety of goods received by Canada. It also demonstrates how regional trade, such as the coal shipments from the United States in the case of Nanticoke, Ontario, can have a major impact on a port's on international shipping totals.

It should be noted that this data represents only one point in time, and is not generalizable to other years.

Interpretative Notes:

The ports are ranked in descending order, by the amount of international cargo handled. The top 10 commodities are also ranked highest to lowest.

The totals at the bottom of each port list relate to the total amount of all commodities sent from international ports. The totals do not reflect port activity overall because international loadings and domestic loadings and unloadings are not included. In addition, only the top 10 commodities for each

port are listed, but the port totals include the amount received of all principal commodities.

Nanticoke (Ontario)	Metric Tonnes (Actual)
Coal	11,396,999
Iron ores and concentrates	2, 377, 533
Other non-metallic minerals	105, 218
Other non-metallic mineral products	28, 106
Gasoline and aviation turbine fuel	7, 072
Unavailable	0
Coal coke and petroleum coke	0
Crude petroleum	0
Fuel oils	0
Metallic waste and scrap	0
Other refined petroleum and coal products	0
Nanticoke Total	**13, 914, 929**

Saint John (New Brunswick	Metric Tonnes (Actual)
Crude petroleum	10, 457, 857
Fuel oils	1, 307, 955
Other basic chemicals	533, 529
Gasoline and aviation turbine fuel	106, 784
Feed, cereal straw, eggs and other animal products	17, 563
Animal or vegetable fats, oils and flours	11, 267
Wood pulp	6, 419
Milled grain products and preps., bakery products	6, 225
Sugar	4,946
Other manufactured and miscellaneous goods	4, 448
Saint John Total	**12, 475, 465**

Montréal / Contrecoeur (Québec)	Metric Tonnes (Actual)
Other manufactured and miscellaneous goods	1, 598, 481
Gasoline and aviation turbine fuel	1, 157, 848
Iron ores and concentrates	756, 633
Sugar	631, 125
Fertilizers (excluding potash)	590, 253
Fuel oils	585, 918
Other basic chemicals	502, 098
Articles of base metal	428, 916
Copper ores and concentrates	416, 690
Other non-metallic mineral products	374, 674
Montréal / Contrecoeur Total	**9, 712, 057**

Québec City / Lévis (Québec)	Metric Tonnes (Actual)
Crude petroleum	7, 201, 114
Gasoline and aviation turbine fuel	503, 567
Iron ores and concentrates	339, 988
Fuel oils	246, 394
Corn	198, 577
Other basic chemicals	193, 496
Alumina	153, 358
Other oil seeds and nuts and other agricultural products	98, 485
Other refined petroleum and coal products	84, 453
Other metallic ores and concentrates	79, 077
Québec / Lévis Total	**9, 393, 442**

Port Hawkesbury (Nova Scotia)	Metric Tonnes (Actual)
Crude petroleum	6, 860, 105
Gasoline and aviation turbine fuel	1, 256, 393
Coal	857, 018
Other non-metallic minerals	126, 577
Fuel oils	86, 848
Other basic chemicals	79, 360
Other refined petroleum and coal products	62, 084
Coal coke and petroleum coke	49, 689
Unavailable	0
Salt	0
Port Hawkesbury Total	**9, 378, 073**

Vancouver (British Columbia)	Metric Tonnes (Actual)
Other manufactured and miscellaneous goods	1, 301, 616
Gasoline and aviation turbine fuel	769, 840
Fuel oils	530, 259
Articles of base metal	428, 569
Salt	395, 886
Plastic and rubber	307, 002
Other metallic ores and concentrates	296, 646
Other basic chemicals	249, 516
Machinery	210, 165
Iron and steel - primary or semi-finished	210, 122
Vancouver Total	**6, 634, 029**

Halifax (Nova Scotia)	Metric Tonnes (Actual)
Crude petroleum	3, 612, 937
Fuel oils	356, 787
Other manufactured and miscellaneous goods	346, 581
Machinery	233, 814
Prepared foodstuffs (not else classified)	203, 979
Other basic chemicals	191, 541
Other non-metallic mineral products	183, 715
Plastic and rubber	149, 206
Alcoholic and non-alcoholic beverages	131, 393
Vehicles and parts and accessories	79, 666
Halifax Total	**6, 106, 978**

Come-By-Chance (Newfoundland & Labrador)	Metric Tonnes (Actual)
Crude petroleum	4, 082, 196
Fuel oils	522, 403
Other basic chemicals	161, 123
Gasoline and aviation turbine fuel	100, 483
Other refined petroleum and coal products	39, 376
Unavailable	0
Sulphur	0
Come-By-Chance Total	**4, 905, 581**

Port-Cartier (Québec)	Metric Tonnes (Actual)
Other oil seeds and nuts and other agricultural products	818, 050
Wheat	488, 840
Coal coke and petroleum coke	157, 027
Corn	49, 235
Other non-metallic minerals	43, 990
Fuel oils	17, 400
Unavailable	0
Iron ores and concentrates	0
Limestone	0
Other basic chemicals	0
Port-Cartier Total	**1, 574, 542**

Sept-îles / Pte-Noire (Québec	Metric Tonnes (Actual)
Alumina	411, 767
Coal coke and petroleum coke	334, 776
Other non-metallic minerals	134, 980
Coal	38, 678
Fuel oils	35, 091
Other refined petroleum and coal products	25, 032
Iron ores and concentrates	21, 150
Articles of base metal	5, 711
Other manufactured and miscellaneous goods	4, 338
Iron and steel - primary or semi-finished	1, 558
Sept-îles/Pte-Noire Total	**1, 014, 719**

Canadian Coast Guard Fleet

List of Active and Inactive Vessels

The active vessels listed below are those being operated by Canadian Coast Guard Personnel. The non-active large and small vessels are listed at the bottom. These vessels are in the fleet inventory but are not currently being funded, crewed or sailed. They may be facing a disposal decision, on standby to replace another vessel in the event of breakdown, or out of service for maintenance.

The small vessels listed as Canadian Coast Guard College vessels are included in the non-active list because they are used for training at the College.

The list does not include vessels transferred to Crown Assets for disposal.

Canadian Coast Guard Fleet

- List of Active and Inactive Vessels

Ship	Type	Year Built	Length (m)	Home Port
Major Vessels				
LOUIS S. ST-LAURENT	Heavy Gulf Icebreaker	1969	119.6	Dartmouth, N.S.
TERRY FOX	Heavy Gulf Icebreaker / Supply Tug	1983	88.0	Dartmouth, N.S.
HENRY LARSEN	Medium Gulf - River Icebreaker	1987	99.8	St. John's, Nfld & Labrador
DES GROSEILLIERS		1982	98.2	Québec City, Québec
PIERRE RADISSON		1978	98.2	Québec City, Québec
ANN HARVEY	Light Icebreaker - Major Navaids Tender	1987	83.0	St. John's, Nfld & Labrador
EDWARD CORNWALLIS		1986	83.0	Dartmouth, N.S.
SIR WILLIAM ALEXANDER		1987	83.0	Dartmouth, N.S.
MARTHA L. BLACK		1986	83.0	Québec City, Québec
GEORGE R. PEARKES		1986	83.0	Québec City, Québec
SIR WILFRID LAURIER		1986	83.0	Victoria, B.C.
J.E. BERNIER		1967	70.7	St. John's, Nfld & Labrador
GRIFFON		1970	71.3	Prescott, Ontario
EARL GREY	Medium Navaids Tender - Light Icebreaker	1986	69.7	Charlottetown, PEI
SAMUEL RISLEY		1985	69.7	Parry Sound, Ontario
TRACY		1968	55.3	Sorel, Québec

SIMCOE		1962	54.6	Prescott, Ontario
BARTLETT		1969	57.7	Victoria, B.C.
SIR WILFRED GRENFELL	Offshore Ice Strength Multi Task Cutter	1987	68.5	St. John's, Nfld & Labrador
LEONARD J. COWLEY		1984	72.0	St. John's, Nfld & Labrador
CAPE ROGER	Offshore Multi Task Patrol Vessel	1977	62.5	St. John's, Nfld & Labrador
GORDON REID	Intermediate Multi Task (Patrol) Cutter	1990	50.0	Victoria, B.C.
TANU		1968	50.1	Patricia Bay, B.C.
TELEOST	Offshore Fisheries Research	1988	63.0	St. John's, Nfld & Labrador
WILFRED TEMPLEMAN		1981	50.3	St. John's, Nfld & Labrador
ALFRED NEEDLER		1982	50.3	Dartmouth, N.S.
W.E. RICKER		1978	58.0	Nanaimo, B.C.
HUDSON	Offshore Research & Survey	1963	90.4	Dartmouth, N.S.
JOHN P. TULLY		1985	68.9	Patricia Bay, B.C.
MATTHEW	Coastal Research & Survey	1990	50.3	Dartmouth, N.S.
LIMNOS		1968	44.8	Burlington, Ontario
VECTOR		1967	39.7	Patricia Bay, B.C.
F.C.G. SMITH	Multi Hulled Survey & Sounding	1985	34.8	Québec City, Québec
LOUISBOURG	Intermediate Multi Task (Patrol) Cutter	1977	37.8	Gaspé, Québec
E.P. LE QUÉBÉCOIS		1968	28.3	Sept-Iles, Québec
ARROW POST		1991	29.0	Prince Rupert, B.C.
ECKALOO	Special River Navaids Tender	1988	49.0	Hay River, NWT
DUMIT		1979	48.8	Hay River, NWT
NAHIDIK		1974	53.4	Hay River, NWT
NAMAO	Small Navaids Tender	1975	33.6	Selkirk, Manitoba

Ship	Type	Year Built	Length (m)	Home Port
Small Vessels				
PARTRIDGE ISLAND	Small Navaids Tender	1985	23.0	Dartmouth, N.S.
ÎLE DES BARQUES		1985	23.0	Dartmouth, N.S.
ÎLE SAINT-OURS		1986	23.0	Sorel, Québec
CARIBOU ISLE		1985	23.0	Sault Ste. Marie, Ontario
COVE ISLE		1980	20.0	Parry Sound, Ontario
GULL ISLE		1980	20.0	Amherstburg, Ontario
TRAVERSE		1998	19.8	Kenora, Ontario
TSEKOA II		1984	26.7	Victoria, B.C.
SIPU MUIN	Air Cushion Vehicle	1998	28.5	Trois-Rivières, Québec
WABAN-AKI		1987	24.5	Trois-Rivières, Québec
SIYAY		1998	28.5	Sea Island, B.C.
FREDERICK G. CREED	Multi Hulled Survey & Sounding	1988	20.4	Rimouski, Québec
GC-03		1973	18.5	Sorel, Québec
SHAMOOK	Inshore Fisheries Research	1975	24.9	St. John's, Nfld & Labrador
6C-4828		1986	12.8	Dartmouth, N.S.
NAVICULA		1968	19.8	Dartmouth, N.S.
J.L. HART		1974	19.8	St. Andrew's, N.B.
OPILIO		1989	18.2	Shippagan, N.B.
PANDALUS III		1986	12.8	St. Andrew's, N.B.
CALANUS II		1991	19.9	Rimouski, Québec
SHARK		1971	16.0	Burlington, Ontario
NEOCALIGUS		1989	18.8	Nanaimo, B.C.

REVISOR	Inshore Hydrographic Survey Vessel	1969	11.1	Patricia Bay, B.C.
CUMELLA	Small Multi Task Cutter	1983	23.2	Grand Manaan, N.B.
ISLE ROUGE		1980	21.6	Tadoussac, Québec
ADVENT		1972	23.5	Cobourg, Ontario
CAPE HURD		1982	21.3	Goderich, Ontario
ATLIN POST		1975	19.8	Patricia Bay, B.C.
KITIMAT II		1974	19.8	Prince Rupert, B.C.
SOOKE POST		1973	19.8	Port Hardy, B.C.
POINT HENRY		1980	20.5	Prince Rupert, B.C.
POINT RACE		1982	21.6	Campbell River, B.C.
A.H. CHEVARIE	Inshore Multi Task Patrol Vessel	1978	12.8	Summerside, PEI
AQUARIEL		1985	12.9	Antigonish, N.S.
ARCADIE		1990	12.8	Caraquet, N.B.
CAPE LIGHT		2001	14.6	Clark's Harbour, N.S.
GELIGET		2003	14.9	Clark's Harbour, N.S.
HARP	Small Multi Task Ice Strengthened Cutter	1986	24.5	St. Anthony, Nfld & Labrador
W.G. GEORGE	Multi Task High Endurance Lifeboat	1994	15.8	Burgeo, Nfld & Labrador
W. JACKMAN		1994	15.8	Burin, Nfld & Labrador
COURTENAY BAY		1994	15.8	Saint John, N.B.
BICKERTON		1989	16.3	Bickerton East, N.S.
SAMBRO		1996	16.3	Sambro, N.S.
CLARK'S HARBOUR		1996	15.8	Clark's Harbour, N.S.
SPINDRIFT		1992	15.8	Louisbourg, N.S.
SPRAY		1994	15.8	Shippagan, N.B.

WESTPORT		1997	15.8	Westport, N.S.
CAP AUX MEULES		1996	15.8	Cap-aux-Meules, Québec
CAPE MERCY	Multi Task Medium Endurance Lifeboat	2000	14.6	Port Dover, Ontario
CAPE FOX		2003	14.6	Allan's Cove, Nfld & Labrador
CAPE NORMAN		2003	14.6	Port-aux-Choix, Nfld & Lab
CAPE STORM		2003	14.6	Tobermory, Ontario
THUNDER CAPE		2000	14.6	Meaford, Ontario
CAPE LAMBTON		2001	14.6	Thunder Bay, Ontario
CGR 100		1986	14.0	Port Weller, Ontario
CAPE ST JAMES		1999	14.6	Bamfield, B.C.
CAPE SUTIL		1998	14.6	Port Hardy, B.C.
CAPE CALVERT		2000	14.6	Tofino, B.C.
SOURIS	Multi Task Lifeboat	1985	13.5	Souris, PEI
TOBERMORY		1973	13.5	Tobermory, Ontario
KESTREL		1969	13.5	French Creek, B.C.

Ship	Type	Year Built	Length (m)	Home Port
Small Vessels				
STERNE	Small Multi Task Utility Craft	1987	12.4	Québec City, Québec
BITTERN		1982	12.4	Kingston, Ontario
SORA		1982	12.5	Amherstburg, Ontario
CCG 119		1973	12.3	Prescott, Ontario
OSPREY		1986	12.4	Kitsilano, B.C.
MALLARD		1985	12.4	Powell River, B.C.
SKUA		1986	12.4	Ganges, B.C.

NON ACTIVE LARGE VESSELS				
PROVOS WALLIS	Ice Strengthened Medium Navaids Tender	1969	63.8	Saint John, N.B.
PARIZEAU	Offshore Research and Survey	197	64.3	Dartmouth, N.S.
CYGNUS	Offshore Ice Strength Multi Task Cutter	1982	63.0	Dartmouth, N.S.
2002-02 (ex SIR JOHN FRANKLI	Medium Gulf - River icebreaker	1979	98.2	Québec City, Québec
TEMBAH	Special River Navaids Tender	1963	37.5	Hay River, NWT
LOUIS M. LAUZIER	Coastal Research & Survey	1976	37.1	Burlington, Ontario

NON ACTIVE SMALL VESSELS				
CG 141 standby vessel	Multi Task Lifeboat	1975	13.5	Dartmouth, N.S.
WESTFORT		1973	13.5	Thunder Bay, Ontario
CG 106 (ex PORT HARDY)		1969	13.5	Port Hardy, B.C.
TOFINO		1970	13.5	Tofino, B.C.
HOWE POINT		1989	12.8	Souris, PEI
NORTH BAR		1987	12.9	Yarmouth, N.S.
DENIS RIVERIN		1984	12.8	On loan to Laval University
TUEBOR		1985	12.9	Mont-Joli, Québec
2001-08 (ex TUCHO MARINER)		1991	14.6	Hay River, NWT
OTTER BAY		1992	13.4	Victoria, B.C.
CAP ROZIER	Multi Task Medium Endurance Lifeboat	2003	14.6	Québec City, Québec
CAP DE RABAST		2003	14.6	Québec City, Québec
WAUBUNO	Small Multi Task Utility Craft	1972	12.3	Gimli, Manitoba
CG-045	Air Cushion Vehicule	1969	14.8	Richmond, B.C.
FRANK M. WESTON	CCG College Training Vessels	1985	13.8	Sydney, N.S.
CAP GOELAND		1985	13.4	Sydney, N.S.
CG 117		1975	13.4	Sydney, N.S.
CG 118		1975	13.4	Sydney, N.S.

	Active	Non-Active	Total on Inventory
Large Ships	40	6	46
Small Vessels	68	18	86
Total	108	24	132

Government and Private Assets Involved in Maritime Surveillance and Search and Rescue

– Part 1 –

Maritime Surveillance

The first part of this appendix lists Canadian maritime surveillance assets. It starts by discussing the Department of National Defence's (DND) standing commitments and listing the Canadian Forces (CF) patrol aircraft and its entire fleet. It then reviews the Canadian Coast Guard's (CCG) plans for ship replacement and enforcement, and lists its helicopters and contracted aircraft. The last section lists the Royal Canadian Mounted Police's (RCMP) vessels, and Provincial Airlines Limited's (a private company) maritime surveillance aircraft.

DND Maritime Surveillance Commitments:

The CF and the Department of Fisheries and Oceans (DFO) have signed a memorandum of understanding concerning maritime surveillance. It states that the CF and DFO will negotiate on an annual basis the number of sea days and flying hours that the military will provide for coastal patrolling. The CF flew 720 hours in 2001-02, but operational demands resulted in a cut to 580 hours in 2002-03. The CF supplied DFO with 155 sea days free of cost in 2003-04 (125 for the east coast, 30 for the west coast).

It is not CF policy to always have a ship patrolling Canada's territorial waters. However, every CF ship at sea must report any sightings to its headquarters on the Atlantic or Pacific coast. This data is integrated into the Recognized Maritime Picture which the navy maintains and which is accessible by other federal departments and Canada's allies. The Maritime Forces headquarters on the Atlantic and Pacific coasts also maintain a Ready Duty Ship. This vessel is on 8 hours notice to respond to unforeseen situations. Given the circumstances, it could be underway in 30 minutes.

The Navy Fleet:

Iroquois Class Destroyer: these are helicopter-carrying ships. In the early 1990s, the destroyers were re-fitted for an area defence role. They were given the self-defence, communications and sensor capabilities that they needed to serve as "command and control ships."

The destroyers can reach speeds of 27-9 knots. The main air-defence weapons on this class of ships are 29 vertically-launched surface to air missiles, a 76mm Super Rapid gun, and a 20mm Phalanx close-in weapons system. They are also equipped with 12.7mm machine guns. The anti-submarine warfare weapons include two torpedo-carrying helicopters and 6 ship-launched torpedos. Defensive armaments include tube-launched shield decoys, chaff, flares, off-board decoys, torpedo decoys and radar.

The ships in this class are:

HMCS IROQUOIS
HMCS ATHABASKAN
HMCS ALGONQUIN
HMCS HURON

Halifax Class Frigate: In the late-1980s, after decades of anti-submarine warfare, the Halifax class was re-fitted for a broader multi-purpose purpose role. The changes enabled the ships to deploy singly or as part of a task group anywhere in the world.

Halifax class vessels can reach speeds of 29-30 knots. Their main armaments are the long-range Harpoon surface-to-surface missiles, Sea Sparrow surface-to-air missiles, a Bofors 57mm rapid-fire gun, a 20mm Phalanx anti-missile close-in weapons system, anti-submarine homing torpedoes, and machine guns. Defensive armament includes infra-red suppression, shield decoys, chaff, flares, a towed acoustic decoy, and radar and sonar jamming devices. The ship's torpedo-carrying helicopter extends its range of operational effectiveness.

However, not all Halifax class vessels are available throughout the year. The 2001 Report of the Auditor General noted that "Halifax class vessels are supposed to have a total of 12 weeks scheduled each year for corrective and preventive maintenance. But they averaged only 6.1 weeks in 1997, 7.8 weeks in 1998, and 8.7 weeks in 1999."

The ships in this class are:

HMCS CALGARY
HMCS CHARLOTTETOWN
HMCS FREDERICTON
HMCS HALIFAX
HMCS MONTRÉAL
HMCS OTTAWA
HMCS REGINA
HMCS ST-JOHNS
HMCS TORONTO
HMCS VANCOUVER
HMCS VILLE DE QUÉBEC
HMCS WINNIPEG

Protecteur Class (Auxiliary Oil / Replenishment Ship): These ships replenish Canadian Naval Task Groups at sea with food, munitions, fuel, spare parts and other supplies. They also have larger medical and dental facilities than the frigates and destroyers. Protecteur class ships have limited capacities as troop carriers, but can embark vehicles, landing craft and up to three medium / heavy helicopters. They can carry 14, 590 tons of fuel, 400 tons of aviation fuel, 1, 000 tons of dry cargo and 1, 250 tons of ammunition.

Protecteur Class ships are capable of 21 knots. They are armed with two 20mm Phalanx anti-missile close-in-weapons systems, and six 12.7mm machine guns. They have self-defence systems like chaff and radar.

The ships in this class are:

HMCS Protecteur
HMCS Preserver

Kingston Class: The Navy has 12 Kingston Class coastal defence vessels. These ships can be fitted for route survey, bottom object inspection and minesweeping. Kingston class ships are crewed primarily by Naval Reservists and, according to the DND Internet site, are intended as a coastal surveillance and patrol platform.

Kingston class ships are capable of 15 knots. They are armed with one Bofors 40mm gun and two machine guns. Six are stationed on each coast; two are on extended readiness on a rotational basis.

But while they do a lot of patrolling and fulfill a valuable presence function, the vessels's enforcement capabilities are limited. Navy Captain (retired) John Dewar testified to the Standing Senate Committee on National Security and Defence that the vessels are "turning in yeoman service at this time," but in "high sea states, they do not get there very fast and it is not a particularly comfortable ride." He added that "You would not necessarily want to deploy boarding parties from those ships, but you make do with what you have."

The ships in this class are:

HMCS KINGSTON
HMCS GLACE BAY
HMCS NANAIMO
HMCS EDMONTON
HMCS SHAWINIGAN
HMCS WHITEHORSE
HMCS YELLOWKNIFE
HMCS GOOSE BAY
HMCS MONCTON
HMCS SASKATOON
HMCS BRANDON
HMCS SUMMERSIDE

Victoria Class Submarine: Canada acquired four Royal Navy submarines in 1998. The boats are conventionally-powered and have sophisticated hydrodynamic and marine engineering systems. Victoria class submarines are well suited to coastal security tasks like law enforcement, immigration, fisheries, and environmental patrols.

The submarines are capable of 12 knots on the surface, 20 knots submerged, and 12 knots while 'snorting' (through an extendable air breather). They can dive below 200 meters. The submarines have 6 torpedo tubes and can carry 18 anti-ship / anti-submarine homing torpedoes. They are also equipped with acoustic 'bubble' decoys that can confuse ships using radar.

The ships in this class are:

HMCS VICTORIA
HMCS WINDSOR
HMCS CHICOUTIMI
HMCS CORNERBROOK

However, none the submarines were operational as of Fall 2003. The VICTORIA has arrived at CFB Esquimalt. It is not expected to be materially ready to fire weapons until the end of 2004. The CORNER BROOK is now conducting qualification training near Halifax and is scheduled to begin Canadianization in Halifax early 2004. The WINDSOR is finishing Canadianization, and is expected to commence sea trials in January 2004. It will be operational later that year. The CHICOUTIMI is still officially known as the HMS UPHOLDER. It is in the final stages of reactivation in Britain, and will be accepted and moved to Canada in the Spring of 2004.

Air Force Maritime Patrol Aircraft:

CP-140 Aurora Long-Range Patrol Aircraft: The Navy uses the CP-140 Aurora as a multi-mission reconnaissance and anti-submarine platform. The CF received 18 Auroras commencing in 1980. The Aurora is capable of 750 km / hour and has a range of 9, 266 km at 648 km / hour. It carries sophisticated avionics to conduct low and high altitude patrols. This includes a forward-looking infrared camera (FLIR), sonobuoy, magnetic anomaly detector, fixed 70mm camera, gyrostabilized binoculars, hand-held camera and night vision goggles.

This aircraft is presently in the midst of the comprehensive, multi-phase Aurora Incremental Modernization Project. The first contract was awarded in August 2000, and the project is due to be complete in 2008. The upgrade will enable the Aurora to serve as an interoperable intelligence, surveillance and reconnaissance (ISR) aircraft. However, it is not clear what impact this program will have on Canadian Forces operations.

CP-140A Arcturus Long-Range Patrol Aircraft: the CF purchased 3 of this aircraft in order to augment its CP-140 Aurora fleet. The Arcturus is capable of surface marine surveillance, search and rescue, drug interdiction and serving as a training platform. The Arcturus is essentially the same aircraft as the Aurora, but it has significantly different mission avionics and is not configured for anti-submarine warfare.

For budgetary reasons, the three Arcturus (and two Auroras) will not be a part of the Aurora Incremental Modernization Project and will eventually be phased out.

CH-124 Sea King: The Sea King is a ship-borne maritime helicopter with day and night vision capabilities. The CF possesses 29 Sea Kings, which have a range of 648 km and a top speed of 211 km / hour. Its maximum flying time is 3h 45 minutes. Since the end of the Cold War, the Sea King has become increasingly responsible for disaster relief, search and rescue, and helping other federal government departments conduct counter-narcotic operations and fisheries and pollution patrols.

However, the Sea King, which was procured during 1963-69, has developed serious serviceability problems. For example, the Report of the Auditor General for 2001 "reviewed 61 post-deployment reports on the use of the Sea King aboard ships

from 1 April 1995 to 31 March 2000. We found that 54 of the reports mention at least one of the following problems: scheduled mission that was cancelled for aircraft maintenance; mission degraded by aircraft's lack of serviceability; poor serviceability that had a negative impact on training; major snags that caused significant downtime; and aircraft that were grounded."

CCG Assets:

DFO is going through a re-assessment and re-alignment process. A capital plan for ship replacement will flow from this exercise. But as of July 2003, this plan was still several months from completion.

DFO has established an inter-sectional working group of Senior Regional and Headquarters staff to review its enforcement functions. The CCG is included in this review. But as of April 2003, a decision regarding the CCG and enforcement had not been made.

The CCG has 108 active and 24 vessels inactive vessels in its fleet at about 60 stations. For the complete list of vessels (including vessel names, type, length and home station), see the appendix to this document.

CCG Helicopters –

> The CCG owns fifteen BO-105 light twin-engine helicopters, five Bell 212 medium lift twin-engine helicopters, and five Bell 206 single-engine seven-seat

helicopters. They are based throughout the country. The CCG also owns a Sikorsky S-61N heavy lift helicopter, which is based in Prince Rupert, British Columbia. These helicopters conduct conservation and fisheries patrols and monitor ice flows. They can be embarked on ships that have the required facilities.

The CCG operates two Transport Canada aircraft under contract:

an Ottawa-based de Havilland Dash 8, which does pollution control patrols over the Great Lakes, St. Lawrence Seaway, and parts of the east coast; and

a Vancouver-based de Havilland Twin Otter, which flies fisheries and pollution control missions along the east coast.

Royal Canadian Mounted Police (RCMP) Vessels:

The RCMP has five commissioned patrol vessels. These catamarans have a crew of four and a top speed of 36 knots. They are floating detachments, and are not meant for regular patrolling far from the coastline. The vessel names, sizes and home ports are:

The Inkster is 19.75 meters long and is based in Prince Rupert, British Columbia;
The Nadon is 17.7 meters long and is based in Nanaimo, British Columbia;
The Higgitt is 17.7 meters long and is based in Nanaimo, British Columbia;

The Lindsay is 17.7 meters long and is based in Nanaimo, British Columbia; and
The Simmonds is 17.7 meters long and is based out of Burin, Newfoundland & Labrador.

In addition, the RCMP will construct a 6th commissioner class vessel, to be based in Port Hawkesbury, Nova Scotia.

Private Maritime Surveillance Assets:

Provincial Airlines Limited (PAL) –

PAL utilizes three King Air 200 aircraft. Each of the aircraft possesses radar, forward-looking infrared, data management, night vision, and satellite communication capabilities. Two of the PAL aircraft are capable of flying for 6.5 hours, while one has longer-range fuel tanks and can fly missions lasting 7.5 hours.

Government and Private Assets Involved in Maritime Surveillance and Search and Rescue

– Part 2 –

Search and Rescue

The second part of this appendix lists Canadian search and rescue (SAR) assets. It runs through the Canadian Forces (CF) SAR aircraft and the Canadian Coast Guard (CCG) SAR vessels. The CCG vessels are grouped by region.

CF SAR Assets:

CC-115 Buffalo: is a transport aircraft with a short take-off and landing capability. It is used primarily for SAR. There are 6 Buffalos in the CF. They have a range of 2, 727 km and a top speed of 416 km / hour.

CC-130 Hercules: is a versatile long-range transport plane. It is used in SAR operations, to airlift troops, equipment and cargo, and to refuel fighters in the air. There are 32 Hercules on strength in the CF. They have a top speed of 556 km / hour and a range of 3, 960 km to 9, 790 km.

CC-138 Twin Otter: is a highly manoeuvrable light transport aircraft with a short take-off and landing capability on floats, skies or wheels. The CF's 4 Twin Otters fly SAR missions

throughout the north. They have a range of 1, 427 km and a top speed of 337 km / hour.

CP-140 Aurora: is a very capable SAR platform. It can fly an impressive 9, 260 km without refuelling, and can achieve speeds of 750 km / hour. The Aurora has sophisticated surveillance equipment, such as a forward looking infrared camera and night vision goggles. The Aurora's versatility was demonstrated in 1996, when it dropped survival gear to the crew a sinking vessel, all of whom were saved.

CP-140A Arcturus: is a coastal patrol aircraft that is essentially the same as the Aurora, but with different mission avionics. The CF's 3 Arcturuses are capable of undertaking SAR missions.

CH-113 Labrador: is a twin-engined helicopter. It is the workhorse of the CF SAR effort. It has a watertight hull for marine landings, a rescue hoist, emergency medical equipment, and a 5, 000 kg cargo hook. There are 12 Labradors in the CF. They have a top speed of 275 km / hour and a range of 1, 110 km.

CH-124 Sea King: is a ship-borne helicopter that was initially procured for anti-submarine warfare. However, domestic roles such as SAR have become increasingly central. The CF's 29 Sea Kings are equipped with forward looking infrared radar. The Sea King can go as fast as 280 km / hour, and has a range of 648 km.

CH-146 Griffon: is a utility transport tactical helicopter. It performs a variety of roles, including SAR. The CF has 99

Griffons. The Griffon has a cruising speed of 220 km / hour, a top speed of 260 km / hour, and a range of up to 500 km.

CH-149 Cormorant: is a new SAR helicopter that came into service in 2002. Ample cabin space enables the Cormorant to carry 12 stretchers or a 5, 000 kg load. The Cormorant is equipped with two 273 kg rescue hoists, a 4536 kg cargo hook and frame, storage racks for SAR equipment, and 12 stretchers. Its top speed is 278 km / hour and its range is 1, 018 km. The CF has acquired 15 Cormorants.

Coast Guard SAR Assets:

Vessels Names and Home Stations in the Newfoundland and Labrador Region:

Harp - St. Anthony, Nfld & Labrador
W. G. George - Burgeo, Nfld & Labrador
W. Jackman - Burin, Nfld & Labrador
Cape Norman - Port-aux-Choix, Nfld & Labrador
Cape Fox - Allan's Cove, Nfld & Labrador

Vessels Names and Home Stations in the Maritimes Region:

Bickerton - Bickerton East, N.S.
Sambro - Sambro, N.S.
Clark's Harbour – Clark's Harbour, N.S.
Spindrift - Louisbourg, N.S.
Spray - Shippagan, N.B.
Courtenay - Saint John, N.B.
Westport - Westport, N.S.
Souris - Souris, PEI

Vessels Names and Home Stations in the Québec (i.e., Gulf of St. Lawrence) Region:

George R. Pearkes - Québec City, Québec
Martha L. Black - Québec City, Québec
Cape Rozier - Québec City, Québec
Sterne - Québec City, Québec
Tracy - Sorel, Québec
Cap-aux-Meules - Cap-aux-Meules, Québec
Sipu Muin (hovercraft) - Trois-Rivières, Québec
Waban-Aki (hovercraft) - Trois-Rivières, Québec

Vessels Names and Home Stations in the Central (i.e., Great Lakes) and Arctic Region:

Eckaloo - Hay River, NWT
Dumit - Hay River, NWT
Tembah - Hay River, NWT
Traverse (Lake of the Woods) - Kenora, Ontario
Bittern - Kingston, Ontario
Griffon - Prescott, Ontario
CCG 119 - Prescott, Ontario
Simcoe - Prescott, Ontario
Samual Risley - Parry Sound, Ontario
Cove Isle - Parry Sound, Ontario
Tobermory - Tobermory, Ontario
Cape Storm - Tobermory, Ontario
Caribou Isle - Sault Ste. Marie, Ontario
Gull Isle - Amherstburg, Ontario
Advent - Cobourg, Ontario
Cape Hurd - Goderich, Ontario
Thunder Cape - Meaford, Ontario
Cape Mercy - Port Dover, Ontario

Cape Lambton - Thunder Bay, Ontario
CGR 100 - Port Weller, Ontario
Sora - Amherstburg, Ontario

Vessels Names and Home Stations in the Pacific Region:

Sir Wilfrid Laurier - Victoria, B.C.
Bartlett - Victoria, B.C.
Point Race - Campbell River, B.C.
Point Henry - Prince Rupert, B.C.
Cape Sutil - Port Hardy, B.C.
Cape Calvert - Tofino, B.C.
Cape St-James - Bamfield, B.C.
Kestrel - French Creek, B.C.
Mallard - Powell River, B.C.
Osprey - Kitsilano, B.C.
Skua - Ganges, B.C.

The Cutter Recommended by John Dewar and the United States Coast Guard Option

This appendix discusses the specifications of a new cutter that would enable the Canadian navy to police and protect Canada's coasts.

Dewar's Vessel:

On 2 June 2003, Mr. John Dewar testified to the Standing Senate Committee on National Security and Defence that Canada should purchase a corvette-sized ship, also called a 'cutter,' for use by the navy in the performance of law enforcement functions.

He recommended a vessel measuring 75 meters that was able to operate in a high sea-state, move quickly (25 knots minimum using diesel propulsion), and remain at sea for 30 days. He said that a landing deck or hanger for a large maritime helicopter like the Sea King is essential. A helicopter would assist in the identification of ships and extend the visible range from the vessel. Typically, sailors can see 6-10 nautical miles from their ship, but most maritime helicopters have a range of 150 nautical miles.

Comparison with Canadian Coast Guard (CCG) Cutters:

CCG cutters do not meet the criteria outlined by Dewar. The Gordon Reid and Tanu are not as fast or large. The Gordon Reid is 50 meters long and has a top speed of 16.5 knots, and the Tanu is 50.1 meters long and has a top speed of 13.5 knots.

The Sir Wilfred Grenfell, Leonard J. Cowley, and Cape Roger are large enough, but are too slow. The Sir Wilfred Grenfell is 68.5 meters long and has a maximum speed of 16 knots, the Leonard J. Cowley is 72 meters long and has a maximum speed of 15 knots, and the Cape Roger is 62.5 meters long and has a top speed of 17 knots.

In addition, of the CCG's five multi-task cutters larger than 50 meters, two (the Cape Roger and Tanu) are at least 25 years old and should therefore be replaced.

Dewar's Vessel – Cost:

Dewar estimates that the vessel would cost CDN $ 55-100 million per unit. Since it would be used for law enforcement, commercial construction and procurement practices could be adopted to lower the per unit price. Civilian sources could be relied upon for service support throughout the life of the vessel, further reducing the cost.

The main factor in the vessel's cost would be the sophistication and density of its radar, sensors, communications equipment and weapon systems. There is a wide variation in the types of sensors and radars. A working group should be convened to determine the specific requirements so that the right balance between affordability and capability can be found. A

consultancy process is necessary because of the number of government and departmental jurisdictions involved.

Keeping the size of the cutter roughly as specified is important because the vessel needs good sea-keeping ability. The size of a ship is not directly proportional to its cost. The ship's physical dimensions are a small part of its total cost, but they have a significant impact on performance. Dewar testified before the Committee that the cutter should be around 75 metres long in order to conduct boardings and have the desired sea-keeping capability.

Dewar's Vessel – Specifications:

Dewar believes the capabilities needed for the law enforcement function are:

· The ability to operate in high sea states
· A high maximum speed for positioning and pursuit
· High endurance to maximize deployment time
· The ability to operate a large helicopter (e.g. CH124)
· The ability to transport and deploy boarding parties
· Ice tolerance (first year ice)
· Sophisticated sensors (e.g., radar, ESM, electro-optic, sonar)
· The ability to participate in network-centric command and control regimes
· Sophisticated communications capability
· Armament commensurate with enforcement functions (e.g., small arms,
machine guns (e.g., 50 Cal), medium calibre weapon (e.g., 57mm or

76mm) and close-in self-defence weapon system (e.g., Phalanx)

Dewar recommends that the vessel have these specifications:

· Length (waterline):	minimum 75m
· Beam:	minimum 12m
· Displacement:	minimum 1600T, desirable 2000T
· Propulsion:	Twin Shaft, 2 x Medium Speed Diesel
· Maximum Speed:	minimum 25 knots
· Time on Station:	30 Days
· Complement:	maximum 40 (mixed gender)
· Accommodation:	for 40 more personnel (boarding teams, etc.)
· Helicopter:	Large helicopter (e.g., CH124) - minimum landing deck, hangar desirable
·Estimate cost:	$55M - $100M per unit (ROM)

United States Coast Guard (USCG) Alternative:

The USCG is implementing an Integrated Deepwater System Program. Under this major multi-year fleet upgrade and recapitalization program, an Offshore Patrol Corvette (OPC) with specifications and capabilities similar to the vessel recommended by Mr. Dewar will be constructed. The OPC will join the USCG fleet in 2013.

The price of the ship has not been determined. The USCG and the defence contractor (which is Integrated Coast Guard Systems, a joint venture established by Lockheed Martin and Northrop Grumman) do not know the cost at this time. The per-unit cost could be decreased and the construction timetable

advanced if countries like Canada decided to purchase the vessel (Israel already has).

Canada could buy into the OPC production line as a straightforward military purchase. It could also enter into a co-operative agreement with the US to acquire a Canadianized version. It would not be difficult to equip the OPC with less sophisticated systems than the US model in order to reduce cost.

Canada would pay for the Canadianized features it wanted, and the US would do the same. The cost for the standard elements would be shared.

The Rationale Behind the 12, 24 nautical miles zones and Exclusive Economic Zone

This appendix lists Canada's maritime zones and discusses what rights and jurisdiction Canada has in each of them.

Background:

The 1982 United Nations Convention on the Law of the Sea (UNCLOS) established the 12 mile territorial sea, the 24 mile contiguous zone and the 200 mile exclusive economic zone. These represent the compromises reached between the interests of maritime powers in maintaining the freedoms of the seas (notably for navigation) and the interests of coastal states in increasing their jurisdiction. (Note that while "mile" is being used, these distances are actually in "nautical miles" which are slightly larger than regular miles.)

12-mile Zone:

As agreed upon in UNCLOS, this zone encompasses the sea within 12 miles of baselines (usually the low water mark along the coastline). This is known as the territorial sea, over which a state has sovereignty. Foreign vessels retain the right of innocent passage through this zone.

Prior to UNCLOS, common claims for the territorial sea were three, four or six miles in breadth. A few states claimed

territorial seas of 200 miles. By the early twentieth century, state sovereignty over a narrow strip of coastal water was widely accepted under customary international law. Coastal state interest in a territorial sea derived in part from security concerns, though considerations such as exclusive access to resources were also important. The narrow breadth of the territorial sea was dictated by the limited ability of coastal states to control waters further from shore, and by the interest of the maritime powers in unrestricted marine navigation.

24-mile Zone:

According to UNCLOS, the contiguous zone is measured from the baselines to 24 miles. However, contiguous zone provisions essentially apply to the area 12 to 24 miles from shore that extends beyond the territorial sea. Within the contiguous zone, states can prevent or take action with respect to offences within its territory or territorial sea related to fiscal, immigration, sanitary and customs law.

The antecedents of the contiguous zone are found in the "Hovering Acts" of the early 1900s. These were intended to address smuggling activities by vessels that would "hover" just outside the territorial sea. The contiguous zone has since developed as an area where states can "take [the] steps necessary…to protect themselves and their territory (including their territorial sea) from certain activities that would be prejudicial to them."[6]

[6] John H. Currie, Public International Law, (Toronto: Irwin Law, 2001) chapter 7, part C-2-C. Available at: www.quicklaw.com/en/home.html.

Exclusive Economic Zone:

UNCLOS provides for a 200-mile exclusive economic zone (EEZ) in which the interests of coastal states and maritime powers are balanced. Coastal states have sovereign rights over the exploration, exploitation, conservation and management of the living and non-living resources in their EEZ. A coastal state also has jurisdiction over certain matters, such as marine scientific research and environmental protection. States other than the coastal state enjoy freedoms, notably of navigation and overflight, in the 200-mile zone.

EEZs began to emerge after the Second World War. They reflect how technology has brought the high seas within the reach of states and exposed the finite nature of ocean resources.

Comparison of the Cost of Satellite Surveillance, Aerial Surveillance, and Ground-Based Radar Surveillance

This appendix briefly reviews the cost, according to Department of National Defence (DND) estimates, associated with some of the main types surveillance technology that could be used to monitor Canada's coasts. It should be noted that cost is only one of the factors that should be considered when choosing an appropriate platform.

SURVEILLANCE AREAS

Maritime surveillance is most crucial with respect to the high-traffic 'choke points' on both coasts. Essentially, these areas comprise 200-nautical mile square zones (102,400 square kilometres) around the entrance to the Straits of Juan de Fuca (west coast), the entrance to Halifax Harbour (east coast), and the Cabot Strait entrance to the Gulf of St. Lawrence. DND notes that within these areas the "surveillance revisit requirement is 6 hours." In that time, "a potential target traveling at 20 knots the vessel could travel 80 nautical miles between visits," meaning that it could be spotted before it was halfway through the zone.

SATELLITES

Obtaining the desired coverage with a commercial imaging satellite would cost about $140,000 CDN per day, per surveillance area ($51,100,000 a year). A satellite has the advantage of being able to see a large area with different levels of resolution. Generally, it cannot identify the contact. However, DND notes that satellites typically only visit an area once every 24 hours, and it might not be possible to reacquire the target on the next pass over the area. Depending on the satellite, there could be a 3-20 day delay in revisiting coverage areas. Another DND concern is that the country controlling the satellite could decide to limit access to the information.

AERIAL SURVEILLANCE

Aircraft would cost $12,000 CDN per day, per surveillance area ($4,380,000 a year). They can travel to and cover an area relatively quickly, and have the added benefit of being able to conduct a more intensive surveillance than radar stations or satellites. However, the endurance of aircraft is limited, and it is possible for a large object to be missed during a pass.

HIGH-FREQUENCY SURFACE WAVE RADAR

Radar stations would cost about $3,500 per day, per surveillance area ($1,246,000 a year). Stations can provide continuous coverage of a large area. According to DND, they have a nominal range starting at 35 nautical miles from the site that extends out to 150-200 nautical miles, with an azimuth range of 120 degrees. The major weakness of this system is high-frequency signal clutter, which can mar signals from true targets.

Air Canada Pilots Association

Air Canada Pilots Association
Association des pilotes d'Air Canada

Via Fax (613-995-1686

September 25, 2003

The Honourable David M. Collenette, P.C., M.P.
Minister of Transport
House of Commons
Room 104, East Block
OTTAWA, Ontario
K1A 0A6

Dear Minister Collenette:

The Air Canada Pilots Association (ACPA) has long held the belief that the ongoing terrorist threat is attracted to the "weakest link". We are not surprised that this assessment, central in the development of our own in-house security analyses and plans on the heels of 911, has been affirmed by a recent United States Department of Homeland Security advisory. This advisory, from 03 September, highlighted the threat presented to the continental United States through "hijacking airliners transiting near or flying over the continental United States – but not destined to land at U.S. airports".

This threat assessment was based on the real and growing differences between a tightening American security environment and the less restrictive arrangements found within neighbouring nations such as Canada.

For our own part, we have witnessed the divergence of American and Canadian aviation security measures on a first-hand basis. We are particularly concerned with the glaring imbalances being generated within the areas of the command and control of security resources and personnel, protection of the airborne cockpit environment and screening of airside personnel and vehicles at major airports. These deficiencies need to be addressed on an urgent basis, if we are to close the widening gap between the Canadian and American security environments and reverse our "weak link" status.

In the area of command and control, our Association has been consistent in highlighting the requirement for one federal government agency, subject to public oversight, to oversee all aspects of the aviation security network. This type of arrangement is resident within the United States Department of Homeland Security and permits the direction of resources, in conjunction with intelligence-based plans. Unfortunately, the Canadian Aviation Transportation Security Authority (CATSA) is not capable of such coordinated activities, as it is removed from intelligence gathering agencies and a host of vital inputs – including those resident within the airborne environment in the form of pilots. It is understood that changing the organisational structure of CATSA to accommodate these very real requirements would be a lengthy process. We see, however, a very real need to begin this change process and kick it off with the immediate establishment of a direct working link that encompasses Transport Canada, CATSA and national pilot communities. National security concerns need to be expanded beyond the current CATSA mandate to incorporate the airborne environment - and pilot participation is key in fulfilling this requirement.

In the area of protecting the airborne cockpit environment, American aviation has generated an increasingly large gap relative to its Canadian counterpart. This divergence has been brought about by the introduction of both the "armed pilot" and the enhanced air marshal programs. The former provides for a positive deterrent, while the latter includes an expanding air marshal presence on both domestic and international operations. For our own part, we have been advocating a "double-door" system to properly fortify the cockpit environment, along with the expansion of the Canadian Air Carrier Protection Program (CACPP) beyond current limits. The "double-door" concept has been endorsed by the January 2003 report of the Senate Committee for National Security and Defence and we have attempted to open discussions on this topic with your department. These efforts, however, were sidelined because of "higher priorities". We suggest, in light of the assessed threat to Canadian aircraft, that it is time to open these discussions. We also suggest that it is time to expand the operational mandate of the CACPP, which pales in comparison to many other countries.

In the area of airport security, American authorities have moved aggressively to vet the backgrounds of all those having access to the secure areas of the nation's airports. This one measure has resulted in the replacement of hundreds of workers with unsuitable credentials and, undoubtedly, greatly enhanced the security of ramped aircraft. As a member of the Transport Canada Airport Security Working Group, we supported a Group recommendation to institute a similar background check requirement in Canada that has yet to be implemented. This is a grave concern to our Association, as our members question the security status of the aircraft which they take airborne – particularly from high threat airports such as Pearson International.

We believe that Pearson International, representing the fourth largest Port of Entry to the United States – after New York, Los Angeles and Miami – represents a special Canadian case that demands special attention. This fact is borne out by its proximity – both to the American border and sensitive Canadian installations – and is reflected in the enhanced screening procedures that it affords Air Canada flight crews. Given the nature of the current threat, Toronto's proximity to lucrative targets and the uncertain nature of Pearson's workforce, it would be prudent to implement the Working Group recommendation regarding background checks. In the interim, it is also critically important to initiate a screening policy at Pearson that scrutinizes all personnel and vehicles proceeding airside. These "side-door" gaps have long been recognized as weak links by blue ribbon panels – such as the Senate Committee for National Security and Defence – and need to be addressed immediately.

The Air Canada Pilots Association is compelled to engage these serious security concerns at the earliest opportunity. We sincerely hope that this is effected through a dedicated exchange with officials in your department.

Sincerely,

Captain Don Johnson
President

DJ:vj

cc Senator Colin Kenny, Chair – The Standing Senate Committee on National Security and Defense (by fax)
M. Jacques Duchesneau, President and CEO – Canadian Air Transport Security Authority (by fax)
M. Gerry Frappier, Director General – Security & Emergency Procedures – Transport Canada (by fax)
M. Jean Barrette, Director – Security Operations, Transport Canada (by fax)
Mr. Louis A. Turpen, President and CEO – Greater Toronto Airports Authority (by fax)
Superintendent Ed Toye, Peel Regional Police – Airport Division (by fax)
Captain Rob Giguere, Vice-President – Operations, Air Canada (by fax)
Captain Kent Hardisty, President – Air Line Pilots Association – Canada Board (by fax)
Captain David Lynch, Chair – TSD, ACPA (by e-mail)
Captain Matt Sheehy, Chair – Security Committee, ACPA (by e-mail)
MEC (by e-mail)

WHO THE COMMITTEE HEARD FROM

37th Parliament – 1st Session

Addy, Major General (ret'd) Clive, National Past Chairman, Federation of Military and United Services Institutes of Canada (Oct. 15/01)

Alexander, Dr. Jane, Deputy Director, U.S. Defence Advanced Research Projects Agency (DARPA) (Feb. 04/02)

Allard, The Honorable Wayne, Ranking Member (Republican – Virginia), U.S. Senate Armed Services Committee (Feb. 05/02)

Allen, Mr. Jon, Director General, North America Bureau, Department of Foreign Affairs and International Trade (Jan. 28/02)

Amos, Chief Warrant Officer Bruce, 423 Maritime Helicopter Squadron, 12 Wing Shearwater, (Jan. 22-24/02)

Andrash, Mr. P. (Duke), Sergeant 481, Vancouver Police Department (Nov. 18-22/01)

Atkinson, Ms. Joan, Assistant Deputy Minister, Policy and Program Development, Department of Citizenship and Immigration (Jan. 28/02)

Badger, Captain Chris J., Vice President, Operations, Vancouver Port Authority (Nov. 18-22/01)

Baker, Lieutenant-Colonel Roy, Wing Logistics and Engineering Officer, CFB Trenton (June 25-27/02)

Basham, Mr. Patrick, Senior Fellow, Center for Representative Government, CTO Institute (March 26/03)

Bastien, Major-General Richard, Deputy Commander of Air, Assistant Chief of the Air Staff, Department of National Defence (Dec. 03/01)

Bastien, Commander Yves, Formation Administration, OfficerMaritime Forces Atlantic (Jan. 22-24/02)

Begley, Inspector J.J. (Jim), Federal Policing Service, Royal Canadian Mounted Police (Nov. 18-22/01)

Bell, Mr. Peter, Intelligence Analyst, Organized Crime Agency of British Columbia (Nov. 18-22/01)

Belzile, Lieutenant-General (ret'd) Charles, Chairman, Conference of Defence Associations (Oct. 15/01)

Bishop Jr., The Honorable Sanford D., (Democrat – Georgia), U.S. House Select Committee on Intelligence (Feb. 05/02)

Black, Lieutenant Colonel, Dean C., Commanding officer, 403 - Squadron, BFC Gagetown (Jan. 22-24/02)

Bland, Professor Douglas, Chair of Defence Management Program, School of Policy Studies, Queen's University (Oct. 29/01 & May 27/02)

Boisjoli, Lieutenant-Commmander André, Commanding Officer, HMCS Glace Bay, Maritime Forces Atlantic (Jan. 22-24/02)

Bon, Mr. Daniel**,** Director General, Policy Planning, Assistant Deputy Minister, Policy, Department of National Defence (July 18/01)

Bramah, Mr. Brian, Regional Director, Transport Canada (Nov. 18-22/01)

Brien, Ms. Una, Director, Homeland Security Council (March 25/03)

Brock, Mr. Sam, Director, Western Hemisphere Affairs, National Security Council (March 25/03)

Brown, Major Chris, 424 Squadron, CFB Trenton (June 25-27/02)

Buck, Vice-Admiral Ron, Chief of the Maritime Staff, Department of National Defence (Dec. 03/01 & Aug. 14/02)

Burke, Mr. Sean, Research Associate, National Security Studies, Council on Foreign Relations (Feb. 04/02)

Burke, Captain (N) Greg, Chief of Staff, Maritime Forces Atlantic, Department of National Defence (Jan. 22-24/02)

Calder, Mr. Kenneth, Assistant Deputy Minister, Policy, Department of National Defence (Nov. 26/01 & Aug. 14/02)

Campbell, Lieutenant-General Lloyd, Commander of Air Command and Chief of the Air Staff, Department of National Defence (Dec. 03/01)

Charette, Mr. Serge, National President, Customs Excise Union Douanes Accise (CEUDA) (Jan. 22-24/02)

Chartrant, Lieutenant-Commander Yves, Acting Commanding Officer, HMCS Huron, Maritime Forces Pacific (Nov. 18-22/01)

Cirincione, Mr. Joseph, Senior Director, Non Proliferation Project, The Carnegie Foundation (Feb. 05/02)

Clapham, Superintendent Ward D., Officer in Charge, Royal Canadian Mounted Police (Nov. 18-22/01)

Coble, The Honourable Howard, Chair, Subcommittee on Crime, Terrorism, and Homeland Security (R-North Carolina), House Judiciary Committee (Feb. 07/02) (March 27/03)

Conyers, Jr., The Honorable John, Ranking Member (Democrat – Michigan), U.S. House Judiciary Committee (Feb. 07/02)

Cormier, Captain Michael P., Deputy Harbour Master,Vancouver Port Authority (Nov. 18-22/01)

Côté, Mr. Bertin, Deputy Head of Mission, Canadian Embassy (Washington) (Feb. 04-07/02)

Creamer, Mr. Dennis, Vice-President, Finance and Administration

Halifax Port Authority, (Jan. 22-24/02)

Crouch, Dr. Jack Dyer, Assistant Secretary of Defence, International Security Policy, Office of the U.S. Secretary of Defence (Feb. 06/02)

Davis, Chief Petty Officer First Class Kim, Formation Chief Petty Officer, Maritime Forces Pacific (Nov. 18-22/01)

Dawe, Mr. Dick, Manager, Personnel Support Programmes, Maritime Forces Pacific (Nov. 18-22/01)

DeCarme, Mr. David G., Chief, Surface, Maritime and Facilitation Division (March 27/03)

Deschamps, Col. André, Director, Continental Operations, Department of National Defence (May 6/02)

Ditchfield, Mr. Peter, Deputy Chief Officer, Organized Crime Agency of British Columbia (Nov. 18-22/01)

Dowler, Chief Petty Officer First Class George, Maritime Forces Atlantic (Jan. 22-24/02)

Dunn, Major General Michael, Acting J-5, Department of Defence (March 24/03)

Elcock, Mr. Ward, Director, Canadian Security Intelligence Service (Aug. 14/02)

Enger, Inspector T.G. (Tonia), Operations Officer, Royal Canadian Mounted Police (Nov. 18-22/01)

Evans, Ms. Daniela, Chief, Customs Border Services, Canada Customs and Revenue Agency (Nov. 18-22/01)

Fadden, Mr. Richard, Deputy Clerk, Counsel and Security Intelligence Coordinator, Privy Council Office (Jan. 29/02 & Aug. 14/02)

Fagan, Mr. John, Director of Intelligence and Contraband, Atlantic Region, Canada Customs and Revenue Agency (Jan. 22-24/02)

Falconer, Captain Vic, Formation Drug Education Coordinator, Formation Health Services (Pacific), Maritime Forces Pacific (Nov. 18-22/01)

Falkenrath, Mr. Richard, Senior Director, U.S. Office of Homeland Security (Feb. 07/02)

Farmer, Mr. Rick, Area Manager, Ontario East Port of Entries, Citizenship and Immigration Canada (May 7-9/02)

Flynn, Commander Steven, U.S. Coast Guard and Senior Fellow, National Security Studies, Council on Foreign Relations (Feb. 04/02)

Forcier, Commodore Jean-Yves, Chief of Staff J3, Deputy Chief of the Defence Staff, Department of National Defence (July 18/01)

Forgie, Mr. John, Enforcement Supervisor, Vancouver, Citizenship and Immigration Canada (Nov. 18-22/01)

Fortin, Lieutenant-Colonel Mario, Acting Commanding Officer, 426 Squadron, CFB Trenton (June 25-27/02)

Foster, Lieutenant-Colonel Rob, Acting Commanding Officer, 8 Air Maintenance Squadron, CFB Trenton (June 25-27/02)

Fraser, Rear-Admiral Jamie D., Commander, Maritime Forces Pacific (Nov. 18-22/01)

Froeschner, Major Chris, Acting Commanding Officer, 429 Squadron, CFB Trenton (June 25-27/02)

Gauvin, Commodore Jacques J., Acting Assistant Chief of the Maritime Staff, Department of National Defence (Dec. 03/01)

Gibbons, The Honorable Jim, Member (Republican – Nevada), U.S. House Select Committee on Intelligence (Feb. 06/02)

Goatbe, Mr. Greg, Director General, Program Strategy Directorate
Canada Customs and Revenue Agency (Jan. 28/02)

Goss, The Honorable Porter, Chair (Republican - Florida), U.S. House Select Committee on Intelligence (Feb. 06/02)

Gotell, Chief Warrant Officer Peter, Operations, 12 Wing Shearwater
(Jan. 22-24/02)

Granatstein, Dr. Jack, Chair, Council for Defence and Security in the 21st Century (May 27/02)

Grandy, Mr. Brian, Acting Regional Director, Atlantic Region, Canada Customs and Revenue Agency (Jan. 22-24/02)

Griswold, Mr. Daniel T., Associate Director, Center for Trade Policy Studies, CATO Institute (March 26/03)

Guindon, Captain (N) Paul, Submarine Division, Maritime Forces Atlantic (Jan. 22-24/02)

Harrison, Captain (N) R.P. (Richard), Assistant Chief of Staff, Operations
Maritime Forces Pacific (Nov. 18-22/01)

Hatton, Commander Gary, Commanding Officer, HMCS Montreal, Maritime Forces Atlantic (Jan. 22-24/02)

Healey, Mr. Gene, Senior Editor, CATO Institute (March 26/03)

Henault, General Raymond R., Chief of the Defence Staff, Department of National Defence (Dec. 03/01)

Henderson, Major Georgie, Deputy A3, CFB Trenton (June 25-27/02)

Henneberry, Lieutenant-Commander, HMCS Nanaimo, Maritime Air Force Command Pacific (Nov. 18-22/01)

Hincke, Colonel Joe, Commanding Officer, 12 Wing Shearwater (Jan. 22-24/02)

Hines, Colonel Glynne, Director, Air Information Management, Chief of the Air Staff, Department of National Defence (July 18/01)

Hornbarger, Mr. Chris, Director, U.S. Office of Homeland Security (Feb. 07/02 & March 25/03))

Hostettler, The Honourable John N., Chair, Subcommittee on Immigration, Border Security, and Crime (R-Indiana), House Judiciary Committee (March 27/03)

Hunt, Mr. Baxter, Embassy of the United States of America to Canada (Aug. 15/02)

Hunter, The Honorable Duncan, Ranking Member, Subcommittee on Military Procurement (Republican – California), U.S. House Armed Services Committee (Feb. 06/02)

Issacs, Sergeant Tony, Search and Rescue Technician, Maritime Forces Atlantic (Jan. 22-24/02)

Jackson, The Honorable Michael P., Deputy Secretary of Transportation (March 27/03)

Jackson Lee, The Honourable Sheila, Ranking Member, Subcommittee on Immigration, Border Security, and Crime (D-Texas), House Judiciary Committee (March 27/03)

Jeffery, Lieutenant General M.K., Chief of the Land Staff, Department of National Defence (Dec. 03/01 & Aug. 14/02)

Joncas, Chief Petty Officer First Class Serge, Maritime Command Chief Petty Officer, Department of National Defence (Dec. 03/01)

Keane, Mr. John, Deputy Assistant Secretary, Bureau of Western Hemisphere Affairs, U.S. Department of State (Feb. 06/02)

Kee, Mr. Graham, Chief Security Officer, Vancouver Port Authority (Nov. 18-22/01)

Kelly, Lieutenant Colonel W.J., Force Planning and Program Coordination,Vice Chief of the Defence Staff, Department of National Defence (July 18/01)

Kennedy, Mr. Paul, Senior Assistant Deputy Solicitor General, Solicitor General Canada (Aug. 14/02)

Kergin, Mr. Michael F., Canadian Ambassador to the United States (March 25/03)

Kiloh, Insp. D.W. (Doug), Major Case Manager, Royal Canadian Mounted Police (Nov. 18-22/01)

Krause, Lieutenant Colonel Wayne, Commanding Officer, 423 Maritime Helicopter Squadron, 12 Wing Shearwater (Jan. 22-24/02)

Kurzynski, Major Perry, Officer-in-charge, Search and Rescue Operations Centre, Maritime Forces Atlantic (Jan. 22-24/02)

LaFrance, Mr. Albert, Director, Northern New Brunswick District, Canada Customs and Revenue Agency (Jan. 22-24/02)

Laing, Captain (Navy) Kevin, Director, Maritime Strategy, Chief of Maritime Staff, Department of National Defence (July 18/01)

Lenton, Assistant Commissioner William, Royal Canadian Mounted Police (Jan. 28/02)

Lerhe, Commodore E.J. (Eric), Commander, Canadian Fleet Pacific, Maritime Forces Pacific (Nov. 18-22/01)

Levy, Mr. Bruce, Director, U.S. Transboundary Division, Department of Foreign Affairs and International Trade (Jan. 28/02)

Loeppky, Deputy Commissioner Garry, Operations, Royal Canadian Mounted Police (Oct. 22/01)

Lupien, Chief Petty Officer First Class R.M., Canadian Forces Chief Warrant Officer, Department of National Defence (Dec. 03/01)

Macdonald, Lieutenant-General George, Vice Chief of the Defence Staff, Department of National Defence (Jan. 28/02 & Aug. 14/02)

Mack, Rear Admiral Ian, Defence Attaché, Canadian Embassy (Washington) (Feb. 04/02)

Maddison, V.Adm.Greg, Deputy Chief of the Defence Staff, Department of National Defence (May 5/02)

Magee, Mr. Andee, Dog Master, Canada Customs and Revenue Agency (May 7-9/02)

Maisonneuve, Major-General J.O. Michel, Assistant Deputy Chief of Defence Staff, Department of National Defence (Oct. 22/01)

Maisto, Mr. John, Senior Director for Western Hemisphere Affairs, National Security Council (March 25/03)

Malec, Mr. George, Assistant Harbour master, Halifax Port Authority (Jan. 22-24/02)

Mallory, Mr. Dan, Chief of Operations for Port of Lansdowne, Canada Customs and Revenue Agency (May 7-9/02)

Mason, Lieutenant Colonel Dave, Commanding Officer, 12 Air Maintenance Squadron, 12 Wing Shearwater (Jan. 22-24/02)

Mason, Mr. Dwight, Joint Chief of Staff, U.S. Chair, Permanent Joint Board on Defence, The Pentagon (Feb. 06/02)

Mason, Ms. Nancy, Director, Office of Canadian Affairs, Bureau of Western Hemisphere Affairs, U.S. Department of State (Feb. 06/02)

Mattie, Chief Warrant Officer Fred, 12 Air Maintenance Squadron, 12 Wing Shearwater (Jan. 22-24/02)

McGowan, Mr. John, Director, Homeland Security Council (March 25/03)

McHale, Mr. Stephen J., Deputy Under Secretary for Transportation Security, Office of Homeland Security (March 25/03)

McHale Jr., The Honorable Paul F., Assistant Secretary for Homeland Defence, Department of Defence (March 27/03)

McIlhenny, Mr. Bill, Director for Canada and Mexico, U.S. National Security Council (Feb. 07/02)

McKinnon, Chief David P., Chief of Police, Halifax Regional Police Force (Jan. 22-24/02)

McManus, Lieutenant-Colonel J.J. (John), Commanding Officer, 443 (MH) Squadron, Maritime Air Force Command Pacific (Nov. 18-22/01)

McNeil, Commodore Daniel, Director, Force Planning and Program Coordination, Vice Chief of the Defence Staff, Department of National Defence (July 18/01)

Mercer, Mr. Wayne, Acting First Vice-President, Nova Scotia District BranchCustomes Excise, Union Douanes Accise (CEUDA)t de la Nouvelle-Écosse, Customs Excise Union Douanes Accise (CEUDA) (Jan. 22-24/02)

Miller, Mr. Frank, Senior Director, President's Adviser on Military Matters, U.S. National Security Council (Feb. 07/02)

Mitchell, Brigadier General Greg, Commander, Land Forces Atlantic Area (Jan. 22-24/02)

Mitchell, Mr. Barry, Director, Nova Scotia District, Canada Customs and Revenue Agency (Jan. 22-24/02)

Morris, Ms. Linda, Director, Public Affairs, Vancouver Port Authority (Nov. 18-22/01)

Munroe, Ms. Cathy, Regional Director of Cutsoms for Northern Ontario, Canada Customs and Revenue Agency (May 7-9/02)

Murphy, Captain (N) R.D. (Dan), Deputy Commander, Canadian Fleet Pacific, Maritime Forces Pacific (Nov. 18-22/01)

Narayan, Mr. Francis, Detector Dog Service, Canada Customs and Revenue Agency (Nov. 18-22/01)

Neumann, Ms. Susanne M., Compliance Verification Officer, Customs – Compliance Mgt. Division, Canada Customs and Revenue Agency (Nov. 18-22/01)

Newberry, Mr. Robert J., Principal Director, Territorial Security, The Pentagon (Feb. 06/02)

Newton, Captain John F., Senior Staff Officer, Operations, Maritime Forces Atlantic (Jan. 22-24/02)

Nikolic, Mr. Darko, District Director, St.Lawrence District, Canada Customs and Revenue Agency (May 7-9/02)

O'Hanlon, Mr. Michael, Senior Fellow, Foreign Policy Studies, The Brookings Institution (Feb. 05/02)

O'Shea, Mr. Kevin, Director, U.S. General Relations Division, Department of Foreign Affairs and International Trade (Jan. 28/02)

Orr, Major Ken, Senior Staff Officer, Attraction Canadian Forces Recruiting Group, CFB Borden (June 25-27/02)

Ortiz, The Honorable Solomon P., Ranking Member, Subcommittee on Military Readiness (Democrat – Texas), U.S. House Armed Services Committee (Feb. 06/02)

Pataracchia, Lieutenant (N) John, Canadian Forces Recruiting Centre, Halifax, CFB Borden (June 25-27/02)

Paulson, Captain (N) Gary, Commanding Officer, HMCS Algonquin, Maritime Forces Pacific (Nov. 18-22/01)

Payne, Captain (N) Richard, Commanding Officer, Fleet Mantenance Facility Cape Scott, Maritime Forces Atlantic (Jan. 22-24/02)

Peterman, Admiral Brian, Senior Director, Border and Transportation Security, Homeland Security Council (March 25/03)

Peters, Colonel William, Director, Land Strategic Planning, Chief of the Land Staff, Department of National Defence (July 18/01)

Pile, Captain (N) T.H.W. (Tyron), Commander, Maritime Operations Group Four, Maritime Forces Pacific (Nov. 18-22/01)

Pilgrim, Superintendent J. Wayne, Officer in Charge, National Security Investigations Branch, Criminal Intelligence Directorate, Royal Canadian Mounted Police (July 19/01)

Pitman, Mr. B.R. (Brian), Sergeant, Waterfront Joint Forces Operation, Vancouver, Royal Canadian. Mounted Police (Nov. 18-22/01)

Poirier, Mr. Paul, Director, Intelligence and Contraband Division, Northern Ontario Region, Canada Customs and Revenue Agency (May 7-9/02)

Preece, Captain (N) Christian, Maritime Forces Atlantic (Jan. 22-24/02)

Proulx, Assistant Commissioner Richard, Criminal Intelligence Directorate, Royal Canadian Mounted Police (Oct. 22/01)

Purdy, Ms. Margaret, Associate Deputy Minister, Department of National Defence (Aug. 14/02)

Reed, The Honorable Jack, Chair (Democrat – Rhode Island), U.S. Senate Armed Services Committee (Feb. 05/02)

Rose, Mr. Frank, International Security Policy, The Pentagon (Feb. 06/02)

Ross, Major-General H. Cameron, Director General, International Security Policy, Department of National Defence (Jan. 28/02)

Rumsfeld, The Honorable Donald, U.S. Secretary of Defense (Feb. 06/02)

Rurak, Ms. Angela, Customs Inspector, Canada Customs and Revenue Agency (May 7-9/02)

Salesses, Lieutenant Colonel Bob, Logistics Directorate for Homeland Security, The Pentagon (Feb. 06/02)

Sensenbrenner, Jr., The Honorable F. James, Chair (Republican – Wisconsin, U.S. House Judiciary Committee (Feb. 07/02 & March 27/03)

Schreiber Hughes, Ms. Lisa Bobbie, Director Homeland Security Council (March 25/03)

Shane, Mr. Jeffrey N., Associate Deputy Secretary (March 27/03)

Simmons, Mr. Robert, Deputy Director, Office of European Security and Political Affairs, Bureau of European and Eurasian Affairs, U.S. Department of State (Feb. 06/02)

Sinclair, Ms. Jill, Director General, International Security Bureau, Department of Foreign Affairs and International Trade (Jan. 28/02 & Aug. 14/02)

Skelton, The Honorable Ike, Ranking Member (Democrat – Missouri), U.S. House Armed Services Committee (Feb. 06/02)

Slater, Ms. Scenery C., District Program Officer, Metro Vancouver District, Canada Customs and Revenue Agency (Nov. 18-22/01)

Spraggett, Mr. Ernest, Director, Commercial Operations, Canada Customs and Revenue Agency (Jun. 24/02)

Stark, Lieutenant-Commander Gary, Commanding Officer, HMCS Whitehorse, Maritime Forces Pacific (Nov. 18-22/01)

Stewart, Mr. James, Civilian Human Resources, Maritime Forces Atlantic (Jan. 22-24/02)

Stump, The Honorable Bob, Chair (Republican – Arizona), U.S. House Armed Services Committee (Feb. 06/02)

Szczerbaniwicz, Lieutenant-Colonel Gary, Commanding Officer, 407 Squadron, Maritime Air Force Command Pacific (Nov. 18-22/01)

Taylor, The Honorable Gene, Ranking Member, Subcommittee on Military Procurement (Democrat – Mississippi), U.S. House Armed Services Committee (Feb. 06/02)

Taylor, Mr. Robert, Inspector, Vancouver Police Department (Nov. 18-**22/01)**

Tulenko, Mr. Timothy, Political-Military officer, Office of Canadian Affairs, Bureau of Western Hemisphere Affairs, U.S. Department of State (Feb. 06/02)

Verga, Mr. Peter F., Principal Deputy Assistant Secretary for Homeland Defence (March 27/03)

Wamback, Lieutenant-Commander Arthur, Commanding Officer, HMCS Windsor, Maritime Forces Atlantic (Jan. 22-24/02)

Warner, The Honorable John, Ranking Member (Republican – Virginia), U.S. Senate Armed Services Committee (Feb. 05/02)

Weldon, The Honorable Curt, Chair, Subcommittee on Military Procurement (Republican – Pennsylvania), U.S. House Armed Services Committee (Feb. 06/02)

Williams, Col. Richard, Director, Western Hemisphere Policy, Department of National Defence (May 6/02)

Woodburn, Commander William, Commander, Submarine Division, Maritime Forces Atlantic (Jan. 22-24/02)

37th Parliament – Second Session

Adams, Mr. John, Commissioner, Canadian Coast Guard, Fisheries and Oceans Canada (May 5, 3003)

Adams, Superintendent Bill, Federal Services Directorate, Royal Canadian Mounted Police (June 9, 2003)

Atkins, Chief Superintendent Ian, Officer in Charge, Criminal Operations Branch, Royal Canadian Mounted Police (September 22, 2003)

Avis, Captain Peter, Director of Maritime Policy, Operations and Readiness, National Defence (April 7, 2003)

Axworthy, Dr. Thomas, Chairman, Centre for Study of Democracy (September 29, 2003)

Boutilier, Dr. James A., Special Advisor (Policy) MaritimeForces, Pacific Headquarters, Department of National Defence (June 9, 2003)

Brandt, Mr. Brion, Director, Security Policy, Transport Canada (May 5, 3003)

Buck, Vice-Admiral Ronald, Chief of Maritime Staff, National Defence (April 7, 2003)

Caron, Corporal Denis, National Support Arrangements Coordinator, Coast and Airport Watch National Coordinator, Organized Crime Branch, Royal Canadian Mounted Police (April 7, 2003)

Connolly, Mr. Mark, Director General, Contraband and Intelligence Services Directorate, Custom Branch, Canada Customs and Revenue Agency (September 22, 2003)

Davidson, Rear-Admiral Glenn V., Commander, Maritime Forces Atlantic, Department of National Defence (September 22, 2003)

Dempsey, Mr. Lawrence, National Secretary Treasurer, Canadian Merchant Service Guild (September 22, 2003)

Dewar, Captain (N) (Ret'd) John, Member, Maritime Affairs, Navy League of Canada (May 12, 2003) (June 2, 2003)

Edmonds, Captain (N) David, Chief of Staff Personnel & Training, Department of National Defence (September 25, 2003)

Ernshaw, Commander Paul F., Commanding Officer TRINITY, Joint Ocean Surveillance Information Centre, Department of National Defence (September 22, 2003)

Fox, Mr. John, Regional Representative, Nova Scotia, Union of Canadian Transportation Employees (September 22, 2003)

Frappier, Mr. Gerry, Director General, Security and Emergency Preparedness and Chair of Interdepartmental Marine Security Working Group, Transport Canada (April 7, 2003) (June 2, 2003)

Gadula, Mr. Charles, Director General, Fleet Directorate, Marine Services, Fisheries and Oceans Canada (April 7, 2003)

Garnett, Vice-Admiral (Ret'd) Gary L., National Vice-President for Maritime Affairs, Navy League of Canada (May 12, 2003)

Garnon, Lieutenant-Commander Daniel, Comptroller, Department of National Defence (September 25, 2003)

Giffin Boudreau, Ms. Diane, Acting Director General, Atlantic Region, Department of Citizenship and Immigration Canada (September 22, 2003)

Hansen, Superintendent Ken, Director of Federal Enforcement, Royal Canadian Mounted Police (April 7, 2003) (June 9, 2003)

Haydon, Mr. Peter T., Senior Research Fellow, Center for Foreign Policy Studies, Dalhousie University (April 28, 2003)

Heisler, Mr. Ron, Director of Operations, Canada Immigration Centre, Halifax, Department of Citizenship and Immigration Canada (September 22, 2003)

Hendel, Commodore (Retired) Hans, Consultant, Canadian Forces Staff College (April 28, 2003)

Henschel, Superintendent Peter, Federal Services Directorate, Royal Canadian Mounted Police (June 9, 2003)

Hickey, Captain (N) Larry, Assistant Chief of Staff Plans and Operations (for Maritime Forces Atlantic) (June 16, 2003)

Hildebrand, Sergeant F.D. (Fred), "H" Division, Criminal Operations Branch, Royal Canadian Mounted Police (September 22, 2003)

Johnston, Rear-Admiral (Retired) Bruce (April 28, 2003)

Kelly, Mr. James C. (May 26, 2003)

King, Vice-Admiral James (Ret'd) (May 12, 2003)

Kobolak, Mr. Tom, Senior Program Officer, Contraband and Intelligence, Canada Customs and Revenue Agency (April 7, 2003)

Kubeck, Commander Kimberley, Project Manager, Naval Control of Shipping – Intelligence, Department of National Defence (September 25, 2003)

Lachance, Mr. Sylvain, A/Director General, Fleet, Canadian Coast Guard (February 17, 2003)

Lenton, Assistant Commissioner W.A.(Bill), Federal Services Directorate, Royal Canadian Mounted Police (June 9, 2003)

MacLaughlan, Superintendent C.D. (Craig), Officer in Charge, Support Services "H" Division, Royal Canadian Mounted Police (September 22, 2003)

Meisner, Mr. Tim, Director, Policy and Legislation, Marine Programs, Canadian Coast Guard (February 17, 2003) (April 7, 2003)

Merpaw, Ms. Diane, Acting Deputy Director, Policy Development and Coordination, Citizenship and Immigration Canada (April 7, 2003)

Middlemiss, Professor Danford W., Department of Political Science, Dalhousie University (May 12, 2003)

Moutillet, Lieutenant-Commander Mireille, Senior Staff Officer Policy, Department of National Defence (September 25, 2003)

Mulder, Mr. Nick, President, Mulder Management Associates (June 9,2003)

Normoyle, Ms. Debra, Director General, Enforcement Branch, Citizenship and Immigration Canada (April 7, 2003)

Russell, Mr. Robert A., Assistant Commissioner, Atlantic Region, Canada Customs and Revenue Agency (September 22, 2003)

Thomas, Mr.John F.Thomas, Partner,BMB Consulting Services (June 9, 2003)

Tracy, Ms. Maureen, Director, Policy and Operations Division, Canada Customs and Revenue Agency (April 7, 2003)

Tremblay, Captain (N) Viateur, Deputy Commander, Naval 1 Reserve, Department of National Defence (September 25, 2003)

Wark, Professor Wesley K., Associate Professor in the Department of History, Munk Centre for International Studies, University of Toronto (May 5, 2003)

Williams, Captain (N) Kelly, Former Commanding Officer, HMCS Winnipeg, Department of National Defence (September 22, 2003)

Wilson, Mr. Larry, Regional Director, Maritimes, Canadian Coast Guard (September 22, 2003)

Wing, Mr. Michael, National President; Union of Canadian Transportation Employees (September 22, 2003)

EXHIBITS

1. ["Presentation to the Senate Standing Committee on National Security and Defence, by Canadian Coast Guard, February 17, 2003"] (Exhibit 5900-2.37/N2-SS-1, 10, "34")

2. ["Presentation to the Senate Standing Committee on National Security and Defence, Mike Toddington, former Chief Officer of the ports Canada Police, Port of Vancouver, Vancouver, January 30, 2003] (Exhibit 5900-2.37/N2-SS-1, "35")

3. ["Update on Canada's Response to Marine Security" presented by Gerry Frappier, Director General, Security and Emergency Preparedness and Chair of the Interdepartmental Marine Security Working Group, April 7, 2003] (Exhibit 5900-2.37/N2-SS-1, 14, "56")

4. ["Chief of Marine Staff Introductory Statement" by Vice-Admiral Ronald Buck, April 7, 2003] (Exhibit 5900-2.37/N2-SS-1, 14, "57")

5. ["Material supporting Canadian Coast Guard responses to questions raised during the February 17, 2003 Hearing" by Robert G. Thibault, Minister of Fisheries and Oceans] (Exhibit 5900-2.37/N2-SS-1, "60")

6. ["RCMP Speaking Points", April 7, 2003] (Exhibit 5900-2.37/N2-SS-1, 14, "62")

7. ["Summary of Presentation" by Charles Gadula and Tim Meisner, April 7, 2003] (Exhibit 5900-2.37/N2-SS-1, 14, "63")

8. ["Opening Remarks" by Debra Normoyle, Director General, Enforcement Branch, Citizenship and Immigration Canada, April 7,2003] (Exhibit 5900-2.37/N2-SS-1, 14, "64")

9. ["Opening Remarks for the Canada Customs and Revenue Agency (CCRA)", , 2003] (Exhibit 5900-2.37/N2-SS-1, 14, "65")

10. ["The Maritime Dimension of Homeland Security: Traditional Task or a New Requirement?" by Peter T. Haydon, Senior Research Fellow, Centre for Foreign Policy Studies, Dalhousie University] (Exhibit 5900-2.37/N2-SS-1, 15, "68")

11. ["Opening Remarks" by Rear-Admiral Bruce Johnston (Ret'd)] (Exhibit 5900-2.37/N2-SS-1, 15, "69")

12. ["Canadian Coast Guard – Safety First, Service Always" from John Adams, May 5, 2003] (Exhibit 5900-2.37/N2-SS-1, 16, "70")

13. ["Opening Statement" by Vice-Admiral Gary L. Garnett, from the Navy League of Canada, May 12, 2003] (Exhibit 5900-2.37/N2-SS-1, 17, "73")

14. ["Cooperative Ocean Information Network Pacific, An Overview" from the Navy League of Canada, May 12, 2003] (Exhibit 5900-2.37/N2-SS-1, 17, "74")

15. ["Condensed version of Canada, An Incomplete Maritime Nation" from the Navy League of Canada, May 12, 2003] (Exhibit 5900-2.37/N2-SS-1, 17, "75")

16. ["The Maritime Dimension of a Canadian National Security Policy: Some Preliminary Observations" by Dr. Dan Middlemiss, Department of Political Science, Dalhousie

University, May 12, 2003] (Exhibit 5900-2.37/N2-SS-1, 17, "76")

17. ["Statement of Vice-Admiral James King (Retired)", May 12, 2003] (Exhibit 5900-2.37/N2-SS-1, 17, "77")

18. [Material from Jean-Pierre Witty, C/Supt, Criminal Intelligence Directorate, Royal Canadian Mounted Police, dated May 6,2003 regarding an inventory of its marine assets] (Exhibit 5900-2.37/N2-SS-1, 18, "78")

19. [Documents from Citizenship and Immigration Canada, dated May 15, 2003 regarding requests by the Committee at its meeting of April 7, 2003.] (Exhibit 5900-2.37/N2-SS-1, 18, "79")

20. ["Outline – Maritime Sovereignty Cutters" by Captain (N) (Ret'd) J.S. Dewar, June 2, 2003] (Exhibit 5900-2.37/N2-SS-1, 18, "80")

21. ["Suggested Questions for Transport Canada: Testimony of Gerry Frappier, Director General, Security and Emergency Preparedness, June 2, 2003"] (Exhibit 5900-2.37/N2-SS-1, 18, "81")

22. ["Role of the Coast Guard" by James C. Kelly, witness, May 26, 2003] (Exhibit 5900-2.37/N2-SS-1, "82")

23. ["Canada Customs and revenue Agency – Appearance before the Senate Standing Committee on National Security and Defence, April 7, 2003 – Additional Information" from Tara Hall, Assistant Director, Parliamentary Affairs, Public Affairs Branch] (Exhibit 5900-2.37/N2-SS-1, "83")

24. ["Material supporting Canadian Coast guard responses to questions raised during the April 7, 2003 Hearing" by John

Adams, Commissioner, Fisheries and Oceans] (Exhibit 5900-2.37/N2-SS-1, "84")

25. ["Outline of opening Comments to Standing Senate Committee on National Defence and Security" by John Thomas, June 9, 2003] (Exhibit 5900-2.37/N2-SS-1, 19, "85")

26. ["Opening Statement – Marine Security" by Assistant Commissioner William Lenton, Federal Services, June 9, 2003] (Exhibit 5900-2.37/N2-SS-1, 19, "86")

27. ["Questions and Answers – Marine Security" by Assistant Commissioner William Lenton, Federal Services, June 9, 2003] (Exhibit 5900-2.37/N2-SS-1, 19, "87")

28. ["Presentation" by Dr. James Boutilier, Special Advisor (Policy) to the Commander, Martitime Forces Pacific, June 9, 2003] (Exhibit 5900-2.37/N2-SS-1, 19, "88")

29. ["Outline of Nick Mulder's Comments to the Senate Committee on National Security and Defence" June 9, 2003] (Exhibit 5900-2.37/N2-SS-1, 19, "89")

30. ["Opening Remarks by Captain (N) Laurence Hickey, Maritime Forces Atlantic Assistance Chief of Staff Plans and Operation" June 16, 2003] (Exhibit 5900-2.37/N2-SS-1, 20, "94")

31. ["Response to Questions Raised at the meeting of the Standing Senate Committee on National Security and Defence on April 7, 2003 (testimony of Gerry Frappier, Director General of Security and Emergency Preparedness), May 5, 2003 and June 3, 2003 (testimony of William Elliott, Assistant Deputy Minister of Safety and Security) by the Department of Transport Canada] (Exhibit 5900-2.37/N2-SS-1, "95")

32. [Letter from Canadian Security Intelligence Service to Barbara Reynolds dated June 19, 2003 – Re: Response regarding the role of the Canadian Security Intelligence Service with respect to marine security issues] (Exhibit 5900-2.37/N2-SS-1, "96")

33. [Presentation by Commander Paul F. Earnshaw, Department of National Defence, September 22, 2003] (Exhibit 5900-2.37/N2-SS-1, 22, "97")

34. [Presentation by Captain (N) Williams, Department of National Defence, September 22, 2003] (Exhibit 5900-2.37/N2-SS-1, 22, "98")

35. [Presentation by Larry Wilson, Regional Director, Maritimes, Canadian Coast Guard, September 22, 2003] (Exhibit 5900-2.37/N2-SS-1, 22, "99")

36. [National Post Article, September 21, 2003] (Exhibit 5900-2.37/N2-SS-1, 22, "100")

37. [Charts from Canadian Coast Guard, September 22, 2003] (Exhibit 5900-2.37/N2-SS-1, 22, "101")

38. [Response from Canadian Coast Guard, Larry Wilson, Regional Director, Maritimes Region, September 22, 2003] (Exhibit 5900-2.37/N2-SS-1, 22, "102")

39. [HMCS ATHABASKAN, September 22, 2003] (Exhibit 5900-2.37/N2-SS-1, 22, "103")

40. [Presentation by Chief Superintendent Ian E. Atkins, Officer in Charge, Criminal Operations Branch, "H" Division, Nova Scotia, RCMP, September 22, 2003] (Exhibit 5900-2.37/N2-SS-1, 22, "104")

41. [Presentation by Robert Russell, Regional Assistant Commissioner, Canada Customs and Revenue Agency, Atlantic Region, September 22, 2003] (Exhibit 5900-2.37/N2-SS-1, 22, "105")

42. [Opening Remarks by Diane Giffin-Boudreau, Acting Director General, Atlantic Region, Citizenship and Immigration, September 22, 2003] (Exhibit 5900-2.37/N2-SS-1, 22, "106")

43. [Opening Presentation, The Canadian Merchant Service Guild, September 22, 2003] (Exhibit 5900-2.37/N2-SS-1, 22, "107")

44. [Presentation by Michael Wing, National President of the Union of Canadian Transportation Employees (UCTE), September 22, 2003] (Exhibit 5900-2.37/N2-SS-1, 22, "108")

45. [Material from the Union of Canadian Transportation Employees (UCTE), September 22, 2003] (Exhibit 5900-2.37/N2-SS-1, 22, "109")

46. [Response from Ian E. Atkins, Officer in Charge, Criminal Operations Branch, "H" Division, Nova Scotia, RCMP, letter dated September 23, 2003] (Exhibit 5900-2.37/N2-SS-1, 22, "110")

47. [Material by Commodore William F. O'Connell, Commander Naval Reserve, September 25, 2003] (Exhibit 5900-2.37/N2-SS-1, 23, "126")

48. [Material by The Naval Reserve in Québec City, September 25, 2003] (Exhibit 5900-2.37/N2-SS-1, 23, "127")

49. [Presentation by Thomas S. Axworthy, Chairman of the Centre for the Study of Democracy School of Policy Studies,

Queen's University, September 29, 2003] (Exhibit 5900-2.37/N2-SS-1, 24, "128")

MEDIA ACTIVITIES

Veronica Morris

Ms. Morris assumed responsibility for media relations with the Standing Senate Committee on National Security and Defence in June of 2001.

Ms. Morris deals with all day to day media inquiries, prepares press releases, logs media coverage, and acts as a liaison for the media during committee trips.

Prior to joining the Committee she worked as a special assistant to the Honourable Colin Kenny. Ms. Morris was educated at Carleton University.

Media inquiries should be sent to: ckres2@sen.parl.gc.ca

Meetings of the Standing Senate Committee on National Security and Defence are open to members of the media. Exceptions include when the Committee is drafting reports, dealing with personnel matters, or when a host specifically requests proceedings be held *in camera*.

When in Ottawa, Committee hearings are televised on the Cable Public Affairs Channel (CPAC); on the Senate Internet site (audio and video); the Parliamentary TV Network; and the Senate audio network, frequencies (MHz): Floor: 94.7, English: 95.5, French: 95.1.

Those interested in the Committee's activities can subscribe to a mailing list that provides advance notice of meeting times, locations, and witnesses.

Information regarding the Committee can be obtained through its web site:

http://sen-sec.ca

Questions can be directed to:
Toll free: 1-800-267-7362

Or via email:
The Committee Clerk: defence@sen.parl.gc.ca
The Committee Chair: kennyco@sen.parl.gc.ca

Media inquiries should be sent to: ckres2@sen.parl.gc.ca

BIOGRAPHIES OF COMMITTEE MEMBERS

The Honourable NORMAN K. ATKINS, Senator

Senator Atkins was born in Glen Ridge, New Jersey. His family is from Nova Scotia and New Brunswick, where he has spent a great deal of time over the years. He is a graduate of the Appleby College in Oakville, Ontario, and of Acadia University in Wolfville, Nova Scotia, where he studied economics and completed a Bachelor of Arts programme in 1957.

(Senator Atkins subsequently received an Honourary Doctorate in Civil Law in 2000, from Acadia University, his old "alma mater".)

A former President of Camp Associates Advertising Limited, a well-known Toronto-based agency, Senator Atkins has also played an active role within the industry, serving, for instance, as a Director of the Institute of Canadian Advertising in the early 1980's.

Over the years, Senator Atkins has had a long and successful career in the field of communications – as an organizer or participant in a number of important causes and events. For instance, and to name only a few of his many contributions, Senator Atkins has given of his time and energy to Diabetes Canada, the Juvenile Diabetes Foundation, the Dellcrest Children's Centre, the Federated Health Campaign in Ontario,

the Healthpartners Campaign in the Federal Public Service as well as the Chairperson of Camp Trillium-Rainbow Lake Fundraising Campaign.

Senator Atkins was also involved with the Institute for Political Involvement and the Albany Club of Toronto. (It was during his tenure as President in the early 1980's that the Albany Club, a prestigious Toronto private club, and one of the oldest such clubs across the country, opened its membership to women.)

Senator Atkins has a long personal history of political involvement. In particular, and throughout most of the last 50 years or so, he has been very active within the Progressive Conservative Party – at both the national and the provincial levels. Namely, Senator Atkins has held senior organizational responsibility in a number of election campaigns and he has served as an advisor to both the Rt. Hon. Brian Mulroney and the Rt. Hon. Robert L. Stanfield, as well as the Hon. William G. Davis.

Norman K. Atkins was appointed to the Senate of Canada on June 29, 1986. In the years since, he has proven to be an active, interested, and informed Senator. In particular, he has concerned himself with a number of education and poverty issues. As well, he has championed the cause of Canadian merchant navy veterans, seeking for them a more equitable recognition of their wartime service. Senator Atkins served in the United States military from September 1957 to August 1959.

Currently, Senator Atkins is the Chair of the Progressive Conservative Senate Caucus, and a member of Internal Economy, Budgets and Administration, the National Security and Defence Committee and the Veterans Affairs Subcommittee. He is also the Honourary Chair of the Dalton K. Camp Endowment in Journalism at Saint-Thomas University in

Fredericton, New Brunswick and Member of the Advisory Council, Acadia University School of Business.

The Honourable TOMMY BANKS, Senator

Tommy Banks is known to many Canadians as an accomplished and versatile musician and entertainer. He is a recipient of the Juno Award, the Gemini Award and the Grand Prix du Disque.

From 1968 to 1983 he was the host of The Tommy Banks Show on television. He has provided musical direction for the ceremonies of the Commonwealth Games, the World University Games, Expo '86, the XV Olympic Winter Games, various command performances and has performed as guest conductor of symphony orchestras throughout Canada, the United States, and in Europe.

He was founding chairman off the Alberta Foundation for the Performing Arts. He is the recipient of an Honourary Diploma of Music from Grant MacEwen College, and Honourary Doctorate of Laws from the University of Alberta, and of the Sir Frederick Haultain Prize. He is an officer of the Order of Canada, and a Member of the Alberta Order of Excellence.

Tommy Banks was called to the Senate of Canada on 7 April 2000. On 9 May 2001, Senator Tommy Banks was appointed Vice-Chair of the Prime Minister's Caucus Task Force on Urban issues.

He is currently a member of the Committee on National Security and Defence, Chair of the Committee on Energy, the Environment and Natural Resources, and chair of the Alberta Liberal Caucus in the Parliament of Canada.

A Calgary-born lifelong Albertan, he moved to Edmonton in 1949 where he resides with Ida, as do their grown children and their families.

The Honourable JANE CORDY, Senator

An accomplished educator, Jane Cordy also has an extensive record of community involvement.

Senator Cordy earned a Teaching Certificate from the Nova Scotia Teacher's College and a Bachelor of Education from Mount Saint Vincent University.

In 1970, she began her teaching career, which has included stints with the Sydney School Board, the Halifax County School Board, the New Glasgow School Board, and the Halifax Regional School Board.

Senator Cordy has also served as Vice-Chair of the Halifax-Dartmouth Port Development Commission and as Chair of the Board of Referees for the Halifax Region of Human Resources Development Canada.

Senator Cordy has also given generously of her time to numerous voluntary organizations. She has been a Board Member of Phoenix House, a shelter for homeless youth; a Member of the Judging Committee for the Dartmouth Book Awards; and, a volunteer with her church in Dartmouth.

Senator Cordy is a native of Sydney, Nova Scotia.

Current Member of the following Senate committee(s):
National Security and Defence
Social Affairs, Science and Technology
Rules, Procedures and the Rights of Parliament
Vice-Chair of the Canadian NATO Parliamentary Association
Vice-Chair of the Canadian Branch of the Commonwealth Parliamentary Association

The Honourable JOSEPH A. DAY, Senator

Appointed to the Senate by the Rt. Honourable Jean Chrétien, Senator Joseph Day represents the province of New Brunswick and the Senatorial Division of Saint John-Kennebecasis. He has served in the Senate of Canada since October 4, 2001.

He is currently a Member of the following Senate Committees: Agriculture and Forestry; National Security and Defence; the Subcommittee on Veterans Affairs, National Finance and Transport and Communications. Areas of interest and specialization include: science and technology, defence, international trade and human rights issues, and heritage and literacy. He is a member of many Interparliamentary associations including the Canada-China Legislative Association and the Interparliamentary Union. He is also the Chair of the Canada-Mongolia Friendship Group.

A well-known New Brunswick lawyer and engineer, Senator Day has had a successful career as a private practice attorney. His legal interests include Patent and Trademark Law, and intellectual property issues. Called to the bar of New Brunswick, Quebec, and Ontario, he is also certified as a Specialist in Intellectual Property Matters by the Law Society of Upper Canada, and a Fellow of the Intellectual Property Institute of Canada. Most recently (1999-2000) he served as President and CEO of the New Brunswick Forest Products Association. In 1992, he joined J.D. Irving Ltd., a conglomerate with substantial interests in areas including forestry, pulp and paper, and shipbuilding, as legal counsel. Prior to 1992 he practiced with Gowling & Henderson in Kitchener-Waterloo, Ogilvy Renault in Ottawa, and Donald F. Sim, Q.C. in Toronto, where he began his career in 1973.

An active member of the community, Senator Day recently chaired the Foundation, and the Board of the Dr. V.A. Snow Centre Nursing Home, as well as the Board of the Associates of the Provincial Archives of New Brunswick. Among his many other volunteer efforts, he has held positions with the Canadian Bar Association and other professional organizations, and served as National President of both the Alumni Association (1996) and the Foundation (1998-2000) of the Royal Military Colleges Club of Canada.

Senator Day holds a Bachelor of Electrical Engineering from the Royal Military College of Canada, an LL.B from Queen's University, and a Masters of Laws from Osgoode Hall. He is a member of the bars of Ontario, Quebec and New Brunswick.

The Honourable J. MICHAEL FORRESTALL, Senator

The Honourable J. Michael Forrestall was born at Deep Brook, Nova Scotia on September 23, 1932. After an early career as a journalist with the Chronicle Herald and airline executive, he entered politics and was first elected to the House of Commons in the General Election of 1965.

The Honourable J. Michael Forrestall was subsequently re-elected to the House of Commons in 1968, 1972, 1974, 1979, 1980, and 1984. He first became Official Opposition Defence Critic in 1966, and challenged the government of Prime Minister Pearson on the Unification of the Canadian Forces. Senator Forrestall subsequently served as Defence Critic from 1966-1979 and served over that period of time as a member of the House of Commons Standing Committee on National Defence and Veterans Affairs.

From 1979-1984, the Honourable J. Michael Forrestall served as a member or alternate to the North Atlantic Assembly. During that period of time he also served as General Rapporteur of the North Atlantic Assembly's Military Committee and presented the committee report entitled *Alliance Security in the 1980's.* In November of 1984, Senator Forrestall led the Canadian delegation to the 30th Annual Session of the North Atlantic Assembly.

In 1984, the Honourable J. Michael Forrestall was appointed Parliamentary Secretary to the Minister of Transport, and in 1986, the Minister of Regional Industrial Expansion and the Minister of State for Science and Technology. He was a candidate in the 1988 General Election and defeated. In 1989,

Senator Forrestall was appointed to the Board of Directors of Marine Atlantic, and then in 1990, appointed to the Veterans Appeal Board.

On September 27, 1990, the Honourable J. Michael Forrestall was appointed to the Senate of Canada. From 1993-1994 he was a member of the Joint Parliamentary Committee on Canada's Defence Policy and serves to this day as Defence critic in the Senate. Senator Forrestall is currently Deputy Chair of the Senate Standing Committee on National Security and Defence, and a member of the Joint Committee on the Library of Parliament. The Honourable J. Michael Forrestall has, in the past, served as a member of the Senate Special Committee on the Canadian Airborne Regiment in Somalia, Senate Standing Committee on Foreign Affairs, Senate Sub-Committee on Veterans Affairs and Deputy Chair of the Standing Senate Committee on Transport and Communications and Chair of the Special Senate Committee on Transportation Safety and Security.

The Honourable J. Michael Forrestall is currently a member of the NATO Parliamentary Association, Inter-Parliamentary Union, Commonwealth Parliamentary Association, Canada-U.S. Inter-Parliamentary Group and the Royal Canadian Legion.

The Honourable COLIN KENNY, Senator

Career History

Sworn in on June 29th, 1984 representing the Province of Ontario. His early political career began in 1968 as the Executive Director of the Liberal Party in Ontario. From 1970 until 1979 he worked in the Prime Minister's Office as Special Assistant, Director of Operations, Policy Advisor and Assistant Principal Secretary to the Prime Minister, the Right Honourable Pierre Trudeau.

Committee Involvement

During his parliamentary career, Senator Kenny has served on numerous committees. They include the Special Committee on Terrorism and Security (1986-88) and (1989-91), the Special Joint Committee on Canada's Defence Policy (1994), the Standing Committee on Banking Trade and Commerce, the Standing Committee on National Finance, and the Standing Committee on Internal Economy, Budgets and Administration.
He is currently Chair of the Standing Senate Committee on National Security and Defence. The Senator is also currently a member of the Steering Committee of the Standing Senate Committee on Energy, the Environment and Natural Resources.

Defence Matters

Senator Kenny has been elected as Rapporteur for the Defence and Security Committee of the NATO Parliamentary Assembly. Prior to that he was Chair of the NATO Parliamentary Assembly Subcommittee on the Future Security and Defence Capabilities and Vice-Chair of the NATO Parliamentary Assembly Subcommittee on the Future of the Armed Forces.

EMAIL: kennyco@sen.parl.gc.ca Website:
http://sen.parl.gc.ca/ckenny

The Honourable MICHAEL A. MEIGHEN, Senator

Appointed to the Senate in 1990, the Honourable Michael Meighen serves on various Senate Standing Committees including Banking Trade and Commerce, National Security and Defence, and chairs the Subcommittee on Veterans Affairs. He has also served on the Special Joint Committee on Canada's Defence Policy and the Special Joint Committee on a Renewed Canada, and the Standing Committee on Fisheries.

In his private career, Senator Meighen practiced litigation and commercial law in Montreal and Toronto. He is Counsel to the law firm Ogilvy Renault, and was Legal Counsel to the Deschênes Commission on War Criminals. He is Chairman of Cundill Funds (Vancouver) and sits on the Board of Directors of Paribas Participations Limited, and J.C. Clark Ltd. (Toronto).

Senator Meighen's present involvement in community service includes the Salvation Army (Chair, Toronto Advisory Committee), Stratford Festival (past Chair), Prostate Cancer Research Foundation, Atlantic Salmon Federation, University of King's College (Chancellor), University of Waterloo Centre for Cultural Management (Chair, Board of Governors), Université Laval, McGill University.

Senator Meighen is a graduate of McGill University and Université Laval and was ordered Honorary Doctorate in Civil Law in 2001 from Mount Allison University. He lives in Toronto with his wife Kelly and their three sons.

The Honourable DAVID P. SMITH, P.C., Senator

In addition to being a respected lawyer, the Honourable David Smith has a distinguished record of public service.

Senator Smith earned a B.A. in Political Science from Carleton University in 1964 and an LL.B from Queen's University in 1970. He was called to the Bar in Ontario in 1972. During a distinguished career, Senator Smith has become a foremost practitioner of municipal, administrative and regulatory law.

At the time of this appointment, Senator Smith was Chairman and Partner of Fraser Milner Casgrain LLP, one of Canada's oldest and largest law firms. In 1998, with the formation of Fraser Milner, Senator Smith was named the firm's first Chairman. Previously, Senator Smith was Chairman of Fraser & Beatty.

From 1980-84 Senator Smith sat in the House of Commons as Member of Parliament for the riding of Don Valley East, and also served in cabinet as Minister of State (Small Business and Tourism). In 1972, he was elected to Toronto City Council and re-elected in 1974 and again in 1976, and was subsequently appointed President of Toronto City Council and Deputy Mayor of Toronto.

Senator Smith became very active in the Liberal party in the 1960's and held such positions as National President of the Young Liberals, Executive Assistant to Keith Davey who was national Liberal Party director, and executive assistant to the Hon. Walter Gordon and the Hon. John Turner

.

Senator Smith has lent his time to numerous voluntary and philanthropic organizations. He has sat on the Board of Governors of Exhibition Place, as well as on the boards of the Salvation Army, Toronto General Hospital, Mount Sinai Hospital and George Brown College. He has served as Chairman of the Retinitis Pigmentosa Foundation and as Vice Chairman of the O'Keefe Centre for the Performing Arts.

Current Member of the following Senate committee(s): Legal and Constitutional Affairs; National Security and Defence and Rules, Procedures and the Rights of Parliament

The Honourable JOHN (JACK) WIEBE, Senator

Jack Wiebe is one of Saskatchewan's leading citizens. He has been a highly successful farmer, as well as a member of the Saskatchewan Legislative Assembly.

And in 1994, he became the first farmer to be appointed to the position of Lieutenant Governor of Saskatchewan in almost 50 years.

Senator Wiebe first became known in Saskatchewan as a leader in the farm community. He and his family built a thriving farm in the Main Center district of the province, and from 1970-85 he was owner and President of L&W Feeders Ltd.

Senator Wiebe has been very involved with the co-operative movement, and has served on the Main Center Wheat Pool Committee, the Herbert Credit Union, the Herbert Co-op, and the Saskatchewan Co-operative Advisory Board. He has also been active with the Saskatchewan Wheat Pool, and the Saskatchewan Stock Growers Association.

Senator Wiebe was elected in 1971 and 1975 as a Member of the Saskatchewan Legislative Assembly for the constituency of Morse.

He is the past-chair for Saskatchewan on the Canadian Forces Liaison Council.

Senator Wiebe and his wife, Ann, have raised three daughters and have eight grandchildren.

Current Member of the following Senate committee(s):

Agriculture and Forestry, Deputy Chair; National Security and Defence; Subcommittee on Veterans Affairs; Rules, Procedures and the Rights of Parliament.

BIOGRAPHIES OF COMMITTEE SECRETARIAT

CHIEF WARRANT OFFICER (Ret'd) J.J.L.M. Dessureault, OMM, CD

Chief Warrant Officer Dessureault was born on 2 November 1945 in Shawinigan, Quebec. He enrolled in the Canadian Army on 26 March 1964. In September of that year, he was posted to the 2nd Battalion Royal 22e Régiment, then stationed at Quebec.

During 37 years, he served with the Regiment in Valcartier, Quebec, in Werl, in Northern Germany and later in Lahr, in Southern Germany. In 1983, he was posted to the College militaire royal de Saint-Jean as Master Warrant Officer of the military drill training section. He was promoted Chief Warrant Officer in 1987 during a tour of duty in Cyprus. In 1990, he was named Regimental Sergeant-Major of the 1st Battalion Royal 22e Régiment and in 1992, deployed to Croatia.

He held the appointments of Chief Warrant Officer Land Force Quebec Area and Land Force Command Chief Warrant Officer before being appointed to the prestigious function of Canadian Forces Chief Warrant Officer in June 1999 until his retirement in July 2001. Since, he joints the Standing Senate Committee on National Security and Defence as Military Advisor.

November 1994, he was decorated Member of the Order of Military Merit and promoted to the rank of Officer of Military Merit in January 2000

Chief Warrant Officer (retired) Dessureault M. is married to Marianne Claassen, who is originally from the Netherlands; they have one daughter, Désirée.

MAJOR-GENERAL (Ret'd) G. Keith MCDONALD

MGen McDonald grew up in Edmonton, attended College Militaire Royal in St. Jean and Royal Military College in Kingston (RMC), graduating in 1966 and being awarded his pilot wings in 1967.

MGen McDonald operationally flew the Tutor, T-33, CF5, CF104 and CF18 aircraft accumulating over 4000 hours of pilot in command throughout his 37-year career in the Air Force, Canadian Forces.

He held staff positions at the Royal Military College, in Baden Soellingen Germany, at National Defence Headquarters in Ottawa and at the North American Aerospace Command in Colorado Springs. Command positions include CF18 Squadron Commander, Base and Wing Commander in Baden Soellingen, Germany.

Major General McDonald ended his military career as the Director of Combat Operations at Headquarters North American Aerospace Defence Command at Colorado Springs, USA.

After leaving the military in 1998, General McDonald served a period of "conflict of interest" prior to joining BMCI Consulting as a Principal Consultant in the Aerospace and Defence Division. He left BMCI in 2002 to set up his own consulting company, KM Aerospace Consulting.

Major General McDonald has a degree in Political and Economic Science (Honours Courses) from the Royal Military College. He has completed Canadian Forces staff school, the Royal Air Force (England) Staff College, the National Security studies course, Post Graduate Courses in Business at Queens University, Electronic Warfare Courses at the University of California Los Angeles, the Law of Armed Conflict at San Remo, Italy, and numerous project management courses.

General McDonald is married to the former Catherine Grunder of Kincardine, Ontario, and they have two grown daughters, Jocelyn and Amy.

GRANT DAWSON

Grant Dawson joined the Parliamentary Research Branch of the Library of Parliament in March 2003. He serves as the Research Officer for the Standing Senate Committee on National Security and Defence.

Dr. Dawson received his Double Honours B.A. (History and English) and M.A. (History) from the University of Manitoba, and his Ph.D. in History from Carleton University, Ottawa. His dissertation is the first critical examination of the Canadian government's decision-making in relation to its contribution of troops to the Somalia peace operations in 1992. Dr. Dawson's academic research interests include Canadian diplomatic and military history, peace history (especially the writings of Jean de Bloch), peacekeeping and peacebuilding. Dr. Dawson has published in the "Journal of Contemporary History" (lead article in January 2002), "International Journal" (Spring 2000), and the 2001 and 2003 editions of the foreign policy essay collection "Canada Among Nations."

Dr. Dawson has lectured for the Royal Military College, Kingston, and was a recipient of a Department of National Defence / Security and Defence Forum Ph.D. Fellowship in 2001-02 and 2002-03.

BARBARA REYNOLDS

Barbara Reynolds has worked with Canadian parliamentarians for 29 years in various capacities. Trained as a sociologist, she worked for 10 years as a research officer for the Library of Parliament, assisting committees involved in the area of social affairs. During this time she served for three years as Director of Research for the House of Commons Committee on Disabled Persons that produced the landmark report entitled Obstacles.

An associate of the Parliamentary Centre for 15 years, she organized fact-finding visits for legislators to and from the United States as well as study tours to Canada for legislators from African and Southeast Asian countries. She coordinated professional development programs for legislators and their staff, and wrote guidebooks on the operation of parliamentarians' offices in Ottawa and in their constituencies. In addition, she served as the director of the Parliament, Business and Labour Trust, a program under which legislators spend up to a week with major corporations and trade unions.

From 1985 to 2000 she also served as adviser to the Canadian Group of the Inter-Parliamentary Union, the worldwide organization of legislators that serves as the parliamentary wing of the United Nations.

In April 1998, she joined the Senate Committees Directorate as a Committee Clerk. Her committee assignments have included: Security and Intelligence; Boreal Forest, Fisheries; Transportation Safety; Veterans Affairs; and National Security

and Defence. In June 2002, she received the Speaker's Award of Excellence for her work in the Senate.

SENATE OF CANADA

National Security and Defence,
Standing Senate Committee
2nd Session, 37th Parliament

INDEX

Canada's Coastlines:
The Longest Under-Defended Borders in the World
Volume 2
Report, October 2003

Note - bold numerical **2**: refers to pages within Volume 2

200 (Nautical) mile exclusive economic zone,
2:4,10,22,28,34,40,46,55,57,100-4

Air Canada Pilots Association
Security Concerns Letter (from Don Johnson to David Collenette), **2**:105-9

Atkins, Hon. Norman K., Standing Senate Committee on National Security and
Defence, **2**:139-41

Banks, Hon. Tommy, Standing Senate Committee on National Security and Defence,
2:142-3

CACPP
See **Canadian Air Carrier Protection Program (CACPP)**

Canada Customs and Revenue Agency (CCRA), 2:59-60

Canada Shipping Act, 2:59,61

Canadian Air Carrier Protection Program (CACPP), 2:107

Canadian Air Transport Security Authority (CATSA), 2:106

Canadian Coast Guard (CCG)
Assets, **2**:90-1
Fleet, **2**:71-78
Maritime Surveillance, **2**:79

Canadian Forces (CF)
See National Defence Department (DND)

CATSA
See **Canadian Air Transport Security Authority (CATSA)**

CCG
See **Canadian Coast Guard (CCG)**

CCRA
See **Canada Customs and Revenue Agency (CCRA)**

Collenette, David, Transport Minister, **2**:105-9

Consolidated Statutes and Regulations of Canada
Ports, 2:61-2

Contiguous zone, 2:100-1

Cordy, Hon. Jane, Standing Senate Committee on National Security and Defence, **2**:144

Cutter, 2:95-99

Dawson, Grant, Secretariat, Standing Senate Committee on National Security and
Defence **2**:160

Day, Hon. Joseph A., Standing Senate Committee on National Security and Defence,
2:145-6

Dessureault, Chief Warrent Officer (Ret'd) J.J.L.M., OMM, CD, Secretariat,
Standing Senate Committee on National Security and Defence, **2**:156-7

Dewar, John, 2:95-9

DFO
See **Fisheries and Oceans Department (DFO)**

DND
See **National Defence Department (DND)**

Exhibits, 2:130-6
Federal statutes
See Consolidated Statutes and Regulations of Canada

Fisheries and Oceans Department (DFO), 2:54,58,79,87

Forrestall, Hon. J. Michael, Deputy chair, Standing Senate Committee on National
Security and Defence, **2**:147-8

HFSWR
See **High Frequency Surface Wave Radar (HFSWR)**

High Frequency Surface Wave Radar (HFSWR), 2:104

Kenny, Hon. Colin, Chair, Standing Senate Committee on National Security and
Defence, **2**:149-50

Maritime Security Policies
Australia, **2**:3-5
Brazil, **2**:6-7
Chile, **2**:8-11
France, **2**:12-15
India, **2**:16-18
Israel, **2**:19-21
Italy, **2**:22-24
Japan, **2**:25-27
Netherlands, **2**:28-32
New Zealand, **2**:33-36
Norway, **2**:37-39
South Africa, **2**:40-42
Spain, **2**:43-45
United Kingdom, **2**:46-49
United States, **2**:50-53

McDonald, Major-General (Ret'd) Keith, Secretariat, Standing Senate Committee on
National Security and Defence, **2**:158-9

Media relations, 2:137-8

Meighen, Hon, Michael A., Standing Senate Committee on National Security and
Defence, **2**:151

Morris, Veronica, Media Relations Coordinator, Standing Senate Committee on National
Security and Defence, **2**:137

National Defence Department (DND)
Arcturus, **2**:86,91
Aurora, **2**:85-6,91
Fleet, **2**:79,86
Sea King, **2**:86.91,95

Order of Reference 2:1

PAL
See **Provincial Airlines Limited (PAL)**

Ports
Commodities – Imported, **2**:65
Statutes, **2:**61
Tonnage, **2**:63-4

Provincial Airlines Limited (PAL)
Aerial Maritime Surveillance, **2**:54-8,89

RCMP
See **Royal Canadian Mounted Police (RCMP)**

Reynolds, Barbara, Secretariat, Standing Senate Committee on National Security and
Defence, **2**:161-2

Royal Canadian Mounted Police (RCMP)
Patrol vessels, **2**:88

SAR
See **Search and Rescue (SAR)**

Search and Rescue (SAR), 2:90-2

Smith, Hon. David P., Standing Senate Committee on National Security and
Defence, **2**:152-3

Statutes
See Consolidated Statutes and Regulations of Canada

Surveillance technology
Cost Comparison, **2**:103-4

Transport Canada, 2:55-6,59,88,95,106-7

UNCLOS
See **United Nations Convention on the Law of the Sea (UNCLOS)**

United Nations Convention on the Law of the Sea (UNCLOS), 2:100-2

United States Coast Guard, 2:98

Vessels

Registration and licensing, **2**:59

Wiebe, Hon. John (Jack), Standing Senate Committee on National Security and
Defence, **2**:154-5

Witnesses, 2:110-29