National Defence

1997-98
Estimates

Part III

Expenditure Plan

The Estimates Documents

The Estimates of the Government of Canada are structured in three Parts. Beginning with an overview of total government spending in Part I, the documents become increasingly more specific. Part II outlines spending according to departments, agencies and programs and contains the proposed wording of the conditions governing spending which Parliament will be asked to approve. The Part III documents provide additional detail on each department and its programs primarily in terms of the results expected for the money spent.

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Ottawa, Canada K1A 0S9

Catalogue No. BT31-2/1998-III-57
ISBN 0-660-60103-6

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Approved

Ministre de l'Environnement

Preface

This document is a report to Parliament to indicate how the resources voted by Parliament have or will be spent. As such, it is an accountability document that contains several levels of details to respond to the various needs of its audience.

The Part III for 1997-98 is based on a revised format intended to make a clear separation between planning and performance information, and to focus on the higher level, longer term plans and performance of departments.

The document is divided into four sections:

- The Minister's Executive Summary;
- Departmental Plans;
- Departmental Performance; and
- Supplementary Information

It should be noted that, in accordance with Operating Budget principles, human resource consumption reported in this document will be measured in terms of employee full-time equivalents (FTEs).

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Section I
Executive Summary

A. MINISTER'S EXECUTIVE SUMMARY

I am pleased to present the Plans and Priorities, and the Annual Performance Report, for the Department of National Defence. These documents describe our objectives and detail our spending plans for the next three fiscal years, as well as detailing our accomplishments in 1995-96. These documents also represent a significant change in the way of reporting to Parliament. The emphasis placed on the strategic overview and on a longer planning perspective paves the way for readers to assess the very real progress made in the delivery of defence services.

The Department of National Defence's goal is to bring together the activities and resources which enable the Canadian Forces to carry out their roles of defending Canada and North America, and contributing to world peace. In addition to these responsibilities which arise under the National Defence Act, the Department has a responsibility under the Emergency Preparedness Act to advance civil preparedness in Canada for emergencies of all types.

The Department has identified and given priority to those functions that best meet the real needs of Canadians, while reorganizing activities to render them more effective and efficient. We have also recently launched a number of additional initiatives which may influence the future order of priorities, but which will nevertheless make the Defence program a more effective instrument of the public's will. The study of Military Justice and Military Police Investigation Services, and the planned examination by the Standing Committee on National Defence and Veterans Affairs of the socio-economic challenges facing military personnel today, are only indicative of work which is now underway to chart a better course for the future of the Canadian Forces.

The following pages also outline the steps we have taken toward development of meaningful performance measures and the progress which is being made; readers will appreciate the efforts of the Department to assess, in as objective a manner as possible, the very real progress recorded.

I am confident that the approach we have adopted in delivering defence services, and the substantial efforts to foster innovation and change in the face of diverse challenges, will ensure that the Department of National Defence and the Canadian Forces continue to meet Canada's needs.

Douglas Young
Minister of National Defence

B. Spending Authorities

1. Authorities for 1997-98 - Part II of the Estimates

Figure 1: Financial Requirements by Authority

Vote (thousands of dollars)		**1997-98 Main Estimates**	1996-97 Main Estimate
	National Defence		
1	Operating expenditures	**6,908,689**	7,148,221
5	Capital expenditures	**2,118,000**	2,484,197
10	Grants and Contributions	**166,322**	172,333
(S)	Minister of National Defence - Salary and motor car allowance	**49**	49
(S)	Pensions and annuities paid to civilians	**175**	75
(S)	Military pensions	**563,393**	605,876
(S)	Contributions to employee benefit plans	**159,890**	144,249
Total Department		**9,916,518**	10,555,000

Figure 2: Departmental Overview

(thousands of dollars)	Main Estimates* 1996-97	**Main Estimates 1997-98**	Planned 1998-99	Planned 1999-00
Gross Estimates	10,962,919	10,306,396	9,711,839	10,001,626
Revenue to the Vote	(407,919)	(389,878)	(334,321)	(332,108)
Total Main Estimates	10,555,000	9,916,518	9,377,518	9,669,518
Revenue Credited to the Consolidated Revenue Fund	(96,380)	(78,966)	(70,696)	(70,696)
Estimated Cost of Services by other Departments	852,152	845,230	831,312	831,437
Net Cost of the Department	**11,310,772**	**10,682,782**	**10,138,134**	**10,430,259**

* Does not reflect Supplementary Estimates...Actual Main Estimates only.

Figure 3: Votes - Wording and Amounts

Vote (dollars)		1997-98 Main Estimates
1	National Defence -- Operating expenditures and authority for total commitments, subject to allotment by the Treasury Board, of $13,670,726,000 for the purposes of Votes 1, 5 and 10 of the Department regardless of the year in which such commitments will come in course of payment (of which it is estimated that $4,087,837,000 will come due for payment in future years), authority to make payments from any of those Votes to provinces or municipalities as contributions toward construction done by those bodies, authority, subject to the direction of the Treasury Board, to make recoverable expenditures or advances from any of those Votes in respect of materials supplied to or services performed on behalf of individuals, corporations, outside agencies, other government departments and agencies and other governments and authority to expend revenue, as authorized by Treasury Board, received during the year for the purposes of any of those Votes	**6,908,689,000**
5	National Defence - Capital Expenditures	**2,118,000,044**
10	National Defence - The grants listed in the Estimates, contributions to the North Atlantic Treaty Organization military budgets, common infrastructure program and airborne early warning and control systems and, in accordance with Section 3 of the *Defence Appropriation Act*, 1950, the transfer of defence equipment and supplies and the provision of services and facilities for defence purposes	**166,321,956**

2. Use of 1995-96 Authorities

Figure 4: Use of 1995-96 Authorities - Volume II Part I of the Public Accounts

Vote (dollars)		Main Estimates	Total Available for Use	**Actual Use**
	Budgetary			
	National Defence			
	Defence Services Program			
1	Operating expenditures	7,484,191,000	7,751,344,468	**7,723,426,107**
5	Capital expenditures	2,673,951,002	2,646,764,902	**2,686,297,377**
10	The grants listed in the Estimates and contributions	174,672,998	200,368,999	**194,965,938**
(S)	Minister of National Defence - Salary and motor car Allowance	48,685	48,645	**48,645**
(S)	Payments to dependants of certain members of the Royal Canadian Air Force killed while serving as instructors under the British Commonwealth Air Training Program	73,834	167,191	**167,191**
(S)	Military pensions	602,815,481	597,923,111	**597,923,111**
(S)	Contributions to employee benefit plans	144,247,000	151,469,000	**151,469,000**
(S)	Spending of proceeds from the disposal of surplus Crown assets	-----	19,718,628	**19,300,020**
(S)	Federal Court Awards	-----	184,453	**184,453**
(S)	Collection Agency Fees	-----	24,554	**24,554**
	Total Program - Budgetary	11,080,000,000	11,368,013,951	11,373,806,396
	Non-budgetary			
L11c	Authorization for working capital advance account. Appropriation Act, No. 1, 1976. Limit $100,000,000 (Net)	-----	62,369,828	(7,538,430)
L15	Loans in respect of housing projects. Special Appropriation Act, 1963. Limit $37,000,000 (Gross)	-----	13,086,217	-----
	Total Program - Non-budgetary	-----	75,456,045	(7,538,430)

Section II
Departmental Plan

A. Summary of Departmental Plans and Priorities

The mission of the Department of National Defence and the Canadian Forces is to defend Canada and Canadian interests and values while contributing to international peace and security. Canada's defence policy calls for maintenance of multi-purpose, combat-capable forces specifically charged with:

- defending Canada;
- defending North America; and
- contributing to international security.

Although a detailed description of the Department's roles and responsibilities, and objectives and priorities can be found in the Departmental Overview, the following is a broad listing of key activity areas:

- demonstrating Canada's defence capabilities to fulfil the objectives stated in the 1994 Defence White Paper through the conduct of operational missions around the world;
- conducting domestic operations involving assistance to civil authorities and to individuals
  - such operations include provision of assistance in the event of civil disasters (floods, forest fires, hurricanes, snow storms, etc.) and humanitarian assistance (searches for missing persons, diver assistance, Search and Rescue, etc.); and assistance to other governments. This latter category includes a number of activities, such as Counter-Drug operations in cooperation with the Royal Canadian Mounted Police and fisheries patrols in cooperation with Fisheries and Oceans Canada;
- maintaining a capability to rescue hostages and respond to nuclear, biological and chemical use by terrorists;
- participating in aerospace warning and control operations in accordance with the renewed NORAD Agreement;
- the Canadian Forces (CF) remaining prepared to deploy on multilateral operations anywhere in the world under United Nations (UN) auspices, or in the defence of a NATO member state, contingency forces of up to a maritime task group, a brigade group plus an infantry battalion group, a wing of fighter aircraft and a squadron of tactical transport aircraft;

- working closely with industry associations to determine industrial base requirements and with other governments to harmonize industrial and defence policies; and

- increasing the level of support to Cadet organizations to help expand their role in building citizenship and advancing national unity; and, paying special attention to augmentation of Cadet parade strength and to the unique youth needs to northern, remote and aboriginal communities.

B. Departmental Overview

1. ROLES, RESPONSIBILITIES AND MISSION

The Government is committed to promoting economic growth, providing for the security and social well-being of Canadians and preserving a modern, united country. Following extensive public consultation, the Government framed its strategic defence vision for Canada in the post-Cold War world in the 1994 Defence White Paper. This document sets out the policy basis for the planning, programming and operations of the Department of National Defence and the Canadian Forces.

The mission of the Department of National Defence and the Canadian Forces is to defend Canada and Canadian interests and values while contributing to international peace and security. Capable armed forces remain an essential component of national and multilateral responses to possible challenges to sovereignty, transgressions of international law and order, and the fulfilment of our commitments to the international community. Canada's defence policy calls for the maintenance of multi-purpose, combat-capable forces to meet Canada's security needs at home and abroad. That is, forces capable of:

- defending Canada — protecting Canada's national territory and areas of jurisdiction; helping civil authorities protect and sustain national interests; and assisting in national emergencies;

- defending North America — protecting the Canadian approaches to the continent in partnership with the United States, particularly through NORAD; promoting Arctic security; and pursuing opportunities for defence cooperation with the US in other areas; and

- contributing to international security — participating in a full range of multilateral operations through the United Nations, NATO, other regional organizations and coalitions of like-minded countries; supporting humanitarian relief efforts and restoration of conflict-devastated areas; and participating in arms control and other confidence-building measures.

The transfer of Emergency Preparedness Canada to the Department of National Defence on 1 April 1996 also brought with it the new task of ensuring an adequate and reasonably uniform level of civil emergency preparedness throughout Canada.

2. EXTERNAL FACTORS INFLUENCING THE PROGRAM

The 1994 Defence White Paper continues to represent an appropriate defence policy for Canada. The multi-purpose, combat-capable forces called for in the defence policy help provide the Government with the necessary flexibility in responding to an unstable and unpredictable security environment.

Though no global military threat to stability currently exists, conflict persists, primarily caused by ethnic tensions and boundary and resource disputes. New issues have also moved to the forefront of the international security agenda, including the proliferation of weapons of mass destruction and their means of delivery, various forms of extremism, environmental degradation, mass migration, international crime and the collapse of effective governance in a number of countries.

Canada faces no current threat of foreign military invasion or incursion into its territory. Nor, for the time being, is there a visible threat or risk of any nation using weapons of mass destruction against North America. Yet the Government needs to maintain a prudent level of forces to protect Canada's sovereignty and to defend Canada and North America should such threats ever arise. In part, this is accomplished most effectively in cooperation with the United States, and bilateral arrangements with the US such as the NORAD agreement have been renewed and updated to reflect new fiscal and strategic realities. The Canadian Forces also contribute to other national objectives, including surveillance and control of Canadian territory, airspace and sea approaches, aid to the civil power, search and rescue, fisheries patrol, drug interdiction, environmental protection, disaster relief and providing support in national emergencies.

Canada remains committed to contributing to international security by participating in a full range of multilateral operations through the United Nations, NATO and other regional organizations or coalitions of like-minded nations. For example, when a humanitarian crisis was looming in Zaire in late 1996, Canada took the lead in efforts to organize an international force under UN auspices. Canada recently agreed to participate in the establishment of a multinational United Nations Standby Forces High-Readiness Brigade (SHIRBRIG) to deal with other increasingly difficult humanitarian crises the world now faces.

Both the UN and NATO have reached major milestones in their development. For the UN, the euphoria generated by the end of the Cold War was replaced by uncertainty and frustration following setbacks in Somalia, Rwanda and the Balkans. The failure of some member states to pay their assessed dues and the increasing tendency for some of them to turn inwards to deal with their own domestic priorities have led the Organization to the brink of financial bankruptcy, with all that this implies for its ability to act. Canada's study on improving the UN's rapid reaction capability presented to the UN's 50th General Assembly contributed to the wider effort of member states to renew the UN by making it more relevant and effective.

NATO has made a significant contribution to promoting and ensuring stability by leading the UN-mandated mission in the Balkans and by expanding its outreach efforts to members of the North Atlantic Cooperation Council and the Partnership for Peace program. Beyond this, plans for NATO's enlargement are proceeding in parallel with efforts to build a comprehensive security architecture for Europe and a newly defined relationship with Russia.

The principal goal of the Defence Program is to enable Canada to maintain multi-purpose, combat-capable forces to meet the defence objectives that the Government has set out in the White Paper. Most areas of defence are being streamlined to produce a leaner Defence Program which reflects only the most essential priorities. To this end, the maximum possible level of resources is being devoted to updating and enhancing the operational capabilities of the Canadian Forces.

3. ORGANIZATION AND PROGRAM COMPOSITION

The Defence Services Program has been divided into eight activities. Three of the activities, Maritime Forces, Land Forces and Air Forces, provide the combat capabilities of the Canadian Forces. Three others provide personnel support, materiel, infrastructure and environment support, and strategic communications for both the Canadian Forces and the Department. Joint Operations and Civil Emergency Preparedness provides the staff elements designed to plan, command and conduct joint operations and to coordinate preparedness for civil emergencies in Canada. The final activity provides for the development of policies and the provision of management services for the Department.

The *National Defence Act* charges the Minister of National Defence with the overall control and management of the Canadian Forces and all matters relating to national defence. The Minister is assisted by two senior advisors, the Deputy Minister and the Chief of the Defence Staff.

The Deputy Minister draws her authority principally from the *Interpretation Act*, the *Financial Administration Act* and the *Public Service Employment Act*. Of these, the Interpretation Act is the most significant, in that it designates the Deputy Minister as the Minister's alter ego with respect to the latter's overall departmental responsibilities. The other two Acts assign to the Deputy Minister specific responsibilities for financial administration in the Department as a whole and for personnel administration of the civilian employees of the Department.

The Deputy Minister is the senior civilian advisor to the Minister on all departmental affairs of concern or interest to the Government and to the agencies of Government, principally the Privy Council Office, Treasury Board Secretariat, and the Public Service Commission. She is responsible for ensuring that all policy direction emanating from the Government is reflected in the administration of the Department and in military plans and operations.

The Chief of the Defence Staff is the senior military advisor to the Minister and is responsible for the effective conduct of military operations and the readiness of the Canadian Forces to meet commitments assigned to the Department of National Defence by the Government.

The Chief of the Defence Staff draws his authority from the *National Defence Act*, which charges him with control and administration of the Canadian Forces. It specifically requires that all orders and instructions to the Forces be issued by or through him and, by inference, assigns to him responsibility for financial and personnel matters relating to members of the Canadian Forces.

At National Defence Headquarters, the Deputy Minister and the Chief of the Defence Staff are supported by the Vice Chief of the Defence Staff, the Deputy Chief of the Defence Staff, and Assistant Deputy Ministers for Policy, Personnel, Material, and Finance and Corporate Services. The Assistant Deputy Minister for Defence Information Services reports through the Vice Chief of the Defence Staff and provides a single departmental integrated information management organization.

The 1994 Defence White Paper directed DND to reduce the resources devoted to command and control by at least one-third, a target increased internally to approach 50%. The Management, Command and Control Re-engineering (MCCR) initiative, begun in December 1994, is now well underway and appropriate implementation plans are being developed to put the new

structure in place between 1997 and 1999. As part of this, the command headquarters for the maritime, land and air forces will be eliminated by 1997 and their essential functions delivered from National Defence Headquarters (NDHQ) and lower echelons. Outside of National Defence Headquarters is the Canadian Forces Northern Area which is a formation that provides specialized functions within the Canadian Forces. Commanders of Commands are responsible to the Chief of the Defence Staff for the operation of their Command and its subordinate formations.

It is this structure that is tasked to deliver the total Defence Services Program and all the related activities included in it.

All authority for decisions on the allocation of resources in DND is vested in, and may be delegated by, the Minister. The departmental structure, through which decisions on resource allocation are made, is based upon a hierarchy of committees which exercise their authority either through consensus or advisors to their respective chairpersons. Managerial accountability for the results achieved under each activity is vested, for the most part, with the respective heads of Commands and Groups. Accountability is brought together by National Defence Headquarters senior management and Commanders of Commands, and is exercised through the chain of command. To encourage efficiency and flexibility, the Department has adopted operating budgets, corporate accounts, apportioned corporate accounts and business planning as key resource management concepts.

4. CORPORATE OBJECTIVES AND PRIORITIES

The mission of the Department of National Defence and the Canadian Forces is to defend Canada and Canadian interests and values while contributing to international peace and security.

Our vision is a highly professional Defence team, fully capable of executing our mission and viewed with pride by Canadians.

The following Strategic Objectives support the Mission and Vision of the Department and the CF:

- to generate and employ effective, multi-purpose, combat-capable forces;
- to provide sound advice to the Government and timely information to Parliament and the Canadian public on defence and national security;
- to play a unifying role and provide effective support to the Government's broad programs and policies;
- to strengthen the Defence Team based on our Vision and Shared Values; and
- to optimize the use of resources available and to promote efficiency and cost effectiveness.

The White Paper assigns the following operational tasks to the Department of National

Defence (DND) and the Canadian Forces (CF):

- **Defending Canada** - protecting Canada's national territory and areas of jurisdiction, helping civil authorities to protect and sustain national interests, and assisting in national emergencies. DND and the CF will maintain the ability to:

  - protect Canadian sovereignty through surveillance and control of Canada's territory, airspace and maritime areas of jurisdiction;

  - assist other government departments in achieving national goals in areas such as fisheries protection, drug interdiction and environmental protection;

  - contribute to humanitarian assistance and disaster relief within 24 hours and sustain this effort as long as possible;

  - provide a national Search and Rescue (SAR) capability;

  - assist in mounting an immediate and effective response to terrorist incidents; and

  - respond to requests for aid to the civil power and to sustain this response for as long as necessary.

- **Defending North America** - protecting the Canadian approaches to the continent in partnership with the US, in accordance with the CANUS Basic Security Plan and particularly through NORAD; promoting Arctic security; and pursuing opportunities for defence with the US in other areas. In this regard, the Department and the CF will:

  - maintain the ability to operate effectively at sea, on land and in the air with the military forces of the US;

  - contribute to the provision of aerospace surveillance and control and the collection, processing and dissemination of missile warning information through NORAD;

  - maintain Canada's participation in the Canada-US Test and Evaluation Program, the Defence Production and Development Sharing Arrangements and other existing bilateral arrangements; and

  - examine ballistic missile defence options with the US, focusing on research and building on existing communications and surveillance capabilities.

- **Contributing to international security** - participating in a full range of multilateral operations through the UN, NATO, other regional organizations

and coalitions of like-minded countries; supporting humanitarian relief efforts and restoration of conflict-devastated areas; and participating in arms control and other confidence-building measures. The Department and the CF will:

- maintain a capability to assist the Department of Foreign Affairs and International Trade (DFAIT) in the protection and evacuation of Canadians from areas threatened by imminent conflict;

- participate in multilateral operations anywhere in the world under UN or other auspices or in defence of a NATO member state;

- honour specific commitments to NATO as outlined in the 1994 Defence White Paper;

- expand bilateral and multilateral contacts and exchanges with selected partners in Central and Eastern Europe, the Asia-Pacific region, Latin America and Africa, with particular emphasis on peacekeeping, confidence-building measures and civil-military relations; and

- support the verification of existing arms control agreements and participate in the development of future accords.

• **Fostering emergency preparedness** - ensuring an appropriate level of emergency preparedness across Canada through an integrated and cooperative program.

5. RENEWAL IN THE DEPARTMENT OF NATIONAL DEFENCE AND THE CANADIAN FORCES

DND and the CF remain committed to achieving the objectives set out in the 1994 Defence White Paper. The key challenge, in this regard, will be to deliver the operational capabilities called for in the White Paper while also reducing the overall cost of defence as part of the Government's broader deficit and debt management strategy.

DND and the CF are in the midst of a major renewal and re-engineering activity that is having a profound impact on departmental processes. While largely initiated as a result of budget reductions, the new processes will have an overall positive impact, improving the Department's ability to concentrate a significantly increased proportion of available resources on the delivery of effective and well-equipped combat-capable armed forces. Many changes have also been introduced that will have a positive impact on the working environment and on quality of life issues as they affect all members of the Defence Team.

A key feature of the renewal effort involves changes to the command and control structure of the Department and CF. The 1994 Defence White Paper directed DND to reduce the resources devoted to command and control by at least one-third, a target increased internally to approach 50%. The Management, Command and Control Re-engineering (MCCR) initiative, begun in December

1994, is now well underway and appropriate implementation plans are being developed to put the new structure in place between 1997 and 1999. As part of this, the command headquarters for the maritime, land and air forces will be eliminated by 1997 and their essential functions delivered from National Defence Headquarters (NDHQ) and lower echelons.

To maximize the resources available for operational forces, the Department will ensure that the resources made available by Government are used in an effective and prudent manner and that efficiencies are achieved in all areas. To encourage efficiency and flexibility, the Department has adopted operating budgets, corporate accounts, apportioned corporate accounts and business planning as key resource management concepts.

To accomplish the missions assigned by Government, the CF will provide multi-purpose, combat-capable armed forces able to carry out joint and combined sea, land and air operations. The CF will be capable of unilaterally conducting Operations Other Than War (OOTW) as well as warfighting within the context of an alliance or coalition. Increased emphasis will be placed on joint operations and on development of a leaner, more streamlined command and control structure. To keep the CF operationally relevant, a judicious and clearly focused recapitalization effort will be undertaken, including specific efforts to improve overall strategic mobility and deployability.

The operational environment in which the CF will operate is rapidly changing and the Forces will need to adjust to remain effective. In particular, the development and deployment of information technology and precision attack capabilities have significantly enhanced command and control capabilities and the effectiveness of offensive forces. At the same time, these advances have also increased the vulnerability of friendly forces to attack. An increased reliance on computers and information systems has led to the development of concepts such as Information Warfare and its military application, Command and Control Warfare. While the CF have developed or adopted appropriate doctrine in this area, operational units remain relatively unprepared in terms of equipment and tactics. To rectify this situation, Deputy Chief of Defence Staff (DCDS) and Assistant Deputy Minister for Defence Information Systems staffs will develop a strategy to incorporate these concepts into CF force structure and operational planning.

Computers and simulation are also playing an increasingly important role in training, whether for individuals and crews or for large-scale, multi-national exercises. If the CF are to retain the ability to operate with Canada's principal Allies, they must be provided similar means to train; this will require an increased focus on war gaming, distributed information systems and modern simulation technology. A departmental strategy and vision for the use of war gaming and simulation in DND will be developed, largely based on work contained in Chief Review Services study E 3/94. The first task will be development of architectural, communication and geomatic standards for the use of simulation. The central focal point for war gaming and simulation in DND will be the DCDS Group.

The military personnel levels directed in the 1994 Defence White Paper have essentially been attained and the large reductions that have marked the past three years will cease. The challenge now is to ensure that the maximum number of military personnel are available for operations; to this end, the CF has undertaken a comprehensive review of the Military Occupational Structure and the Department will pursue Alternative Service Delivery (ASD) options to determine the most cost-effective way of conducting non-core activities. The intention is to increase the

overall sustainability of the Forces through initiatives such as those just mentioned and through other initiatives such as the new Mobilization Plan and the implementation of many of the recommendations put forward by the Senate, the Standing Committee on National Defence and Veterans Affairs (SCONDVA), and the Special Commission on the Restructuring of the Reserves.

In order to successfully execute our Mission, the following specific areas will be given a particularly high priority:

- a renewed emphasis on the values of professionalism, loyalty, integrity and mutual respect;
- the structuring and manning of the CF to ensure that all tactical and deployable operational and operational support elements are manned at the highest priority within a streamlined command and control structure;
- the provision of equipment that enables CF personnel to perform their operational missions without unnecessary risk in terms of combat capability or safety; in particular, plans include the acquisition of a modern maritime helicopter and adequate resources for our Land Forces to train for and conduct their assigned missions, up to and including warfighting as part of a combined force;
- emphasis on improving the morale of our personnel and their quality of life; and
- improved communications both upwards and downwards.

6. FINANCIAL SUMMARY

Figure 5: Appropriated Planned Spending

(thousands of dollars)	Main Estimates* 1996-97	Main **Estimates 1997-98**	**Planned 1998-99**	**Planned 1999-00**
Business Lines/Activities				
Maritime Forces	2,139,198	2,034,140	1,845,937	1,875,628
Land Forces	3,039,846	2,702,627	2,707,409	2,691,722
Air Forces	2,563,302	2,385,186	2,298,646	2,573,733
Joint Operations and Civil Emergency Preparedness	339,650	338,103	315,047	307,886
Communications and Information Management	372,795	404,134	368,339	361,754
Support to the Personnel Function	660,152	833,769	760,950	768,127
Materiel, Infrastructure and Environment Support	968,044	762,759	642,515	649,899
Department/Forces Executive	472,013	455,800	438,675	440,769
Total	10,555,000	9,916,518	9,377,518	9,669,518

* Does not reflect Supplementary Estimates .....Actual Mains only

Figure 6: Net Cost of the Program by Business Line/Activity

(thousands of dollars) **1997-98 Main Estimates**

	Operating	Capital	Grants and Contributions	Gross Total	Statutory Payments[1]	Gross Expenditures	Less: Revenue Credited to the vote	Main Estimates
Business Lines/Activities								
Maritime Forces	1,554,451	503,783	----	2,058,234	----	2,058,234	(24,094)	2,034,140
Land Forces	2,221,194	639,380	----	2,860,574	----	2,860,574	(157,947)	2,702,627
Air Forces	1,996,741	545,041	---	2,541,782	----	2,541,782	(156,596)	2,385,186
Joint Operations and Civil Emergency Preparedness	270,331	67,072	4,683	342,086	----	342,086	(3,983)	338,103
Communications and Information Management	298,389	108,851	----	407,240	----	407,240	(3,106)	404,134
Support to the Personnel Function	760,914	73,824	300	835,038	19,175	854,213	(20,444)	833,769
Materiel, Infrastructure and Environment Support	609,941	157,663	----	767,604	----	767,604	(4,845)	762,759
Department/Forces Executive	290,938	22,386	161,339	474,663	----	474,663	(18,863)	455,800
	8,002,899	**2,118,000**	**166,322**	**10,287,221**	**19,175**	**10,306,396**	**(389,878)**	**9,916,518**
Other Revenues and Expenditures								
Revenue credited to the Consolidated Fund								(78,966)
Estimated Cost of services by other Departments								845,230
Net Cost of the Program								**10,682,782**

(1) Do not include Contributions to employee benefit plans and other which are allocated in the operating expenditures

C. Details by Business Lines/Activities

C.1 MARITIME FORCES

1. OBJECTIVES:

- the defence of Canada's maritime areas of responsibility, the maintenance of Canadian sovereignty and the provision of military support to civil authorities;
- the defence of the North American maritime areas of interest in cooperation with the United States;
- contributing to international security through participation in multilateral maritime or joint operations anywhere in the world under the auspices of the UN or NATO or as part of a coalition of like-minded nations;
- contributing to world peace by supporting humanitarian relief efforts and restoration of conflict-devastated areas; and
- maintaining an affordable and versatile personnel support strategy which includes the creation and improvement of facilities to support the well-being of our sailors.

2. OPERATING CONTEXT

In the national context, Canada borders on three oceans, has the world's longest coastline and has responsibility for a vast ocean economic zone. Its ocean areas are subjected to some of the harshest weather conditions on earth. Further, maritime systems are the leading edge in many technology areas. Continuing success is rooted in research and development - an investment that is key to maintaining an effective and capable maritime force able to meet the challenges of the future.

In the international context, while it is true that global war is less likely, the world is still a tumultuous and often violent place. Canada's Maritime Forces have been called upon to deploy worldwide in support of a variety of missions. This trend is expected to continue. Deployments in support of alliance commitments, peacekeeping and humanitarian missions necessitate the ability to operate at great distances for prolonged periods and in a wide variety of conditions often including climatic extremes.

Maritime Forces must be capable of operating and addressing threats in all three dimensions of ocean space: above, on and under the surface. Maritime Command will accomplish this by means of a demanding operational deployment programme, a continuing fleet modernization plan, a comprehensive training activity and the application of contemporary command and management concepts and technologies.

Finally, the heart of a successful organization is its people and as such, Maritime Forces need a well educated and well motivated defence team. Together, the military and civilian members of the team ensure that the Maritime Forces are ready to take on the demands of difficult work in rigorous settings. The above issues, when taken as a whole, present a challenging operating context. Maritime Command plans to address these challenges with a family of key initiatives based on the principles of size, balance, multi-purpose design, interoperability and affordability.

3. KEY INITIATIVES - Force Structure

Ensuring the correct size of our Maritime Forces in a time of restricted resources has been a major thrust of Maritime Command over these past several years. Canada has been able to reduce the quantitative size of its Maritime Forces through the application of modern technology and contemporary management sciences. The 12 HALIFAX Class frigates are qualitatively far more effective than the older steam destroyers they replace. Likewise, significant reductions in infrastructure support costs are currently being pursued. The implementation of the Business Planning process and the amalgamation of CFB Halifax and CFB Shearwater support services are examples of this type of action.

The second initiative centres on maintaining the principle of balance. There are two dimensions to this issue. The first refers to a balance of platform types capable of operating on, under and over the sea. Platform balance issues include a surface fleet of destroyers, frigates, coastal defence vessels and operational support ships; a sub-surface fleet of submarines; a seabed operations capability; and deployable harbour defence and naval control of shipping units. Maritime air assets are provided by Air Command. The second dimension to balance refers to the need for a balanced distribution of assets between Canada's three ocean areas - the Atlantic, Pacific and the Arctic. Traditionally, the navy had maintained most of its assets on the Atlantic coasts. As new and modernized ships have been introduced into the fleet, the balance between the east and west coasts has improved. Redistribution will continue with the delivery of the Maritime Coastal Defence Vessels (MCDV) and, if current plans are approved, the submarines. Presently the Atlantic and Pacific Ocean areas are of far greater importance than the Arctic to the interests of Canada. Nonetheless the Arctic continues to evolve in importance and the ability to demonstrate a maritime presence and exercise control in the Arctic reaches is highly desirable.

Critical deficiencies continue in the submarine and maritime helicopter fleets. Canada's three 30+ year old OBERON Class submarines are close to the end of their useful life. The option of obtaining four UPHOLDER Class submarines from the Royal Navy is under consideration by the Government. Delays in the approval of this project have resulted in operating budget expenditures to support an additional OBERON refit programme. Studies are underway on options to improve, upgrade or replace the capability of our current ship-borne helicopter - the 30+ year old Sea King. Continued integral helicopter capability in the surface fleet is critical to maintaining an operational effective maritime force.

Next in importance is the Aurora Upgrade project which will provide a modern capability for effective maritime operations. An AOR (support ship) replacement programme is in the early development phase. In addition to maintaining the vital capability to support naval ships at sea, it will redress the Canadian Forces' very limited capacity to provide logistic support, including sealift,

to in-theatre forces. The rapid pace of technological advancement in modern weapons systems underlines the need for regular upgrades to combat systems. In this regard, a host of smaller projects are in various stages of development and implementation to ensure that the fleet does not slip into a state of obsolescence.

Operations

The navy will continue to support other government departments including Fisheries and Oceans; Transport/Canadian Coast Guard; Solicitor General/RCMP; Citizenship and Immigration; and Environment. Our efforts in support of Fisheries and Oceans Canada, and other government departments have significantly enhanced their ability to enforce Canada's jurisdiction in our near and off-shore regions. Maritime Command has agreed to provide to Fisheries and Oceans a minimum of 155 sea days and 1300 hours of aerial surveillance annually in support of fisheries enforcement. In addition, it is expected that Maritime Forces will continue to be called upon to assist in the war against illegal drug smuggling. Such cooperative ventures maximize the efficient use of government fleets, an activity considered vital in the face of continued financial constraints.

Maritime Forces contribute to collective defence through our contribution of forces in peace and crises to our NATO allies. These commitments are practised through regular participation in allied exercises and specifically through the continuous contribution to the Standing Naval Force Atlantic. As in the past, Canada will supplement its contribution to NATO with the occasional assignment of a ship to the Standing Naval Forces Mediterranean. There is also a requirement to contribute forces to address Canadian security at "arm's length" through the pursuit of measures which reinforce international peace and security. Maritime Command is prepared to contribute to future contingency operations, either undertaken with like-minded nations or under the auspices the United Nations. These operations straddle the wide spectrum of conflict and may include such diverse tasks as humanitarian relief, peacekeeping and peace-enforcement operations.

In addition to protecting national interests, the highly capable ships and the submarines of Canada's navy play a significant role in promoting Canadian foreign policy objectives. All naval vessels enjoy the advantages of being able to deploy rapidly around the world where they can remain discreetly offshore or be deployed overtly as an indication of interest or concern. Finally, frigates bearing the names of major Canadian cities frequently visit foreign ports. They play an important role as ambassadors, representing our interests in a distinctively Canadian way.

Performance measurement is an area that requires a great deal of work. In order to define our output and measure its variance in response to changes in funding, Maritime Command will focus on this area over the next year. In addition, the development of activity based costing will be a high priority initiative for Maritime Command.

The naval personnel support strategy must display flexibility and imagination in coping with the increasing challenges posed by married Service couples, working spouses and other social changes shaping the Canadian mosaic and the Canadian Forces. A major challenge will be to ensure that the character and culture of our navy evolves along with the society it serves. At the same time, we must preserve the essential qualities of our service ethos and the best of our naval traditions. Maritime Command has taken a leadership role in developing advanced policies in mixed gender integration, personnel harassment, sexual orientation, family support and grievances.

Canadians are becoming increasingly aware of departmental activities. Our communication strategies must educate Canadians about Maritime Command activities and reassure them that we are fully accountable for the stewardship of entrusted resources.

4. CHANGE MANAGEMENT ISSUES

Effective August 1997, the new Chief Maritime Staff (CMS) organization will stand up in Ottawa and Maritime Command Headquarters in Halifax will close. The CMS organization will assume all the strategic level naval staff functions from the current Maritime Command Headquarters and Director General Maritime Development (in Ottawa) staffs.

The ongoing devolution of authority and resources permits flexibility in delivering output and in applying the operating budget to missions and tasks. It has been the catalyst in enabling Maritime Command to confront significant reductions in resources and yet preserve an adequate tempo of operations. Continued devolution of authority and flexibility is vital for mission achievement given the resource reductions planned for the next five years.

Maritime Command will continue to operate against a backdrop of major fiscal pressures. The maintenance of constant capability levels with steadily declining budgets has presented a severe challenge in fulfilling the assigned mission.

5. RESULTS EXPECTATION

No substantive change in objectives are anticipated and Maritime Forces will continue to be deployed in support of national and international goals. The danger of global conflict has receded significantly in the 1990s. Nonetheless we face a fragmented and unpredictable world in which our security policies must address both diverse threats to international peace and challenges to Canadian sovereignty. During this period the Canadian Forces and Maritime Command have experienced a notable increase in operational tempo, and these contingency operations will likely continue.

Given budgetary constraints, this could seriously impact on our ability to sustain a balanced fleet, modernization activities and the quality of life for serving personnel. Initiatives to improve efficiency by reducing headquarters and employing better business practices are ongoing. Efforts to complete the Canadian Patrol Frigate (CPF) and Tribal Class Update and Modernization (TRUMP) projects and progress, expeditiously, submarine, helicopter and, in due course, AOR (support ship) replacement activities will continue. Further, innovative educational and training practices will be pursued, spurred in part by the introduction into service of the Maritime Coastal Defence Vessels (MCDV) and the accompanying expanded role for naval reservists. Finally, although further reductions in absolute size appear problematic without commensurate role adjustments, force structure options will be studied to ensure that optimal value for dollar is achieved.

6. FINANCIAL SUMMARY

Figure 7: Business Line/Activity Financial Plan

(thousands of dollars)	Main Estimates* 1996-97	**Main Estimates 1997-98**	**Planned 1998-99**	**Planned 1999-00**
Maritime Forces				
Operating Expenditures				
Personnel	881,503	901,676	872,387	871,920
Operations and Maintenance	652,656	652,775	638,326	684,480
Operating Requirement	1,534,159	1,554,451	1,510,713	1,556,400
Capital	629,475	503,783	358,281	342,669
Total Requirement	2,163,634	2,058,234	1,868,994	1,899,069
Less: Revenue credited to the Vote	24,436	24,094	23,057	23,441
	2,139,198	2,034,140	1,845,937	1,875,628

* Does not reflect Supplementary Estimates .....Actual Mains only

C.2 LAND FORCES

Mission

The mission of the Land Forces is to generate and maintain multi-purpose, combat-capable, land forces to meet the defence policy objectives contained in the 1994 Defence White Paper.

1. OBJECTIVES

The Land Forces objectives over the next three years are as follows:

Figure 8: Land Forces Objectives

1. DEFENCE OF CANADA	
Objective	**Task Description**
Territorial Defence	Be prepared to conduct land operations in defence of Canadian sovereignty and territorial jurisdiction
Domestic Operations	Maintain Immediate Reaction Units (IRU) for domestic operations in either aid of the civil power or assistance to civil authorities. This includes the provision of support to Other Government Departments for environmental protection, drug interdiction, control of illegal immigration, major air disaster aid and other activities
Surveillance	Provide a land based surveillance capability within Canadian territory
Counter Terrorist Operations	The capability to assist in mounting immediate response to terrorist incidents
Support to Other Government Departments	The plans necessary to provide appropriate Land Forces support to other Government Departments (OGDs)
Humanitarian Operations	The plans necessary to contribute to domestic humanitarian assistance and disaster relief
Command CF Joint Operations	Provide the basis for joint force headquarters to command and control CF domestic operations. Alternatively, be prepared to provide personnel augmentation to any other CF based Joint Force Headquarters

2. DEFENCE OF NORTH AMERICA	
Objective	**Task Description**
Continental Defence	Be prepared to conduct land operations in conjunction with the USA in accordance with the CANUS Basic Security Plan

3. CONTRIBUTING TO INTERNATIONAL SECURITY	
Objective	**Task Description**
NATO Contingency Operations	Be prepared to conduct land operations in defence of a NATO member state in accordance with current NATO Defence Planning Questionnaire commitments
Contingency Brigade Group	Be prepared to provide forces required to participate in multi-lateral operations anywhere in the world under the auspices of the UN or NATO or as part of a coalition of like minded nations
Short Range Air Defence (SHORAD)	Provide SHORAD support to other elements of the CF or a CF Joint Force for contingency operations
UN Stand-by Forces	Be prepared to provide land forces as part of Canada's contribution to the UN Stand-by Arrangements System
Peace Support Operations	Plans and resources necessary to provide land force observers for peace support operations
Humanitarian Operations	Prepare the contingency plans and personnel necessary to provide assistance (including medical, transport, labour, signals and engineer support) for humanitarian or disaster relief operations abroad
Service-Assisted Evacuations	Provide the Land Forces component required to assist the Department of Foreign Affairs and International Trade in the protection and evacuation of Canadians from areas threatened by imminent conflict
CF Joint Operations	Provide a deployable Joint Force Headquarters (JFHQ) for deployment in an international scenario. Alternatively, be prepared to provide personnel augmentation to a formation-based JFHQ
Third Line Support	Provide the plans and resources to the land component of the Canadian Support Group

2. OPERATING CONTEXT

Land Force Command will be comprised of an operational force (the core capability) and four enabling capabilities (command and control, training, garrison support and mandated programs). These capabilities constitute the processes through which 100% of the army's resources will be consumed to produce the defence output -- multi-purpose, combat capable, land forces.

The **operational forces** will be based on both regular and reserve force components, as follows:

- **Regular forces** consist of three similarly structured, geographically dispersed, multi-purpose brigade groups, an air defence regiment, an engineer support regiment, a tank squadron, a divisional headquarters, and a reserve component of 10 (reducing to nine) brigade groups each with appropriate support units and headquarters. Land aviation assets will consist of three tactical aviation squadrons equipped with CH-146 Utility Tactical Transport Helicopters provided by Air Command.

- **The Reserves** will provide the capability to transition from routine peacetime operations to higher levels of capability in accordance with the four-stage mobilization framework. The Reserves are also effective resources with which to help foster national unity. The Reserves will be rendered more operationally effective through the application of the Total Army Establishment and by implementing the recommendations of the Special Commission on the Restructure of the Reserves (SCRR). In accordance with Government direction, Reserve restructure will be delayed until November 1999; however, those SCRR initiatives that do not directly affect Reserve units will be pursued sooner. In 1997, the current Militia will be replaced by a District structure with a reduced number of Reserve brigade headquarters. The number of Land Forces Reservists must be maintained at 18,500 to adequately fulfill its roles.

Command and control will be exercised by the Chief of the Land Staff located in Ottawa through four Area Commanders who command both the operational forces and infrastructure located within their areas. This capability comprises the resources necessary to effect command and control of the Land Force Areas, to generate deployable field forces, to provide direction to allocated and assigned formations, units and elements and to form the basis for a deployable Joint Force Headquarters.

The training capability comprises the resources required to train the land forces for their operational missions. Training establishments have been studied extensively over the past year through Op MISTRAL and the implementation of its operation and support concepts will provide more focused training organizations where the principles of train to need and just in time training will be fully applied.

Garrison support consists of the infrastructure, materiel and personnel support resources required for the maintenance of assigned infrastructure and the provision of materiel and personnel support for LFC forces as well as support to other Business Lines/Activities, as applicable.

3. STRATEGIC GOALS AND KEY INITIATIVES

Figure 9: Land Forces Strategic Perspective

Strategic Goal	Key Initiatives	Results Expectation
Maximize the Operational Force	• review the army establishment; and • reduce overhead and infrastructure through Alternative Service Delivery initiatives.	• balanced "tooth-to-tail" ratio; • revised army establishments; and • reduced overhead and infrastructure costs.
Strengthen the Total Force concept of the Operational Force	• implement the recommendations from the Special Committee on the Restructuring of the Reserves (SCRR); and • stand-up of nine reserve brigades.	• reduction of marginal units and facilities; • introduction of the "Total Army Establishment"; • adoption of brigade group structure; and • application of unit-by-ability criterion.
Continue the management and culture changes that are under way throughout CF/DND and adopt a more results-oriented approach	• develop and implement the Land Force Integrated Management Environment (eg: business planning, performance measurement, activity based costing); • greater devolution through the use of operating budgets; • establish service standards; and • implement ASD initiatives.	• functional integrated management environment; • increased resource management flexibility; and • increased accountability.
Attract and retain sufficient numbers of well trained personnel to support a world class army into the next century	• continue implementation of personnel support programs; • increased emphasis on quality of life initiatives; and • increase emphasis on leadership and morale.	• increased retention rate; • adequately qualified personnel; and • morale and leadership survey tools.
Reform the army training system	• review army training system.	• fully costed training plan; • alignment with national training plan; and • individual and collective training to need.

4. CHANGE MANAGEMENT ISSUES

The army management environment is in transition. Current systems and processes are largely independent, standalone initiatives that do not fully meet the demands of managing the army. To address this, Land Force Command is actively pursuing the implementation of an integrated

management environment. This represents the army's target work environment, and includes the following:

- Implementation of a fully functioning business planning process across the Land Forces by 1997-98;
- Implementatation of a fully functioning performance measurement system across the Land Forces by 1998-99;
- Implementation of activity based costing across the Land Forces by 1998-99; and
- Implementation of the required information management support (in concert with the departmental data warehousing initiative).

5. RESULTS EXPECTATIONS

As the basis of the Commander's accountability agreement, the Land Forces capabilities required to effectively achieve LFC's mission are assessed by a performance measurement framework. The performance indicators include measures of operational, financial and corporate performance. Only the most critical measurements are compared to expected results for each capability. The following outlines the definition, objective, outputs, critical success factors and key measurement areas for each land force capability.

OPERATIONAL FORCES

Definition: The generation and application of combat power through grouping of trained personnel and equipment, both regular and reserves.

Objective: To generate the operational forces at the required readiness levels to achieve Defence Planning Guidance tasks and objectives in accordance with the Commander's priorities.

Outputs:

- Multi-purpose combat-capable field forces at a specified readiness level with respect to combat arms, combat support and service support.
- Reserve augmentation and sustainment of the regular forces in accordance with the army mobilization plan.

Critical Success Factors:

- Achievement of maintenance of assigned readiness states.
- Achievement of maintenance of combat effective personnel and equipment establishment levels.
- Effective integrated combat functions to brigade level.

- Capacity of the Reserve to augment and sustain Regular Forces units/formations in accordance with the mobilization plan.

Key Measurement Areas: For each of Regular Force and Reserves --

- Personnel: combat arms, combat support & service support with respect to establishment, strength, availability and deployability.
- Equipment: vehicles, major weapon systems, weapons, technical equipment and materiel with respect to holdings, serviceability, deployability, suitability, affordability and utilization.
- Training: combat arms, combat support & service support with respect to Individual Battle Training Standards, individual qualifications and Battle Training Standards.
- Infrastructure: suitability, condition, affordability and utilization.

COMMAND AND CONTROL

Definition: The provision of adequate command and control for the Land Forces.

Objective: To provide an efficient Headquarters staff, structure and information management systems to support the Land Forces mission, tasks and objectives by providing commanders with accurate, timely and relevant information to support decision-making.

Outputs:

- Capacity to plan, organize, implement and control generation of forces.
- To respond to strategic, operational and policy level requirements as directed.
- To respond to DND/CF applicable common objectives in accordance with Defence Planning Guidance.
- The Land Forces Area Headquarters, to provide the basis for a joint force headquarters and conduct domestic operations.

Critical success factors:

- Efficient information management and information technology infrastructure.
- Efficient staff structure.
- Efficient procedures.
- Effective response.
- Improved Joint and Combined level of Interoperability (Domestic Operations).
- Operational focus.

Key Measurement Areas:

- Personnel with respect to strength and authorized strength.
- Equipment with respect to information systems and their suitability, condition, affordability and utilization.

- Training with respect to qualification and individual training.
- Infrastructure with respect to suitability, condition, affordability and utilization.
- Command and control with regard to staff planning cycle, responsiveness and program/project management

TRAINING

Definition: The provision of individual and collective training required to operationally prepare the Land Forces to meet the assigned Defence Planning Guidance (DPG) tasks.

Objective: To train the Land Forces to the required standards to meet the tasks.

Outputs:

- Maintaining the structure and the infrastructure suited to the army's training needs.
- Training individual and collective groups to the appropriate training standards i.e.: train to need and just-in-time, to bring the operational forces to the proper readiness level in order to meet the tasks.

Critical success factors:

- Achieving expected readiness level.
- Cost effectiveness.
- Performance and proficiency.
- Train to need.

Key Measurement Areas:

- Personnel with respect to strength, authorized strength, instructor/student ratio, incremental instructor training days, and instructor qualification.
- Equipment: vehicles, major weapon systems, weapons, technical equipment and materiel with respect to holdings, serviceability, suitability, utilization and affordability.
- Individual training with respect to success rate, course loading, use of trained individual & unit satisfaction.
- Infrastructure with respect to suitability, condition, affordability and utilization.

GARRISON SUPPORT

Definition: The provision and maintenance of infrastructure, materiel and personnel support services to support and sustain LFC and its assigned dependencies.

Objectives: To provide Garrisons, Detachments and Satellite Support Elements, which will support the operational forces and dependencies.

Outputs:

- Provide efficient and effective customer oriented service.
- Provide the infrastructure suited to the army's support needs.

Critical success factors:

- Effective customer support.
- Efficient support.
- Effective and efficient resource management.

Key Measurement Areas:

- Personnel: strength and authorized strength.
- Equipment: vehicle with respect to suitability, condition, affordability and utilization.
- Infrastructure: training facilities, support facilities and utilities with respect to suitability, condition, affordability and utilization.
- Services: land maintenance, food services, dental services, medical services, health promotion, social work, postal service, transport/Mobile Support Equipment, transportation/materiel movement, transportation/personnel movement, supply services, ammunition services, comptroller, security military police, administration and management information systems with respect to requests for service completed and requests completed to user satisfaction.

6. FINANCIAL SUMMARY

Figure 10: Business Line/Activity Financial Plan

(thousands of dollars)	Main Estimates* 1996-97	**Main Estimates 1997-98**	**Planned 1998-99**	**Planned 1999-00**
Land Forces				
Operating Expenditures				
Personnel	1,537,495	1,428,269	1,393,947	1,393,286
Operations and Maintenance	798,951	792,925	783,527	812,668
Operating Requirement	2,336,446	2,221,194	2,177,474	2,205,954
Capital	859,064	639,380	665,261	620,113
Total Requirement	3,195,510	2,860,574	2,842,735	2,826,067
Less: Revenue credited to the Vote	155,664	157,947	135,326	134,345
	3,039,846	2,702,627	2,707,409	2,691,722

* Does not reflect Supplementary Estimates .....Actual Mains only

C.3 AIR FORCES

1. OBJECTIVES

The Air Forces' objectives over the next three years will be as follows:

- the defence of Canada's national areas of jurisdiction and maintenance of Canadian sovereignty as well as the provision of air support to the Land Forces, Maritime Forces and civil authorities;
- the defence of North America in cooperation with the military forces of the United States, in accordance with the Canada - United States (CANUS) Basic Security Plan, particularly within the context of the North American Aerospace Defence (NORAD) agreement;
- participation in multi-national or joint operations anywhere in the world under the auspices of the UN or NATO or as part of a coalition of like-minded nations;
- support of humanitarian relief efforts, restoration of stability or participation in arms control or other confidence-building measures;
- assist other government departments and agencies in time of emergency or disaster; and
- assist other government departments in enforcing Canadian laws.

2. OPERATING CONTEXT

Canada's Air Forces will continue to provide multi-purpose combat-capable and supporting air forces required in the conduct of air, surface and sub-surface operations. The mission of the Air Forces as defined in the 1994 Defence White Paper and supported by successive federal defence budgets reaffirms that the role of the Air Forces in fulfilling defence policy objectives has not significantly diminished. Between 1989 and 1999, Air Forces' personnel, and operations and maintenance budgets will be reduced by 43% and 65% respectively. By 1999, Air Command's personnel establishment will be approximately 13,439 Regular Force, 3000 Primary Reserve and approximately 3000 civilian employees. Financial resource allocations for Air Forces are detailed in Figure 11 .

The challenge facing the Air Forces is in maintaining a full spectrum of operational capabilities, including a new dimension of dramatically increased deployed operations, but, with fewer personnel, smaller operating budgets and reduced equipment and infrastructure resources. To meet this challenge, Air Command will move *from a static air force in being to a dynamic air force*

in action, structured and postured to execute worldwide operations while maintaining the ability to respond to tasks in support of national interests at home.

3. KEY INITIATIVES AND EXPECTED RESULTS

The Air Forces will continue to provide national aerospace surveillance, management, enforcement, air-to-air refuelling and offensive air capabilities which contribute to the collective defence arrangements of Canada and North America, and Canadian Forces operations worldwide:

- NORAD's surveillance architecture will remain largely unaltered, however, the North Warning System's Unattended Radars will be operated at a reduced activity rate. This will allow surveillance operations and maintenance costs to be reduced;

- a basic operational capability resulting from the Region /Sector Air Operations Control Centre Modernization project should be available in October of 1998 with a full capability expected in late 1999. The Region Air Operations Control Centre currently located in North Bay will be located in Winnipeg. Location of the Sector Air Operations Control Centre has not yet been finalized. Implementation of this project will provide enhanced operational capability with significant savings in personnel, operations and maintenance costs;

- the 8 Air Communication and Control Squadron in Trenton will upgrade unsupportable radar and communications equipment through a modernization project. This will significantly improve deployed contingency surveillance operations;

- Military Air Traffic Control services will be streamlined with the introduction of a Military Automated Air Traffic System. The seven existing Military Control Units will be replaced by two centres collocated with NAVCAN facilities at Edmonton and Montreal resulting in measurable savings in personnel, operating and maintenance costs;

- the CF18 operational fighter fleet will undertake life-extension and avionic upgrade programs, capital acquisition of precision guided munitions, rationalization and significant restructuring. The goal of these initiatives is to extend the useful life of CF18 airframes while ensuring survivability, employability and interoperability; and

- the Canadian Forces' strategic air-to-air refuelling capability has been resident in the CC137 Boeing 707 which will be retired from service in 1997-98. Replacement of this capability through modifications to CC150 Polaris is planned, but cannot be expected prior to late 1999. To avoid a gap in our ability to satisfy our air refuelling requirements, it has been proposed that strategic air-to-air refuelling be provided through a commercial leasing

arrangement. This will ensure that the Air Forces will be able to fulfil tasks and commitments as called for in Defence White Paper 1994.

The Air Forces will continue to provide air support to the Maritime Force for the enforcement of Canada's sovereignty over its maritime approaches in peacetime, for the collective maritime defence of North America and for Canadian Forces operations worldwide. To preserve maritime air capabilities, a replacement for the operationally obsolete CH124 Seaking helicopter and an update to the CP140 Aurora maritime patrol aircraft is vital. Fleet replacement of the Sea King helicopter is planned under the auspices of the Maritime Helicopter Project. An update of the CP140 Aurora is planned through the Aurora Life Extension Project. Both projects are scheduled to commence in 1997-98 and are awaiting Government approval to proceed. Delays in commencement will result in a continued erosion of operational capability and escalating maintenance costs.

The Air Forces will continue to provide air support to the Land Forces for the enforcement of Canada's territorial sovereignty in peacetime, the collective land defence of North America and for Canadian Forces operations worldwide:

- Air Command will continue replacing the CH135 Twin Huey helicopter with the new CH146 Griffon helicopter. Introduction of the Griffon began in 1995 and will be completed with acceptance of the last aircraft scheduled for January 1998;

- 10 Tactical Air Group has restructured with the closure of BFC St Hubert and Canadian Forces Base Downsview in Toronto and the move of 400 Squadron to Canadian Forces Base Borden. 10 Tactical Air Group will stand down in the summer of 1997 and reform as 1 Wing when it relocates to Kingston as a Land Aviation Wing Headquarters; and

- eight Griffon helicopters will be fitted with Electronic Warfare/ Peacekeeping Self Protection equipment.

The Air Forces will continue to provide routine, and when directed, surge air transport services in support of Canadian Forces' operations at home and abroad. Air mobility forms part of virtually all air forces Operational Plans. To preserve airlift capabilities, fleet rationalization and essential capital replacement is being undertaken:

- the CC137 Boeing aircraft will be retired in 1997-98 and a commercial leasing arrangement is being pursued to eliminate the potential gap that would exist until the modification of the CC150 Polaris can reestablish this capability within the air force in late 1999;

- the CC150 Polaris is also being modified into the “combi” configuration (mixed cargo and passengers) in order to provide the greatest possible flexibility within the airlift resources; and

- the CC130 Hercules transport aircraft is currently undergoing an avionics update. Two Hercules aircraft acquired to replace those lost through attrition

are being modified to Canadian Forces standards and will be available for use in 1997. An engine upgrade is being proposed for the Hercules in order to achieve enhanced performance, reduced fuel consumption and lower maintenance requirements. A Hercules Self Protection Suite is being considered to provide a level of protection for CC130 aircraft required to fly into areas where hostile threats to the aircraft are likely.

The Air Forces will continue to provide on-demand search, rescue, emergency and utility airlift, jurisdictional, and air support services in concert with other government agencies and in support of the national well-being and interests within Canada and internationally as required:

- government approval has been given for the procurement of a new Canadian Search and Rescue Helicopter. This will ensure that the Canadian Forces remains capable of effecting the search and rescue mission as stipulated in White Paper 94; and

- it is intended to extend the CC115 Buffalo, fixed wing search and rescue aircraft, scheduled for retirement in 1998, until the new Search and Rescue Helicopter achieves Initial Operational Capability status.

The Air Forces will maintain the ability to deploy, support and sustain Maritime Air, Land Aviation, Fighter Support, Air-to-Air Refuelling, and Tactical Transport assets participating in multi-national or joint operations anywhere in the world under the auspices of the United Nations, NATO or as part of a coalition of like-minded nations:

- Air Command will establish a Contingency Support organization by 1997. The *Contingency Support* capability will allow Air Command to draw together any combination of its Contingency Support elements into a composite, air component wing, deploying worldwide within prescribed reaction times, and supporting and sustaining the air power capabilities embodied in Air Command's operational forces; and

- emphasis will be placed on improving the ability of air force operational and support units to deploy and conduct operations from a less-developed infrastructure.

Command and Control of the Air Forces will be exercised by the Chief of the Air Staff located in Ottawa through a single Air Operational Headquarters located at Winnipeg. The Operational headquarters is the regrouping of the former four Air Group Headquarters. A key initiative associated with Command and Control is the investment in an Air Force Command and Control and Information System which will allow the replacement/integration of multiple manual and automated information systems. This initiative will ensure our ability to provide commanders with the information necessary to operate in joint or combined operations in support of either national or collective defence relationships. The start of this project has been advanced to 1997-98 and Initial Operational Capability is expected within the first two years.

The Air Forces will operate a personnel training, infrastructure, and equipment generation capability that yields a capable fighting force employing assigned resources in the execution of their mission elements in the defence of Canada's territorial sovereignty, the collective defence of North America and for Canadian Forces' operations worldwide. Key initiatives in this area include the following:

- the Canadian Aerospace Training Project will continue its mandate to recommend the most cost effective training system which meets operational requirements while simultaneously marketing excess Canadian Forces aerospace training capacity through the Aerospace Training Canada International initiative. NATO Flying Training in Canada, as the cornerstone of this initiative, seeks to attract participation from NATO nations. Goals have been determined and marketing efforts are underway to meet these goals by mid 1997;

- Air Forces will be confirming and drawing on the potential of Community Colleges and CEGEPs to augment or replace traditional in-service sources of technical training. The relocation of 3 Field Technical Training Squadron Bagotville to College Edward Monpetit in St.Hubert is an example of such joint ventures;

- the air force wing/base organizations will undergo consolidation and major process re-engineering. Air Forces force generation activities will be consolidated onto six main operating bases;

- Engineering Test and Evaluation support is being reorganized to gain efficiencies. The Aerospace and Telecommunications Engineering Support Squadron (ATESS) has been formed from the former Aircraft Maintenance Development Unit and the Terminal Radar and Control Systems Support and Training Unit; and

- many of the functions carried out by the Director General of Aerospace Equipment and Project Management within the air force will be more closely integrated into the air force in 1997-98. The air force Command and Control Reengineering Team through the Management, Command and Control Reengineering Team is in the process of realigning the these functions into a revised command structure. An accountability framework will be established that clarifies the Force Generation - Materiel relationship between CAS and ADM(Mat).

The Air Forces will remain actively engaged in the United Nations (UN), the North Atlantic Treaty Organization (NATO), Canada-United States collective defence (CANUS) including NORAD, the Organization for Security and Cooperation in Europe (OSCE) and SICOFA (Spanish acronym for "Conference of the Chiefs of the Air Forces of Americas").

4. CHANGE MANAGEMENT ISSUES

Generating the necessary air power capabilities while honouring fiscal responsibilities in an air force postured to fulfil defence policy objectives in the most efficient manner possible, will form the foundation for the Air Forces' force development efforts into the 21st century.

Air Command will complete the restructuring of headquarters formations by July 1997, with the closure of the four Group HQs, and the activation of 1 Canadian Air Division/Canadian Northern Region HQ in Winnipeg, and the Strategic Air Staff HQ in Ottawa.

The Air Forces will continue to implement Alternative Service Delivery (ASD) options where financially and operationally sound. Additionally, the Command will continue to seek a partnership with other Government departments, as well as Canadian industry and educational institutions.

The Command will promote a heightened awareness of quality, professional standards and continuous improvement in all aspects of air operations, training and support activities by:

- integrating by the summer of 1997, a quality and excellence framework into the air force's professional and cultural environments;
- integrating by the summer of 1997, a Command-wide performance measurement framework as part of Air Forces' Business Planning practices; and
- supporting the air force's professional development programs.

The Command will continue to aggressively promote and manage cultural change by:

- creating, by the summer of 1997, an air force "Flight Plan For Life"charter that addresses quality of life issues based on the needs of the air force team and National Defence objectives; and
- establishing by the summer of 1997, an improved air force Communications Strategy focused on both external and internal agencies, to increase awareness of air force issues, and communicate how the air force is preparing itself to fulfil the security needs of Canada.

5. RESULTS EXPECTATION

As the Air Forces move towards the 21st century, it can be expected that they will be optimized for assigned defence roles, resource efficient and corporately energized and responsive as follows:

- The Air Forces will optimize their structure for assigned defence roles so that combat capability and the ability to conduct contingency operations is maximized while domestic infrastructure and associated overhead costs are kept to a minimum;

- The air forces will emphasize the efficient use and astute management of resources which will underpin the accountabilities associated with the stewardship of air force capabilities; and

- Command team will be operationally focused on continuous improvement, results and performance, in a work and cultural environment that demands and recognizes the best from its people.

The air force expects to become a more efficient combat-capable force through the application of the initiatives outlined above. The progress of these initiatives will be closely monitored to ensure not only that Air Forces objectives will be met but departmental objectives will be satisfied. The challenges facing the Air Forces remain significant, however, the implementation of business planning practices, a more combat capable force model, and capability-based planning tools will permit this Command to overcome any obstacles. The Command looks forward to reporting on the success of this programme in future departmental performance reports as measurement criteria become more refined.

6. FINANCIAL SUMMARY

Figure 11: Business Line/Activity Financial Plan

(thousands of dollars)	Main Estimates* 1996-97	**Main Estimates 1997-98**	**Planned 1998-99**	**Planned 1999-00**
Air Forces				
Operating Expenditures				
Personnel	1,094,353	1,047,888	976,319	962,035
Operations and Maintenance	1,164,077	948,853	922,456	991,004
Operating Requirement	2,258,430	1,996,741	1,898,775	1,953,039
Capital	480,912	545,041	529,731	748,434
Total Requirement	2,739,342	2,541,782	2,428,506	2,701,473
Less: Revenue credited to the Vote	176,040	156,596	129,860	127,740
	2,563,302	2,385,186	2,298,646	2,573,733

* Does not reflect Supplementary Estimates .....Actual Mains only

C.4 JOINT OPERATIONS AND CIVIL EMERGENCY PREPAREDNESS

1. OBJECTIVES

The mission of Joint Operations and Civil Emergency Preparedness is to provide effective strategic-level planning, conduct, coordination, support and direction of military operations, security and intelligence activities and federal civil emergency preparedness. In this regard Joint operations and Civil Emergency Preparedness constitute the Canadian Forces and DND operational capability at the national and strategic level.

The strategic objectives of the Joint Operations and Emergency Preparedness are:

- to generate and employ effective, multi-purpose combat capable forces;
- to provide sound advice to government and timely information to Parliament and the Canadian public on defence and national security;
- to strengthen the Defence Team based on our vision and shared values; and
- to optimize the use of resources available and to promote efficiency and cost effectiveness.

2. OPERATING CONTEXT

Multi-sided and Diverse Conflicts. While the end of the Cold War dramatically reduced the catastrophic threat to world peace, it has resulted in an upsurge of new forms of turbulence and disorder. These have generally been low intensity, multi-sided conflicts which have been generated by: assertions of militant nationalism; ethnic, religious or cultural strife; poverty; famine; and the abuse of human rights. Conflict has often been fuelled by the availability of large quantities of modern weaponry.

As a consequence, the UN has been called upon to intervene in a multitude of localized or regional conflicts with roles and objectives far broader than those which applied to more traditional peacekeeping operations. These interventions call for flexibility and innovative planning and increased cooperation and coordination with other government departments, non government agencies and Allies.

Computers and Information Systems. Advanced technology primarily applied to telecommunications and information systems is playing a leading role in operations and training, whether for individuals or crews or for large scale operations and exercises. If the Canadian Forces are to retain the ability to operate with Canada's principal Allies, they must have similar capabilities in command and control, intelligence, geomatics, support and training systems including distributed information systems and modern simulation technology.

Information Warfare. The development and deployment of information technology and precision attack capabilities have significantly enhanced command and control capabilities and the effectiveness of offensive forces. At the same time, these advances have also increased the vulnerability of friendly forces to what has become known as Information Warfare (IW) and its military application, Command and Control Warfare (C^2W).

Resource Limitations. The end of the Cold War resulted in the public expectation of less government resources required for defence. As well, global commercial competition has fuelled the determination of the government to reduce public spending overall to get the deficit under control. These two pressures have resulted in dramatically lower resource levels for the Department. The military reductions directed in the Defence White Paper have essentially been attained . The challenge now is to ensure that the maximum number of military personnel who remain are available for operations and to increase the sustainability of the forces.

Increased Operating Tempo. Notwithstanding these lower resource levels the government and the Canadian people continue to require the Canadian Forces to deploy and sustain significant numbers of troops on various peacekeeping and related operations around the world and this tempo of operations is not expected to significantly decrease in the near future. The recent government commitment to lead a humanitarian mission into the central African country of Zaire is an example of these expectations.

Global Warming/Climatic Changes. The increasing incidence of natural disasters which may be occuring as a result of global warming/climatic changes and other factors underscore the need to be prepared for emergencies. EPC's efforts to facilitate and coordinate the development of emergency plans and to train and educate emergency responders, among other activities, have contributed to the successful response to such disasters as the massive flooding in the Saguenay region of Quebec in the summer of 1996. However, resource constraints at all levels of government may seriously impact on their ability to prepare for, and adequately respond to, natural disasters and other emergencies in the future, especially if these increase in frequency.

Additional information on Emergency Preparedness Canada can be found in Setion IV, Supplementary Information, page 4-87.

3. KEY INITIATIVES

The core capabilities must be carried out in a framework which integrates strategic planning, coordination, control and intelligence supported by interoperable information technology. Joint operations and Civil Emergency Preparedness must relentlessly exploit information technology in order to remain operationally effective, cope with severe resource constraints and deal with dramatic changes in many of our activities. Such exploitation will lead to co-production and burden sharing programmes with allies and other government departments and the use of the private sector where feasible.

The initiatives undertaken by the management of each service line are aimed at updating technological capabilities; enriching operational planning; and improving our ability to manage resources and assess progress. The specific initiatives by service line area:

Strategic planning, coordination, conduct and control of all Canadian Forces operations.

- Formulation of a strategy and vision for war gaming including the development of architectural, communication and geomatic standards for the use of simulation;
- Constant review and updating of operational plans, doctrine; and related guidance; and
- Establishment of an Information Warfare Coordination Cell and development of a related strategy.

Planning, coordination, control and direction of intelligence and geomatic activities

- Application of technology to improve access to allied intelligence and geomatics; increase the use of softcopy material and provide "pull" access to authorized users of intelligence;
- Standardization of geo-spatial and imaging data;
- Review organizational structures and priorities and apply re-engineering and Alternate Service Delivery concepts to achieve efficiencies and improve effectiveness; and
- Upgrading geographic base plant capabilities.

Operational support

- Enhance the deployabilty of 1 Construction Engineering Unit to support a Joint Task Force;
- Implement the De-mining Action Centre and improve land mine detection and clearing equipment and other capabilities for ordnance disposal;
- Progress key projects such as the Joint Command and Control Information System, the Restricted Access System, the Security and Military Police Information System, and related operational support foundation systems according to the authorized milestones;
- Prosecute Collaborative Projects for Space with project arrangements in place by the end of 1998; fulfil Search and Rescue Satellite Aided Tracking (SARSAT) MOU requirements for two Repeaters; explore potential for Bi-national cooperation and deliver a report by the summer of 1997 to the CANUS Military Cooperation Committee; and develop a long range space strategy by the end of 1996-97 and other related elements before the end of 1997-98;

- Enhanced planning and conduct of Joint Operations with the implementation of a National Training Plan by 1998-99;

- Revise and develop Nuclear, Biological and Chemical (NBC) defence policy, doctrine, training and foster the NBC defence equipment acquisition program;

- Apply technology to track lessons learned from all deployments and to monitor the procurement of material urgently required for operations;

- Install a web site to facilitate access to joint doctrine;

- Effect the transition to the new Meteorological structure and services using the Federal Government's Atmospheric and Environmental Services and associated management agreements and the related downsizing of the former the Department of National Defence capability by the end of 1997-98;

- Enhance the Readiness and Capability (RECAP) reporting system through the development of a common standardized system for reporting based on expanded readiness capabilities directly linked to strategic guidance and departmental business plans and supported by a modern data base system; and

- Enhance the deployability and operational effectiveness of the deployable Joint Force Headquarters (JFHQ).

Planning coordination and technical control of security, counter intelligence, military police and custodial activities

- Re-configure security and investigative resources so that they provide a national capability for investigation on an independent basis and explore various police services for application of the alternate service delivery concept;

- Establish a client relations program to establish and monitor the provision of essential services;

- Exploit the features of the Security and Military Police System to streamline organizational structures and services; and

- Establish a deployable military police unit to support the Joint Task Force.

National programs support

- Re-configure the Canadian Forces Attaché Program to meet new requirements and update the supporting Memorandum Of Understanding with the Department of Foreign Affairs and International Trade; and

- Complete the certification of surveillance equipment to be used in the Arms Control and Verification operations under the Open Skies Treaty.

Fostering and coordination of preparedness for civil emergencies

- Develop and run, by the spring of 1998, an exercise to test and evaluate the Federal Nuclear Emergency Plan and its interfaces with the related plans of Ontario;
- Initiate and lead the development of a national Heavy Urban Search and Rescue (HUSAR) capability in conjunction with other government departments, the provinces, municipalities and other interested parties;
- Implement a new training strategy to ensure that the 30,000 Canadians who require emergency preparedness and response training will receive it;
- Development of a Natural Hazards Electronic map and Assessment Tools Information System for the collection, representation and analysis of natural hazards information;
- Pursue a variety of initiatives including partnerships and a National Emergency Preparedness week to increase public awareness at all levels; and
- Develop and implement new terms and conditions for the Disaster Financial Assistance Arrangements as a means of achieving more efficient and consistent administration.

Additional information on Emergency Preparedness Canada can be found in Section IV, Supplementary Information, page 4-87.

Operational Research

- Provide high quality analysis services to a wide variety of CF clientele on issues dealing with strategic operational, and tactical problems. Balancing the immediate needs of frequent clients, the provision of support to major programs and the demands of occasional clientele with priority to: Direct support to operational HQ; and Establishment within the new NDHQ structure of effective reporting relationships for each OR team within the client group it serves.

4. CHANGE MANAGEMENT ISSUES

The impact of decentralization, devolution and technological advances has not run its full course yet in the Deputy Chief of the Defence Staff Group. What is known has been integrated into the core capabilities and the related initiatives. Concern exists about the funding levels associated with

devolution and the related burden to administer additional resource management responsibilities. Nevertheless the opportunity to affect savings for reallocations within the Group is recognized.

Business Planning is being integrated and enhanced although realistically, it will take at least another full cycle before its benefits will be recognized at all levels. Similarly, performance measurement and the use of quantitative indictors at different levels will take time, training and demonstrated utility to be fully integrated into management processes.

The Joint Operations function of this activity has a very focused operational culture and a high turnover of personnel each year. Moreover, the current level of resource management expertise and familiarity with departmental support system processes is not high. Consequently, it will take a few years to develop the required perspective and mastery over the concepts like devolution and decentralization to fully exploit the potential benefits.

5. RESULTS EXPECTATIONS

The Joint Operations element of this activity provides the Canadian Forces and the Department of National Defence with a strategic operational capability. We must carry out this responsibility within a framework which integrates intelligence analysis, strategic planning, coordination and control of Canadian Forces operations. As a national center of excellence for strategic intelligence, the Joint Operations element will share information with other government departments and agencies. Emergency Preparedness Canada will provide a focal point for advancing civil emergencies of all types. During the next five years the results required to achieve this vision are:

- enhanced intelligence capabilities and their integration with strategic planning, coordination, and control activities;
- leadership in developing an interoperable, strategic, joint command, control and intelligence system and architecture;
- improved information management and information management services consistent with Group missions and Canadian Forces and the Department of National Defence information management strategic direction;
- continued emphasis on improving the Joint Staff system, doctrine and operations;
- maintenance of a trained, dedicated corps of federal civil emergency preparedness professionals within a well-developed network of partners and stakeholders; and

Result Expectations by service line

Strategic planning, coordination, conduct and control of all Canadian Forces operations.

Results expected from this service line are:

- clear and timely direction is given to deployed forces and missions;
- contingents are successfully deployed, employed and re-deployed;
- improved strategic readiness in joint /combined operations and training; and
- development of Simulation policy this year.

Planning, coordination, control and direction of intelligence and geomatic activities

Results expected from this Service line are:

- improved client relations such that: requirements are known, priorities are reviewed annually and through ready electronic access to available data, clients can satisfy a significant portion of their needs directly.
- development of a deployable intelligence support capability sufficient to support two simultaneous operations;
- exploitation of burden sharing to permit Canadian concentration of effort and recognized contribution to the overall allied effort and in return Canada receives wide access to allied intelligence and geomatics products; and
- the employment of advanced technology to improve efficiency and effectiveness in the processing and distribution of intelligence and geomatic services.

Operational support

Results expected from this Service line are:

- far greater cost effective use of general engineer support occupations, through demonstrated activity costing;
- reduced land mine related casualties and damage to equipment;
- a fully deployable 1 Construction Engineering Unit by the year 2000 which provides third line support in the most cost effective manner;
- the provision of a strategic Joint Command, Control and Intelligence System that is interoperable with sea, land and air elements and key allies
- approval of a National Joint Training Plan budget;
- successful completion of Capital projects on time and within budget using commercially available software and hardware to the maximum extent;

- progression of space projects to agreed upon milestones so that Canada obtains a comprehensive space capability for the surveillance of space and environmental observation;

- the survival of Canadian Forces personnel and continued efficient CF operations in an Nuclear, Biological and Chemical threat environment;

- lessons learned data base developed and doctrine web site established this fiscal year;

- cost effective meteorological services for the Canadian Forces;

- effective capabilities based evaluation system combatable with business planning and against which Commands will measure their performance; and

- a rapidly deployable and operational Joint Force Headquarters by 1998.

Planning coordination and technical control of security, counter intelligence, military police and custodial activities

Results expected from this Service line are:

- Professional military police offering independent investigative and competent and relevant police services in garrison and on deployments;

- Cost effective military police structures and activities employing advance information technology.;

- a deployable military police unit established to support the Joint Task Force.

National programs support

Results expected from this Service line are:

- a re-configured and restructured Canadian Forces Attaché Program to meet new requirements and an updated supporting MOU with the Department of External Affairs; and

- all Canadian Arms Control Verification treaty obligations met.

Fostering and coordination of preparedness for civil emergencies

Results expected from this Service line are:

- enhanced national preparedness for nuclear emergencies and improved capabilities to respond;

- coordinated Heavy Urban Search and Rescue (HUSAR) capability that is able to effectively respond to emergencies situations anywhere in Canada;
- updated and workable plans and arrangements and agreements with the provinces, territories, municipalities and other nations for emergency preparedness;
- up to 30,000 students trained in Emergency Preparedness and Response each year; and
- sufficient exercises to implement agreements and procedures during emergencies;

Additional information on Emergency Preparedness Canada can be found in Section IV, Supplementary Information, page 4-87.

Operational Research

Results expected from this Service line are:

- continued effective interoperability of the Canadian Forces with Canada's principal allies through cost effective investment in war gaming and simulation technology.

6. FINANCIAL SUMMARY

Figure 12: Business Line/Activity Financial Plan

(thousands of dollars)	Main Estimates* 1996-97	**Main Estimates 1997-98**	**Planned 1998-99**	**Planned 1999-00**
Joint Operations and Civil Emergency Preparedness				
Operating Expenditures				
Personnel	227,078	210,265	205,897	207,675
Operations and Maintenance	74,027	60,066	59,109	64,253
Operating Requirement	301,105	270,331	265,006	271,928
Capital	37,819	67,072	48,980	34,948
Grants & Contributions	4,851	4,683	4,768	4,852
Total Requirement	343,775	342,086	318,754	311,728
Less: Revenue credited to the Vote	4,125	3,983	3,707	3,842
	339,650	338,103	315,047	307,886

* Does not reflect Supplementary Estimates .....Actual Mains only

C.5 COMMUNICATIONS AND INFORMATION MANAGEMENT

1. OBJECTIVES

The Defence Information Services Organization (DISO) mission and vision are to provide the full range of common Information Management (IM) functions and services to the Department, while moving the Department towards a completely electronic work environment. DISO addresses this mandate in its business plan by setting strategic objectives as follows:

- **Leadership Objective**. To provide the strategic IM leadership to realize the integrated information environment;
- **Service Delivery Objective**. To provide quality, efficient and effective IM tools to clients on time, utilizing dynamic partnerships built on good communications;
- **Resource Management Objective**. To increase DISO's efficiency in delivering IM products, services and support in a responsible manner; and
- **Organizational Health Objective**. To create a rewarding and productive work environment, built on shared core values, within an understood management framework.

The first two strategic objectives in turn translate to four Information Management Objectives that emphasise the main functions, or key processes that DISO operationally performs on behalf of Assistant Deputy Minister Defence Information Services (ADM (DIS)) for the Department. The last two strategic objectives relate to the DISO vision. The four Information Management Objectives are:

- **IM Support to Operations.** This entails extending IM services to deployed forces;
- **Strategic Direction.** This entails the provision of strategic direction for the DND/CF IM Program;
- **Information Resource Management (IRM)**. This entails the provision and integration of a full range of information resource management services to enable clients to exploit and manage information resources throughout their life cycles; and
- **Infrastructure Services.** This entails the provision, integration and management of Common-User-Core infrastructure facilities and services, and other specified common support services including Information Technology Security (ITSEC).

The attainment of these objectives directly supports the Department in carrying out its business activities or core processes, and is an essential enabler in its goal for business planning and performance measurement.

2. OPERATING CONTEXT AND KEY INITIATIVES

The environment within which DISO operates is impacted heavily by uncontrollable factors including participation of Canada's military in conflicts between nations and in peace-keeping/peace-making initiatives.

Concurrently, Information Management (IM) and technology are revolutionizing both the military and administrative functions of DND. In both spheres the development of IM is resource-intensive and increasingly non-discretionary. In the administrative sphere the deployment of IM is essential to redirect resources for the field and to cope with cutbacks. In the military sphere, IM has become critical for the provision of intelligence, for command and control in the field of rapid tempo operations, and for interoperability with Canada's allies.

Departmental clients are increasingly looking to DISO to provide leadership in IM and to find technical solutions to problems. The demand for effective IM is increasing at the same time as resources assigned are being reduced, causing concern as to DISO's ability to meet commitments.

This environment has led to a plethora of perceived stakeholder needs and public expectations, the most important of which are:

- Leadership in IM for an integrated IM environment; an IM solutions enabler;
- Access to a common user core of IM services including both hardware and software that is extendable to operational theatres;
- Interoperability within the department, within the international allied military community and with industry; and
- Faster IM solutions and feedback on IM development progress.

Because of the inherent high level of risk that pervades the environment within which DISO must work, DISO is targeting attainment of its IM objectives through completion of a number of major initiatives, intended to reduce risks in meeting the goal of converting the above broad needs into reality:

- **Transition to a new organisation.** As departmental re-engineering progresses, the DISO organisational structure will continue to be refined to that best fitted to achieve maximum efficiency delivering IM services to DND/CF, other government departments and allies. DISO will become a learning organization;
- **Field Force Restructure.** As part of the reorganization, the IM Field Force is undertaking a zero-base analysis of IM requirements, technology, and structure, and determining the optimum IM force structure for DND/CF. This project has a very high priority. Non-completion would make it impossible to meet imposed budget reductions without cutting back on current levels of service;
- **Communication Reserve Review.** A critical look at the role and structure of the Communication Reserve is under way to determine the structure for both the short and long term, and to ensure cost effectiveness. The review is being harmonized with the Land Force restructure where the operational requirement, force structure, training, and equipping of the Comm Reserve is being

investigated to ensure maintenance of a viable force with an optimum balance between funding and unit strength. Non-completion of this high priority project would result in inefficient resource utilization;

79 Communication Regiment Growth. 79 Communication Regiment capabilities are being enhanced in order to improve the extension of Information Management Services to meet increased rapid deployment requirements. Consequently, all forces will be consolidated and the manning level will be increased. A high priority project, non-completion would jeopardise deployment capabilities;

- **Activity Based Costing (ABC).** Work is well underway on developing an overall conceptual level ABC model/framework for DISO. This conceptual framework will be tested with a pilot project, with implementation across DISO and subsequent expansion across the rest of the IM community. Failure to implement ABC within DISO will have the mid- to long-term consequences of not acheiving the cost visibility and performance management capability required to make informed decisions;
- **Training Process.** Management will identify the skills required to perform a job, assess skills of an employee and determine the skills gap. The most appropriate and cost effective training method will then be chosen. The skills gap analysis will enable training priorities and training plans to be developed, to be reflected in business plans with corresponding cost forecasts. A trial will be conducted in DISO HQ. Following proof of concept, the process will be applied to DISO field forces, clients and user groups. Non-completion would result in the continued failure of traning to meet job skill requirements.
- **Alternative Service Delivery.** It is intended to review all of DISO's deliverables and identify those that are candidates for ASD, as a means of more cost effective delivery and of assessment of outsourcing options. Appropriate procedures will ensure maintenance of quality standards satisfactory to clients;
- **IM Long Term Capital Plan.** The LTCP (IM) consists of three components: the Integrated Information Environment (IIE)-enabling projects, DISO's own major capital projects and finally, DISO's clients' IM-related projects. A summary of each approved project is presented under supplementary information; and
- **Way Ahead.** DISO has adopted the vision of Information Superiority and has indicated that its achievement would be through the creation of an IIE. In order to support the establishment and then the evolution of the IIE, DISO has embarked upon a co-ordinated R&D plan that is based upon four core areas:
  - Business Management and Operating Excellence;
  - Information Warfare (IW);
  - Information Technology (IT); and
  - Joint Surveillance.

In summary, the successful completion of these major initiatives will provide the IM business rules, information repositories, services, products and connectivity to ensure that all

departmental users can find, retrieve, use and share the information they need to perform their tasks and execute their responsibilities wherever they may be located.

3. CHANGE MANAGEMENT ISSUES

The successful attainment of the above major initiatives is complex, and will introduce difficulties including the adoption of a new business or operating culture within the department. This culture must:

- promote information technologies that reduce resource utilization within the department;
- regard information as a common resource to be shared by all to the maximum extent possible; and
- introduce technologies specifically aimed at producing an Electronic Work Environment and eliminating paper-based information.

This new business culture will require DISO staff to embrace new roles to achieve the aims of the new organization. To bridge the gap between the business specialists and the technology specialists, DISO will have to understand both the technology and the tools it offers, and the business it will be required to support. The DISO culture will have to change from analytic and technical to business-oriented and collaborative.

To embrace this new culture will not be an easy transition in a military environment, and some of the more difficult transition challenges for ADM(DIS) will be:

- to participate in the development of the overall re-engineering implementation strategy and action plan in partnership with the group principals and environmental commanders;
- to realize the IIE strategy through the implementation of the Information Management Infrastructure (IMI) and the Long Term Capital Plan (IM); and
- to lead the retraining and re-skilling of the IM and user work force, and to restructure and streamline the downsized IM work force.

In summary, the IM business will see major shifts in how services are managed and delivered. Many service delivery and service management functions will be centralized, while other management and support functions will be decentralized. Fewer people will be required to operate the IM infrastructure.

4. RESULTS EXPECTATION

Assuming a successful transition, the results that are envisaged, taking into account the environment and issues, are indicated below:

- **Integrated Information Environment (IIE).** Current information systems and services are "stove pipe" in character and have many information sharing and capability limitations. The IIE will correct this. The IIE is the Departmental strategy to integrated systems products and/or services which will enable DND personnel to access any information they need to do their job;
- **Accountability Framework.** Responsibility and authority will be assigned and delegated to the lowest practical levels consistent with cost effectiveness and operational requirements, with common and shared services being built using off-the-shelf (commercial and government) products to the extent feasible, along with the pursuit of ASD opportunities; and
- **Performance Improvements.** Achievement of an effective IM capability, forecast to evolve incrementally over the next four years, and continuing to improve for the foreseeable future, will result in dramatic improvements in information quality, timeliness and availability. Significant efficiency gains in the handling (filing, accessing, use and disposal) of information, when considered from an overall corporate perspective, are expected. The creation of the Electronic Work Environment (EWE) can enable tremendous improvements to, and streamlining of, current business processes.

5. FINANCIAL SUMMARY

Figure 13: Business Line/Activity Financial Plan

(thousands of dollars)	Main Estimates* 1996-97	**Main Estimates 1997-98**	**Planned 1998-99**	**Planned 1999-00**
Communications and Information Management				
Operating Expenditures				
Personnel	178,749	209,329	207,437	209,823
Operations and Maintenance	102,632	89,060	87,805	95,198
Operating Requirement	281,381	298,389	295,242	305,021
Capital	94,692	108,851	76,019	59,717
Total Requirement	376,073	407,240	371,261	364,738
Less: Revenue credited to the Vote	3,278	3,106	2,922	2,984
	372,795	404,134	368,339	361,754

* Does not reflect Supplementary Estimates .....Actual Mains only

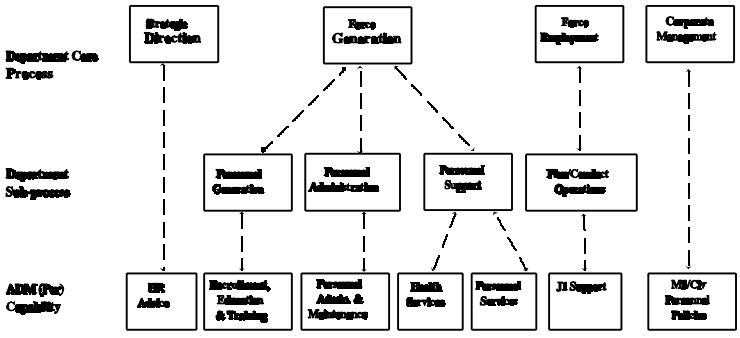
C.6 SUPPORT TO THE PERSONNEL FUNCTION

1. OBJECTIVES

The Support to the Personnel Function objectives over the next three years will be as follows:

- develop strategic personnel policies for the Department and provide advice to managers on personnel implications of planned actions;
- provide health care services to the Canadian Forces, allied forces personnel and their dependants as well as those Canadian civilians directed by the MND;
- develop CF policies governing personnel support programs, and administer/manage certain specific programs;
- coordinate and manage individual training and education of all CF personnel;
- coordinate and manage recruitment and training of new personnel;
- control and administer the allocation of personnel resources, both military and civilian;
- provide support to joint operations; and
- develop DND-specific civilian policies and national programs to implement Public Service wide policies.

Figure 14: The Personnel Group Capability Framework



2. OPERATING CONTEXT AND KEY INITIATIVES

The Department and the Canadian Armed Forces have been subjected to many of the same stresses which seem to have become omnipresent signs of life in the '90's - for example, re-engineering, downsizing, reorganization , alternative service delivery. Regardless of the program or motivation, the net impact has been significant change and upheaval and the Personnel Group has not been immune. The impact has been compounded by increased operational commitments and declining budgets and the effects have been increasingly absorbed by our people - both military and civilian - and their families.

The Personnel Group has not set out to deliberately eradicate long established traditions and cherished ways, or to take away benefits and programs. However, in the challenge of finding the means to live within ever-declining budgets, we have been forced do things that are more affordable. The net effect has been a slow but perceptible erosion of support programs and services- all at a time when the demands on all personnel are increasing.

Key Initiatives

The highest priority of the Personnel Group is to highlight the strategic importance of human resource management and to lead the department and the CF in rebuilding the source of its operational strength -that is its personnel.

The Personnel Group has just completed a very demanding series of re-engineering projects as part of a departmental-wide effort. The implementation plan for the Personnel Group's portion of this omnibus project was tabled in October '96 and will become an integral part of the revitalized and strategically positioned Human Resources Group. The four highest priorities for the group in the coming years will be:

Position the HR function *strategically*

This means a focus on developing personnel policies which are proactive and are integrated with achievement of the Defence mission. These policies must be central in enabling Commanders/Group Principals to meet their objectives but they must also assure the well being/quality of life for CF members and DND employees.

Focus on Care of People and Quality of Life

Increased commitments and reduced resources have had a negative effect on personnel. Increased attention must be given to the "people" side of the enterprise - without motivated and committed personnel, the mission cannot be assured.

Focus on meeting the changing needs of those we serve both the managers and CF members/DND employees

This means implementing new and better consultation/decision making mechanisms supported by accessible, real time information systems. Lines of authority and accountability will be achieved

through agreed upon frameworks and specific service level agreements. A HR Performance measurement framework will support this new management environment.

Move out of service delivery in order to focus on policy and future planning

The interface with clients at the operational level will result in some corporate level activities being retained by the Personnel Group but only where economies of scale or skill requirements dictate. The major thrust will be to move service delivery as close to the decision making/worksite as possible. The Group will continue to evolve from an organization based on control of personnel support activities to one which supports those who are engaged in personnel administration and support.

3. CHANGE MANAGEMENT ISSUES

The Personnel Group has undergone, and is continuing to undergo significant changes in size, organization and culture. It has embarked upon a major cultural shift with respect to how personnel are managed. This will start with a change in philosophy as we move from Personnel Management to Human Resource Management - enabling equal recognition of both dimensions. In the past, personnel concerns were often secondary to other considerations. Similarly, human resource management , which was often seen as an administrative - and hence -strictly a support function. In the future, the human resource function must be an integral part of the decision-making process which shapes DND/CF effectiveness.

Other change issues are the role of IM/IT relative to the number of people that are employed in the organization. Reductions in personnel in order to meet budgeted requirements are being completed before anticipated IM/IT efficiency solutions are on-line. The words, customer or client are not necessarily natural words in the military or departmental lexicon but the Group is learning to recognize who its customers are and how it meets their respective needs.

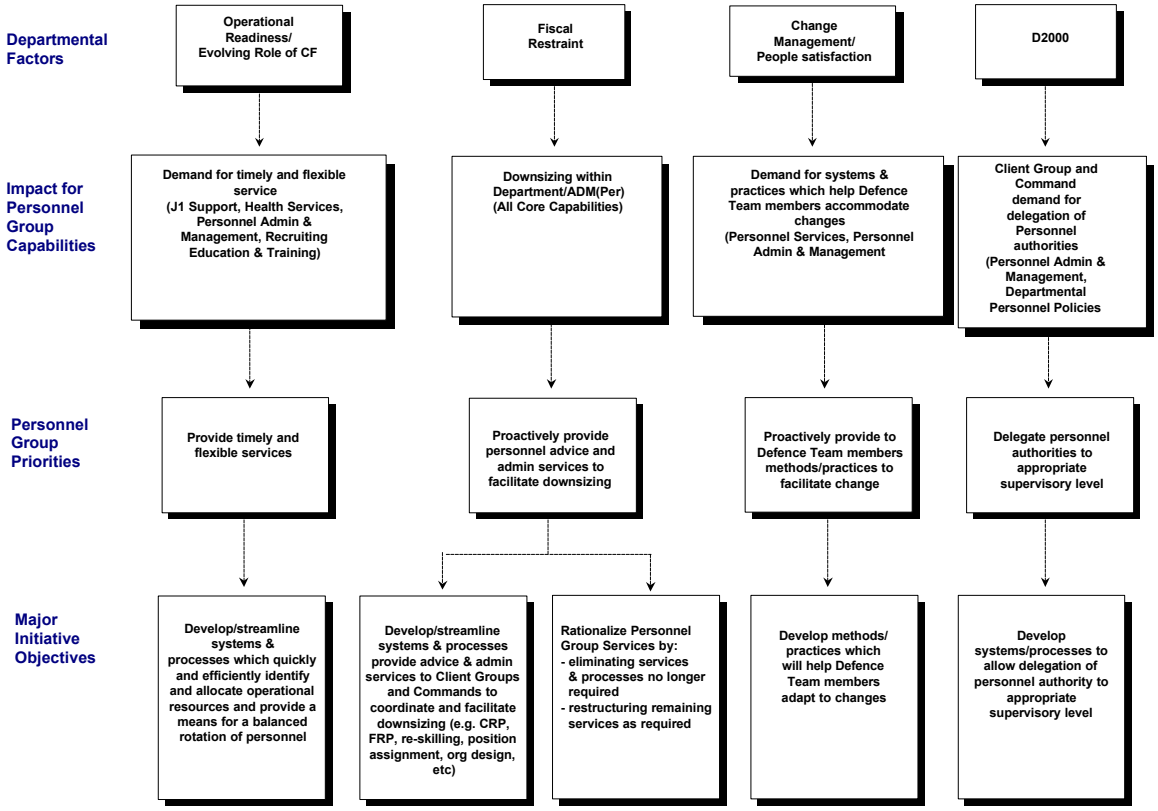
The following will be key contributory elements as the Group prepares to build an improved, more responsive and strategically focused Human Resources group:

- Continued refinement of the mission and lines of business
- Increased consultation and closer linkages with clients
- Increased use of technology in order to maximize efficiency and effectiveness
- Comprehensive approach to and greater use of Alternative Service Delivery
- Improved support to operations
- Improved alignment of spending responsibility with accountability and authority
- Improvements in resource allocation, costing and performance measurement

4. RESULTS EXPECTATIONS

These initiatives are to be understood in the context of the Personnel Group responses to external demands for human resource services, and to demands for change in the way that the personnel function is managed. The logic of these initiative objectives and their relationships to the broader demands upon the Department, are illustrated below:

Figure 15: Major Objective Initiative Framework



Personnel Group Priority Framework

5. FINANCIAL SUMMARY

Figure 16: Business Line/Activity Financial Plan

(thousands of dollars)	Main Estimates* 1996-97	**Main Estimates 1997-98**	**Planned 1998-99**	**Planned 1999-00**
Support to the Personnel Function				
Operating Expenditures				
Personnel	452,743	619,159	588,973	586,080
Operations and Maintenance	146,613	141,755	136,653	146,814
Operating Requirement	599,356	760,914	725,626	732,894
Capital	64,426	73,824	35,043	35,420
Grants & Contributions	17,294	19,475	19,475	19,475
Total Requirement	681,076	854,213	780,144	787,789
Less: Revenue credited to the Vote	20,924	20,444	19,194	19,662
	660,152	833,769	760,950	768,127

* Does not reflect Supplementary Estimates .....Actual Mains only

C.7 MATERIEL, INFRASTRUCTURE AND ENVIRONMENT SUPPORT

A. Materiel

1. OBJECTIVES

The mission of the Materiel Group is to provide quality, timely, and efficient materiel acquisition and support to the Canadian Forces and the Department. The vision of the Materiel Group is that it will be a results-oriented member of the Defence Team that provides value-added materiel acquisition and support to the Canadian Forces and the Department.

To support the achievement of the mission and vision, the Materiel Group has developed strategic objectives in four categories to ensure a balanced framework. They are listed in order of priority:

Effectiveness: to provide the best possible advice, guidance and support to the Canadian Forces and the Department within Government policies, and to provide leadership to the materiel acquisition and support process.

The Team: to energize, motivate and develop ourselves around shared core values within an understood management framework.

The Business Process: to increase the efficiency in delivering materiel acquisition and support.

External Stakeholders: to foster collaborative relationships with industry, other Government departments and international partners to assist in the delivery of value-added materiel acquisition and support.

These strategic objectives support the attainment of the Departmental strategic objectives.

The Materiel Group is responsible for providing materiel acquisition and support services in the following areas:

- equipment management of new or existing Canadian Forces equipment and systems which includes new capability acquisition, modification, supply and inventory management, maintenance and disposal services;
- research and development including defence science and technology leadership;
- logistics planning and operational coordination for military operations; and
- materiel and transportation management (including postal and customs services, and food services support and technical advice).

The Materiel Group is also responsible for providing other support services to the Canadian Forces and the Department such as:

- intellectual property management;
- personnel and household traffic management;
- military logistics training support;
- movement planning and operational coordination; and
- stakeholder relations with various industrial, governmental and international partners

2. OPERATING CONTEXT AND KEY INITIATIVES

Operating Context

The resources dedicated to support services are being reduced each year and the Materiel Group must continuously improve its delivery of materiel acquisition and support and demonstrate the value it provides to other members of the Defence Team. Innovation will be required in all aspects of the Materiel Group business which implies assuming greater business risk while ensuring appropriate risk management.

The Materiel Group will work closely with external stakeholders such as industry, other Government departments and international partners, to continue to contribute to the achievement of non-defence objectives. In particular, environmental protection considerations will become more important in delivering materiel support as legislation comes into effect in the near future.

Key Initiatives

The Materiel Group reengineering initiative began in June 1994 as Operation Excelerate. The scope of the reengineering widened under the Management, Command, and Control Reengineering initiative and now involves major organizations in the Canadian Forces and the Department who play a role in the materiel acquisition and support process.

The mission of the project is to deliver the most cost-effective and efficient support to Canadian Forces operations by driving fundamental change to the materiel acquisition and support processes and organizational structures. The scope of the work covers the materiel acquisition and support business from the front line operations to industry throughout the materiel life-cycle.

The materiel acquisition and support process supports the operational capabilities of the Canadian Forces. By providing cost-effective support, the work will contribute to the success of Canadian Forces operations and the attainment of broader departmental objectives. Front line operational units will be able to count on clear, dependable, and streamlined support. Those who work in the materiel acquisition and support business throughout the Department will have a clear

understanding of their contribution to the success of the Canadian Forces and the Department of National Defence.

Four pilot projects are now ready to move from redesign to reality to test the reengineered concepts. Additional pilot projects will be phased in over time based on an implementation plan and lessons learned from the initial pilot projects.

3. CHANGE MANAGEMENT ISSUES

Since 1 April 1994, the Materiel Group has undergone a significant change over the past couple of years as a consequence of downsizing by 33%; the severe nature of these changes is now being experienced across the Group. Although the downsized organization is in place, many of the reengineered processes and automated tools required to enable the streamlining of the Group's business activities have yet to be delivered. It is anticipated that it will take several years to complete the change management process, the process reengineering and the delivery of enabling tools.

4. RESULTS EXPECTATION

The Materiel Group's reengineering and renewal efforts are expected to achieve the following:

- an increase in quality and responsiveness of materiel and acquisition support services to the Canadian Forces and the Department, facilitated by the development and implementation of agreements with service recipients;
- a reduction in the overall number of specialities and expertise required in order to focus on the Group's core competencies;
- clearer lines of authority and responsibility through defined management frameworks;
- a substantial reduction in the cost of providing the services to meet mandated reductions;
- improved visibility into the costs of the services by allocating costs to processes, outputs and service recipients; and
- increased collaborative relationships with industry, other Government departments and international partners.

B. Infrastructure

1. OBJECTIVES

The mission of the Assistant Deputy Minister (Infrastructure and Environment) (ADM(IE)) Group is to provide efficient delivery of the infrastructure support, environmental protection, aboriginal affairs and nuclear safety oversight programs. The vision of the ADM(IE) Group is to be a responsive, results oriented, business-like team of innovative and knowledgable civilian and military professionals. The strategic objectives are:

- To develop policy and to provide direction, advice and support that meets the requirements of the CF, DND and the Government of Canada;
- To develop and adopt processes and systems that result in cost-effective, results oriented and client-focussed support to DND and the CF; and
- To develop positive and stable relationships with stakeholders external to ADM(IE), in order to promote and protect the interests of the ADM(IE) Group, the CF and the Department.
- To continue to develop a team approach and promote the continuous development of the Group personnel in order to enhance the quality of the work environment and to contribute to the achievement of the ADM(IE) vision;

The ADM(IE) Group is responsible for the following specific infrastructure related capabilities:

- Strategic policy and planning. To provide strategic advice on infrastructure requirements and holdings and an IE policy and information management framework;
- Infrastructure and Real Property management. To provide infrastructure and real property management and related professional services;
- Infrastructure service delivery and support. To become the “deliverer” of projects of choice and to provide policy, advice and life-cycle support to the management of infrastructure assets; and
- Fire services. To provide expert advice, policy and life-cycle support for the provision of fire protection and crash rescue services to DND and the CF.

2. OPERATING CONTEXT AND KEY INITIATIVES

Operating context

The major objective of the Federal Government for the foreseeable future, as outlined in Budget 94 and 95, is to reduce spending in order to control the deficit. Given the current financial climate, DND and the CF will continue to conduct a high level of operations but with reduced resources. An impact on ADM(IE) of reduced spending and organizational downsizing is a decrease in the overall inventory of infrastructure to support. Nevertheless, as the Department rationalizes its holdings and moves toward consolidation of facilities, there will be an increased demand for capital funding for infrastructure in the short term. Finally, an increase in parliamentary scrutiny of Departmental programs and initiatives is to be expected; and

Alternative Service Delivery. The Government's continued emphasis on "alternate service delivery" options will continue to be a major feature of all departmental restructuring exercises. Privatization, partnerships and other private sector participation must be considered as viable opportunities for service delivery. Mounting pressures of program spending cuts and military/civilian personnel reductions will require that innovative methods of providing the non-core services be developed to protect the operational capability of the CF. ADM(IE) staff will continue to evaluate processes (levels of service and delivery mechanisms), as well as the value-added of staff and management overheads as a means of ensuring that the best possible service delivery is provided at the lowest cost, without prejudicing military requirements.

Key initiatives

The one key initiative in the ADM(IE) Group is the Infrastructure and Environmental Renewal (IER) project. Indeed, ADM(IE), along with the active involvement of the Command Engineers, has completed the analysis and planning portion of IER. The core processes have been defined and the IE organizations at the NDHQ and Command levels realigned to accomplish these processes. The changes planned under IER will be solidified through policy renewal and training modifications which will be implemented next year. Indeed, the ADM(IE)'s new role as the corporate asset manager for the infrastructure holdings of the department must be conducted in the context of a new resource management system, based, among other things, on level 1 business plans and a national performance measurement system. The significant changes brought on by IER are as follows:

- Devolution of funds. Preparations have been made this year for the devolution of construction funds to the Capability Components as part of their operating budgets;

- Optionality. The Environmental Chiefs of Staff will have the option of managing their infrastructure projects themselves and determining methods of service delivery. Up to now, ADM(IE) had the mandate of managing all infrastructure projects over one million dollars. However, Director General for Infrastructure remains the DND "centre of excellence" for infrastructure service delivery;

- Assigned infrastructure. Under this concept, the host Capability Components (CC) will be responsible to maintain all its own infrastructure and will no longer be dependent on another CC; and

- IM/IT. Many of the new Information Environment (IE) processes are based upon a new Integrated Information Environment (IIE) which will allow more effective transfer of information and the monitoring of infrastructure performance in DND.

3. CHANGE MANAGEMENT ISSUES

The above mentioned Infrastructure and Environmental Renewal (IER) initiatives and operating context affect the ADM(IE) Group in the following ways:

- Devolution of funds. The ADM(IE)'s direct influence on the management of resources will decrease as the authority and funding will then be devolved to the lowest practical level. It is expected that the legacy projects currently in the system will be completed by 2000-01. The anticipated annual allocation for 2001-02 is $131M; it is expected that approximately $129M will be devolved to the Capability Components;

- Optionality. Implicit in the devolution of construction funds is the concept of optionality. In this concept, the ECSs and bases may request ADM(IE) to manage their infrastructure projects or seek cost effective alternatives. ADM(IE) will continue to maximize the options available to Capability Components and bases for the implementation of projects. ADM(IE) will strive to become the deliverer of projects of choice;

- Assigned infrastructure. Implicit in the devolution of construction funds is the concept of assigned infrastructure. Eventually, the CC operating a certain infrastructure will be responsible to maintain the infrastructure with the devolved funds; and

- IM/IT. The funding will be found and the project management support provided so that the new Departmental systems are in place as well as the IE specific applications required to do the work. If the new IM systems are not in place, then there will be insufficient staff remaining to carry out the new IE processes.

4. RESULTS EXPECTATIONS

The IER efforts are expected to achieve the following:

- Full devolution of construction funds, including the Defence Construction Corporation funding under the fee for service initiative, by 2001-02;

- The design and implementation of an IM/IT system by 1998-99;
- The development and implementation of a national performance measurement system by1998-99; and
- The implementation of the Assigned Infrastructure initiative by 1998-99.

C. Environment

1. OBJECTIVES

Awareness of environmental issues continues to be prominent in Canada and internationally. This is reflected in the strong emphasis the Department of National Defence and the Canadian Forces place on protecting the environment in all peacetime operations and activities. Important human and financial resources are expended to ensure that the Canadian Forces and National Defence policy on the environment is implemented throughout DND/CF, and that full compliance with the Government's national environmental legislation, regulations and guidelines is observed.

Environmental protection and stewardship activities throughout DND/CF are in keeping with two of the Department's stated strategic objectives. First, the activities support the Government's environmental programs and policies; and secondly, they optimize the use of resources available and promote efficiency and cost effectiveness.

2. OPERATING CONTEXT AND KEY INITIATIVES

Canadians want to live in a healthy environment now, and want to safeguard the health of the environment for coming generations. They look to the federal government for environmental leadership. As a result, the Government of Canada has pledged to "green" its own operations, to be accountable for its management of the public environmental trust, and to be a leader in environmental protection and sustainable development. Environmental laws such as the *Canadian Environmental Protection Act (CEPA)*, the *Canadian Environmental Assessment Act (CEAA)* and the pollution prevention portions of the *Fisheries Act* demonstrate this commitment.

The potential for DND/CF to affect the environment is considerable. Military operations and exercises take place across the country; fuels are used to power some 30,000 vehicles (including aircraft and ships); hazardous waste is generated; energy is consumed to operate bases and equipment in approximately 10,000 facilities (excluding married quarters); and more than 2,000,000 hectares of owned and leased land, in more than 1700 different locations, are administered. Some 125,000 military and civilian personnel are employed by National Defence. It is widely recognized by those personnel that constant environmental vigilance is required, and that every precaution must be taken to avoid environmental incidents.

Consequently, the potential for impact presents DND/CF with many opportunities to protect the environment with which it has been entrusted. DND/CF has proven to the Canadian public that it takes its role as environmental steward very seriously. National Defence and the Canadian Forces adhere fully to the principles of sustainable development and to the spirit of environmental protection laws. We aim, in the course of our daily operations, to conserve both non-renewable and renewable resources, while using them efficiently and effectively.

3. CHANGE MANAGEMENT ISSUES

The ultimate goal of DND/CF environmental activities is to integrate them into daily activities, simply as the way we do business. Over the years, many environmental activities have been so integrated. However, for those initiatives which had not been budgeted for or consolidated into daily activities, beginning in 1992-93, DND/CF established a corporate account which provided funding for environmental initiatives, known as the Incremental Environmental Program (IEP). It was intended that the IEP would fund one-time, non-recurring expenditures such as site clean-ups, and that, in time, environmental activities would be absorbed into regular Operating and Maintenance budgets of managers.

Originally, the life of the IEP was expected to be at least ten to fifteen years and was to have covered most identified multi-year projects. It is now expected that the funding program itself will be phased out over a five-year period, beginning with 1997-98, to be replaced by specific designation of environmental projects in business plans. This will have the effect of transferring the accountability for results from corporate management to local managers.

DND/CF's move toward operating budgets and business planning presents an ideal opportunity for line managers to integrate environmental activities into their existing operations. To that end, Environmental Protection and Stewardship has been recognized as a common, mandated program which is to be integrated into all levels of business plans. IEP funding will be limited to remediating contamination which occurred prior to 1992 (legacy issues) and special projects (e.g., the Halon replacement program and the Training and Education for Environmental Stewardship (TrEES) initiative). All other environmental projects are expected to be funded through the business planning process. Major stand-alone projects, or legacy issues, such as the clean-up of the Distant Early Warning Line (DEW Line), will be budgeted for on an exception basis.

Recent amendments to the *Auditor General Act* require the Department of National Defence to prepare a Sustainable Development Strategy, and to table it in Parliament by December 1997. That strategy will outline concrete goals and action plans for integrating sustainable development into departmental policies, programs and operations. The objectives cited below are expected to form the nucleus for those goals and action plans. The strategy will provide benchmarks against which progress will be measured, and, in keeping with Government direction, we will report annually thereafter on progress towards sustainable development in Part III of the Main Estimates. The Commissioner of the Environment and Sustainable Development, who has standing as a Deputy Auditor General, will monitor the Department's progress in achieving the stated objectives.

4. RESULTS EXPECTATIONS

The Assistant Deputy Minister (Infrastructure and Environment) issued *Strategic Guidance for Environmental Protection and Stewardship for 1997-98* in July, 1996. It provided managers with a list of environmental issues/aspects, and national objectives and targets, which they are expected to include in their business plans. Specifically, authors of all levels of business plans were to:

- identify those environmental issues/aspects which apply to their activities; and

- develop and implement action plans in order to achieve the objectives set by the Department.

Business plans at all levels are expected to reflect initiatives designed to achieve progress against the stated national objectives. In recognition of the fact that limited resources dictate that not all activities can be implemented immediately, a set of four prioritization criteria was developed to assist in determining the relative priority of undertaking environmental activities. The criteria are:

- risk to human health, either direct or indirect;
- compliance with legislation and regulations;
- compliance with government policy and risk to the environment; and
- restoration/enhancement of the environment.

Figure 17 outlines the environmental issues/aspects which business planners are to address, and identifies the performance indicators which will be used to track progress.

Figure 17: Environmental Issues/Aspects, National Objectives, Target Dates and Performance Indicators

ASPECT/ISSUE	DATE/NATIONAL OBJECTIVE	INDICATOR
PCB Phase-out	Remove and destroy liquid and solid PCB wastes as equipment comes out of service	Equipment identified and database inventory completed Phase-out plans developed and implementation initiated NOTE: For liquids (i.e., oil, soils, sludges, concrete, gravel, tar, debris, ballast and capacitors) express quantities by the number of 209-litre drums (45 gal); for solids (i.e., transformers, other equipment that cannot be put in a drum), express quantities in kg

ASPECT/ISSUE	DATE/NATIONAL OBJECTIVE	INDICATOR
Hazardous Material	By the year 2000, reduce by 90 per cent the use of products which contain persistent, bioaccumulative toxic substances identified under the Accelerated Reduction and Elimination of Toxics (ARET) program. By the year 2000, reduce by 50 per cent the use of products from other ARET-identified toxics.	Baseline data (1993-94) HazMat reduction plan Percentage reduction of products which contain substances identified in ARET program
Environmental Emergencies	Have contingency plans in place for response to releases, spills or incidents involving hazardous materials (including POL), based on risk assessment of local conditions.	Plans in place at each base/wing Number of plans/ responses validated for effectiveness (e.g., through Op Evals, etc)
Ozone Depleting Substances (ODS)	Reduce and/or eliminate the use of ODSs in National Defence (where appropriate alternatives are available).	Percentage reduction of ODSs in the inventory
Infrastructure Energy Usage	By 2001, reduce the amount of building energy consumed in DND facilities by 15 per cent from 1989-90 amounts (Married Quarters are not to be reported).	Megajoules per sq metre Percentage change from base year (1989-90)
Infrastructure Water Usage	By 2001, reduce annual water consumption by 20 per cent of 1989-90 consumption at National Defence facilities (Married Quarters are not to be reported).	Water used by cubic metre per site Percentage change from base year (1989-90)
Transportation Energy	Where cost effective and operationally feasible, any motor vehicle capable of operating on an alternative fuel shall do so. By the year 2004, use alternative fuel in all automobiles, passenger vans and light trucks, where cost effective and operationally feasible.	Number and percentage of all automobiles, passenger vans and light trucks acquired which meet the objectives: • acquisition of vehicles; and • use of alternative fuel.

ASPECT/ISSUE	DATE/NATIONAL OBJECTIVE	INDICATOR
Fuel Storage Tank Management (includes Fuel Handling Activities)	Register all tanks (Underground Storage Tanks (UGSTs) and Above Ground Storage Tanks(AGSTs)) in accordance with *Canadian Environmental Protection Act* (*CEPA*) regulations. Provide annual tank registry update by Jan each year. Ensure all UGSTs and AGSTs are in compliance with *CEPA* technical guidelines and timetable.	Number and percentage of fuel storage tank inventory registered Number and percentage of fuel storage tank inventory replaced and/or upgraded
Incinerator Emissions	Decommission land-based incinerators used for destroying classified waste. Operate incinerators at DND facilities used for disposal of biomedical waste IAW regulations and guidelines, including monitoring of emissions.	Number and percentage of land-based incinerators decommissioned Number and percentage of DND incinerators in compliance with emission regulations and guidelines
Solid Waste	By the year 2000, use economically viable waste reduction opportunities to reduce solid waste by 50 per cent.	Baseline data (1989-90) Solid waste reduction plan Percentage reduction of solid waste by tonnes
Contaminated Site Management	By 2003, identify, remediate and/or risk manage all contaminated sites in accordance with the DND/CF Contaminated Site Remediation Framework	Number of confirmed contaminated sites identified Number and percentage of contaminated sites remediated Number and percentage of contaminated sites risk managed

ASPECT/ISSUE	DATE/NATIONAL OBJECTIVE	INDICATOR
Training Area Management Plans	By the year 2000, complete initial natural resource inventories and environmental assessments for activities that take place in all major DND training areas, ranges and established low-level flight areas; and complete land use and training plans for all major land-based training areas and established low-level flight areas, and marine ranges, balancing operational demands and environmental requirements (managing natural resource inventories).	Number of Training Area Management Plans implemented

A significant environmental activity which will continue to be addressed through the Incremental Environmental Program, or by way of stand-alone projects, is that of remediating sites which have been contaminated as a result of past practices. Estimated clean-up costs over the medium term are anticipated to be in the neighbourhood of $500 million. Any liabilities arising from contamination at former DND sites, now owned by other federal government departments or provincial/territorial governments, are considered to be the responsibility of those agencies.

There are a number of approaches whereby the Department is addressing its liability for cleaning up contaminated sites currently owned by DND. The Contaminated Site Database mentioned above will soon provide the Department with a complete picture of its contaminated sites, spills and incident reporting. This will provide input to the Contaminated Site Remediation Framework, designed to apply long-term risk management and/or remediation options to all contaminated sites in a timely manner. Thorough review and testing of the sites will indicate the scope of the contamination, the degree of risk it poses, and will provide for a more accurate estimate of clean-up costs.

Submissions for the 1997-98 IEP show that the bulk of potentially contaminated sites is currently in the risk assessment and study stage. Once the relative risk has been determined, the Department will proceed to remediate those sites where clean-up is warranted. An estimate for the approximate cost of remediation projects submitted for the IEP for 1997-98 is $25 million.

This amount includes approximately $1 million to be used in the final phase of the Longue Pointe Lead Clean-Up project in 1997-98. This project, which involves decontamination of soil at the Longue Pointe Garrison near Montreal, will total$26.4 million when complete. One hundred and ten thousand metric tonnes of soil had been contaminated with lead by two battery-recycling and smelting enterprises, now defunct, operating on DND and adjacent land. Innovative Canadian environmental technology is being used for the clean-up, expected to be complete by Summer 1997.

A number of large remediation projects, funded as stand-alone projects, address the legacy issues. Because the scope exceeds the level of funding generally assured for the IEP, and because

the complexity of the projects poses unique project management challenges, they will be treated as stand-alone projects, and will be funded separately from the IEP. The most significant stand-alone remediation project is that of the Distant Early Warning Line (DEW Line) Clean-Up. The project is currently in the definition stage: implementation of the project, currently estimated at $242 million, is now expected to be phased over about ten years, at an approximate cost of $20 million per year.

5. COMPARATIVE FINANCIAL DETAILS

Since the integration of environmental protection and stewardship activities into business plans has not yet taken place, it is difficult to determine the level of resources which each business planner will allocate to environmental activities. A more accurate determination is expected to be available when the performance report for this period is published. However, notional allocations have been identified for the IEP, and they are outlined in figure 18 below.

Figure 18: Cash Flow

IEP MULTI-YEAR CASH FLOW ($ millions)		
1997-98	**1998-99**	**1999-00**
42.5	37.5	34.5

The business planning process has identified the requirement for an Environmental Baseline at the corporate level, at National Defence Headquarters/Director General Environment. It is anticipated that it will provide an annual baseline operating and maintenance budget of $7.5 million for such activities as:

- representing the interests of DND/CF during the development of federal environmental legislation, regulations and policy;
- in keeping with Government direction, development of an environmental management system including: policies, procedural frameworks, standards, performance measurement and accountability initiatives, and including the necessary tools, instructions, training and other support activities to allow departmental implementation validation and ongoing improvement;
- initiation and trial of national programs and/or demonstration projects, including tools to support those initiatives;
- provision of technical and due diligence advice to all levels of DND/CF on environmental protection and stewardship issues; and
- conducting and supporting environmental assessments, studies and associated research with respect to national and international issues that affect DND/CF operations.

D. Financial Summary

Figure 19: Business Line/Activity Financial Plan

(thousand of dollars)	Main Estimates* 1996-97	**Main Estimates 1997-98**	**Planned 1998-99**	**Planned 1999-00**
Materiel, Infrastructure and Environment Support				
Operating Expenditures				
Personnel	393,643	369,993	347,787	351,450
Operations and Maintenance	282,944	239,948	236,034	255,816
Operating Requirement	676,587	609,941	583,821	607,266
Capital	296,543	157,663	62,766	46,689
Total Requirement	973,130	767,604	646,587	653,955
Less: Revenue credited to the Vote	5,086	4,845	4,072	4,056
	968,044	762,759	642,515	649,899

* Does not reflect Supplementary Estimates .....Actual Mains only

C.8 DEPARTMENT/FORCES EXECUTIVE

A. Management of the Defence Services Program

1. OBJECTIVE

- Manage the Defence Service Program.

2. OPERATING CONTEXT AND KEY INITIATIVES

To meet the challenge of providing defence capabilities with the changed threat levels that have existed since the end of the Cold War despite significant reductions to the Defence Budget, DND is re-engineering every aspect of management processes applicable to the Defence Services Program. These changes have been designed to satisfy the requirements of the Government's new Expenditure Management System.

The guiding principle determining the changes is devolution, which places the authority, resources, and accountability with those who deliver defence products. To implement this strategy, DND has established a new accountability framework. As a result resources will be linked directly to assigned defence capabilities. Under this new accountability framework, only a small reserve will be retained in the centre to respond to unforeseen operational contingencies. Thus, managers will have no option but to address funding shortfalls internally by reprioritizing requirements within their programs.

3. CHANGE MANAGEMENT ISSUES

Chief of Management Renewal Services (CMRS) is responsible for fostering, guiding and coordinating improvements in management practices and work methods. CMRS staff are preparing a Departmental cultural awareness program based on the DND/CF mission, vision, shared values and principles. CMRS will also continue to coordinate the Alternative Service Delivery (ASD) program to facilitate, from a departmental perspective, the most cost-effective delivery of non-core activities by alternative means. By the end of 1997, the results of ASD reviews of the majority of activities listed in ASD Plan 97 will be implemented. A second list of activities to be assessed for ASD will be released early in 1997, with implementation targeted for the end of 1998 (ASD Plan 98). The savings which result from ASD Plans 97, 98 and future increments are estimated to be $200 million by 1999 and $350 million by 2001, funds which will be used to accommodate funding reductions while sustaining operational capabilities.

4. RESULTS EXPECTATIONS

The new resource management process is top-down/supply-driven, and will replace the current practice of demanding additional resources to address funding shortfalls with an imperative to work within the resources assigned. By discouraging demands for additional resources, it is expected that

managers will become more closely attuned to the outcomes resulting from their decisions, and this will foster more prudent uses of resources.

The transition to the new strategic management system and the implementation of the new accountability framework began during 1996-97. FY 1997-98 will see significant progress in the realignment of resources within the new accountability framework, but completion of this initiative before 1998-99 is unlikely. Internal Business planning is entering the third cycle since 1995-96. With the gain from this experience, level one business plans have been significantly refined to improve their ability to guide the assignment of resources and responsibilities within the Defence Services Program. With the completion of the corporate framework for performance reporting, it is expected that individual organizations will be in position to begin reporting measured performance internally during 1997-98. However, the standards and information needed to establish department-level performance reporting cannot be developed until capability components have their systems fully operational. As a result, departmental level performance reporting will not be fully functional until 1998-99.

B. Management of the Defence Policy

1. OBJECTIVE

- Formulate and manage all aspects of defence policy

It entails the use of resources allocated to the Policy Group to provide:

- the analytical basis and policy options, as well as advice on and support in the formulation and execution of defence policy, for the MND and senior departmental management;
- advice and support to the MND, and senior departmental Management in dealing with Cabinet and Parliament;
- advice to MND and senior departmental Management in advancing policy-related issues nationally and internationally;
- advice to MND and senior departmental Management on managing issues bearing on national unity and relations with provincial governments;
- coordination of departmental relations with Foreign Affairs, the Privy Council Office, the Cabinet and Parliament on behalf of the DM and CDS;
- assistance in fostering and nurturing a national pool of expertise and interest in defence and international security issues;
- management of the Department's bilateral and multilateral defence and international security relations, including representation of Canada at UN, NATO and other meetings and on these institutions' committees; and
- management of the Military Training Assistance Program offered to Partnership for Peace nations and a number of developing countries.

2. OPERATING CONTEXT AND KEY INITIATIVES

The 1994 Defence White Paper sets out Canada's defence policy response in the transition period following the Cold War. It calls for the maintenance of multi-purpose, combat-capable sea, land and air forces to protect Canada and Canadian interests, and to contribute to international peace and security.

Canada's defence policy takes full account of the Government's strategy to reduce the deficit. Over the period from 1994 to 1998, defence program expenditures are being cut by 23% in nominal terms (or over 30% after inflation). More of the available resources is being allocated to operational forces and less to infrastructure and administrative overhead.

The world remains turbulent and uncertain. Long-range strategic analysis remains essential and international trends and developments must be monitored to ensure that defence policy continues to meet Canada's security requirements-- or, alternatively, to allow for the timely development of new policy options for government consideration. Moreover, new defence issues -- including consideration of possible new military commitments and operations -- arise constantly and seem to be growing in complexity. Finally, the MND will continue to expect timely, competent support from the Department in his evolving relations with Parliament, the Canadian public, and defence partners abroad.

3. CHANGE MANAGEMENT ISSUES

Implementation of the Group's re-engineering changes and an emphasis on a team approach are helping alter the organizational culture of the Group and improve the way in which it does business. The goal is to enhance and maintain a responsive, competent, results-oriented organization, with a broad understanding of the machinery of government, a sound appreciation of the policy implications of international and domestic developments with a bearing on security and defence, and the ability to manage complex, sensitive issues.

4. RESULTS EXPECTATIONS

Over the planning period, the work of the Policy Group will be focused on:

a. **Strategic Monitoring and Analysis**. The goal is to provide timely, relevant thoughtful, accurate analysis of defence-related international and national developments that could have a significant impact on Canadian defence policy in the short or the longer term. The Policy Group draws on its own analysis as well as consultations with and the findings and reporting of departmental as well as inter-departmental staffs to provide the MND and Cabinet with both the information necessary to formulate defence policy and timely warning of events that could demand policy changes or new force commitments.

b. **Provision of Defence Policy Advice**. The goal is to provide sound, relevant, timely, clear policy advice on defence policy and issues that could be of concern to senior management. It involves research, analysis, consultation and identification of courses of action for MND, DM and CDS consideration. It also serves to provide policy guidance and comments to other Group Principals and environmental Chiefs of Staffs. Beyond this, it includes providing departmental representation at interdepartmental meetings where policy issues of interest to the Department are debated or resolved and representation of the Department at international meetings where matters of interest to Canada are negotiated or discussed, and where guidance is agreed for the management of NATO, NORAD and other institutions.

c. **Support to Senior Management**. The goal is to provide relevant, timely, accurate support to the MND, DM and CDS regarding Department's and Canada's external

defence relations. It includes vetting and coordinating the departmental input into briefing books and preparing briefing material and speeches as required. Other DND/CF agencies continue to be responsible for managing external relations in their specific functional areas.

d. **Management of Defence Policy Outreach**. The goal is to provide effective and efficient management of DND's defence policy outreach functions, including the Security and Defence Forum, the Chair of Defence Management Studies and the Military Training Assistance Program.

C. Provision of Review Services

1. OBJECTIVE

- Provide review services comprising internal audit and program evaluation

2. OPERATING CONTEXT AND KEY INITIATIVES

The mission of the Chief of Review Services (CRS) is to perform review services on behalf of the DM and the CDS to promote improvements to DND and CF policies, programs, operations and activities, and to provide enhancement and coordination of all DND/CF ethics programs and activities.

As a result of new mandates assigned to CRS and the recently reengineered CRS organization, the following capabilities reflect the future direction of the CRS Branch:

Corporate Review - encompasses the plans and resources required to provide program evaluation and internal audit methodologies to enhance the relevance, results and cost-effectiveness of all areas of the DND/CF policies and programs. This capability will contribute to improving the management of program delivery activities and internal operations and assist in strengthening accountability.

Assistance Review - will assist senior level Departmental/CF managers to meet their mandates by providing CRS expertise and an independent review capability, at their request.

Operational Capability Review - will be provided to review the processes and the factors considered by Commanders when they declare Operational Readiness for specific missions. It will also review the degree to which the CF can deliver the capability required of it by Departmental plans.

Special Examinations and Inquiries - will entail the conduct of special examinations and inquiries into allegations or instances of impropriety, mismanagement and/or other irregularities in DND and the CF.

Ethics Coordination - will provide enhancement and coordination of all DND/CF ethics programs and activities. This capability will also entail the assimilation of the Conflict of Interest/Post Employment Code section.

Office of the Auditor General (OAG) Coordination - involves the provision of service as DND's interface with the OAG.

Review activities in DND and the CF are conducted by commanders and managers at all levels to ensure that their delegated responsibilities are fulfilled with due regard to efficiency, effective-ness and accountability. Corporate level responsibility for the provision of independent program evaluations, internal audits, and other special studies, reviews and examinations as may be required rest with the Chief Review Services who is the independent advisor to the DM and the CDS on all aspects of review.

In light of the important change initiatives underway in the Department, priority for review activity will be given to defence program rationalization activity and to military operations. With regard to the defence program, reviews will continue to be conducted to determine where effectiveness can be improved, where savings can be made, and which activities are no longer essential.

Over the next few years, a key focus of review will be the implementation of the management renewal decisions made by the Department and the Canadian Forces including: reengineering initiatives; business planning; departmental reporting; the devolution of departmental activities; different forms of alternative service delivery and the development of strategies to review these new arrangements; the capital equipment program and life-cycle management; defence industrial capability; human resources initiatives; comptrollership; and the integrity of information systems and data.

3. CHANGE MANAGEMENT ISSUES

There are three significant challenges facing the CRS Branch as a result of their own reengineering, carried out during the past year. The first challenge is to get the new organization, processes and operating concepts up and working. The second challenge is to establish, or in some cases reestablish, partnerships with key stakeholders including central agencies (TB and the OAG), DND review processes outside CRS, other government Departments, and defence review agencies in other countries. A special partnership workshop is planned with command/ base internal audit agencies in February 1997. CRS currently enjoys an association with several review organizations in defence agencies in other countries including the U.S.A., Australia, U.K. and New Zealand.

The third challenge, and perhaps the most difficult, is to change the culture in CRS to match the new organization and operating concept. Included in this will be increased transparency in the review process and the implications of review products being available to the media and the public.

CRS also has the challenge to implement three relatively recently assigned mandates - special examinations and inquiries, ethics and operations capability - from within existing resources.

4. RESULTS EXPECTATIONS

The new organization and operating concepts are more flexible and adaptable and will create a more open work environment with less hierarchy and a more strategic focus. The new organization is also transitional. Ongoing adjustments will be made to the organization and operating concept, as and when necessary. An 18-24 month transition period is anticipated and should not be regarded as a delay. It will take that long to train, develop and adjust to the new operating environment and to"activate" a new culture.

The more recent mandates - DSEI, ethics and operations capability - will mature over the next few years, and become mainstream activities, impacting significantly on the Department and

CF. Over time, additional personnel in the Branch will be assigned to specific projects related to these mandates, in addition to the personnel dedicated full time to those functions .

D. Provision of Legal Services

1. OBJECTIVE

- Provide legal services, advice and training.

2. OPERATING CONTEXT AND KEY INITIATIVES

The Judge Advocate General (JAG) contributes to the mission of the CF and the goals of DND by providing optimum, timely, accurate legal advice and support services and superintending the Military Justice System. Legal considerations are increasingly factored into matters of policy, doctrine and operations, and are integrated into CF/DND decision making. Examples of such matters which have a significant impact upon the business environment of the JAG, and his offices include:

- foreign deployments for peacekeeping and humanitrian duties, such as Haiti, Bosnia and the Zaire Refugee Crisis;
- expectations that the CF and DND become more visibly engaged in dealing with less traditional threats to national security such as the trade in illicit drugs, protection of the fisheries, enforcement of environmental laws and preparedness for civil emergencies;
- the Somalia inquiry; and
- federal legislation which recognizes or creates rights for individuals and imposes obligations for the government.

To support its business planning environment, the Office of the JAG provides four capabilities which form the basis of its accountability framework. These capabilities and the strategic objectives developed for each are as follows:

Military Justice - *To ensure the military justice system operates in a fair and efficient manner.*

Legal Advice and Services - *To provide accurate, timely, independent legal advice and services.*

International Humanitarian Law - *To ensure obligations pursuant to International Humanitarian Law are a key component of CF training***.**

CF Operations - *To support CF Operations at the strategic, tactical and operational levels through legal advice and services.*

3. CHANGE MANAGEMENT ISSUES

In maintaining and enhancing an effective and successful organization, the JAG organization will have to organize and structure itself to meet the challenges and opportunities presented by its operating environment. This environment includes political realities, CF/DND restructuring, economic/financial conditions, and an evolving legal environment with increased and more complex demands by clients.

The three factors that will have the greatest influence on the achievement of JAG objectives are CF/DND downsizing, increasing demands for legal advice across most of the spectrum of CF/DND decision making and operations and the unpredictable nature of demands for legal services.

Downsizing

The most immediate of these factors is downsizing. A scarce resource base has reinforced the need for the CF/DND to critically examine all of its programming and services. This has meant a decline in the number of CF members , a realignment of activities towards the support of operations and the devolution of responsibilities and authorities.

The JAG must be an integral part of CF/DND's response to the new fiscal realities, reviewing his current organization for efficiency and effectiveness and pursuing, where appropriate, opportunities for alternate means of delivering services. Downsizing initiatives will also add significant demands for legal services as the diversity of issues associated with such policies require legal solutions.

Increasing Demand for Legal Advice

The JAG is increasingly being asked to provide legal advice and services to domestic and international operations of the CF. This support includes advice to NDHQ in the planning of these operations and attendance at international gatherings to represent CF long-term operational interests. The JAG must ensure that his organization maintains a military component which can be deployed on CF operations, both international and domestic.

Additionally, the evolution of Canadian society within which the CF/DND operates has, since the passing of the Charter, created an environment in which major decisions are not taken without prior legal consultation. In response to society's changing attitudes concerning the relationship of the individual to government, a great deal of federal legislation has been passed in recent years which recognizes or creates rights and imposes obligations. Most of this legislation is of general application. The JAG must ensure that legal officers are kept abreast of the legal ramifications of these legislative changes and manage the significant demand for CF/DND legal services generated by the changes. In addition the JAG must continue to seek opportunities to train members of the CF/DND with respect to their legal obligations.

Unpredictable Nature of Demand for Services

The JAG has little control over the type, complexity and urgency of legal problems which he must address. For example, the JAG has minimal control over:

- the scope, volume, complexity and urgency of requests for legal opinions and services;
- the number and complexity of courts martial;
- the number, complexity and value of claims;
- number and nature of contracts and contract disputes;
- unfolding international events such as those requiring legal officers to undertake United Nations, NATO or multi-national duties in support of CF operations;
- the number and complexity of Government initiatives, usually legislative in nature, that impact CF/DND interests and demand an immediate response; and
- the increasing requirement to use legal resources in domestic roles such as counter drug operations and CF assistance to provincial police authorities.

In order to maintain a capacity to meet the above demands, the JAG organization must remain flexible and ensure its personnel are knowledgeable and trained in several areas of law. A JAG performance measurement system must provide feedback on client requirements and monitor trends with respect to legal issues.

Current Legal Issues

The publicity concerning the military justice system resulting from the Somalia incident has meant that the JAG must continue his efforts to ensure the system is, and is perceived to be, by both CF members and the Canadian public, fair, efficient and in compliance with the Charter. As reforms are brought about in the military justice system these must be adequately communicated and enforced by all concerned. The occurrence of events such as the Somalia inquiry and other international investigations (i.e. the Belgian Inquiry into Rwanda) divert valuable resources away from providing the day-to-day legal advice and services required by the CF/DND.

Due to the need for the JAG to be readily available to the Minister and executives of CF/DND and accommodation restrictions, the JAG is physically separated from his legal officer resource base. This imposes a serious time constraint upon the delivery of legal advice and services in the National Capital Region and reduces the efficiency in dispensing legal advice to all clients.

The following environmental factors will also impact upon JAG planning:

- the legal environment is continually evolving;
- costs for legal services are not charged to clients;
- there is a need to apply domestic, foreign and international law for international operations;
- the CF engages in high risk activities as a matter of course;
- the wide scope of CF/DND activities results in a requirement for the JAG to maintain a commensurate number of lawyers trained in specialty areas; and,
- the military requirement for staff postings increases on-going training needs.

4. RESULTS EXPECTATIONS

The JAG organization of the future will build upon its three pillars of business: the Military Justice System, Legal Advice and Services, and CF operations. Strategic objectives have been developed for each JAG capability to provide direction for future endeavours. These are as follows:

Military Justice

To ensure the military justice system operates in a fair and efficient manner.

Improvements to the military justice system will continue to ensure that the system is, and is perceived (by both CF members and the Canadian public) to be, fair, efficient and in compliance with the Charter of Rights. Important initiatives which will lead to improved public perception and increased efficiency will be the implementation of reforms related to the summary trial system and the investigation and charging of service offenses.

Legal Advice and Services

To provide accurate, timely, independent legal advice and services.

A substantial amount of JAG resources will continue to be deployed to support advisory roles, including the continued provision of accurate, timely, arms-length advice and services to the CF/DND on policy and legislative matters. The JAG will continue to seek opportunities to improve the delivery of legal service by exploring alternate means of delivering services such as through agreements with the Department of Justice. In addition, a client survey will be developed to evaluate service levels and identify areas for improvement.

International Humanitarian Law

*To ensure obligations pursuant to International Humanitarian Law are a key component of CF training***.**

The JAG will escalate his role in the CF training function, not only for legal officers but for all CF members, particularly in the areas of military justice, International Humanitarian Law, and UN Charter operations.

CF Operations

To support CF Operations at the strategic, tactical and operational levels through legal advice and services.

JAG resources are increasingly used in direct support to CF operations, both domestic and international, at the strategic, operational and tactical levels. As a result, additional JAG resources will be deployed to the field organizations with only required specialist remaining in headquarters.

On matters of international law which impact on DND and the Canadian Forces, JAG resources will continue to participate in Canadian Delegations to the United Nations and other international conferences or committees as well as domestic interdepartmental working groups . JAG will continue to participate in these endeavours and ensure that the interests of the Canadian government, the Canadian Forces and the international community are properly represented and protected.

General Management Objectives

Information Management: To improve communications and accessibility to information by both legal officers and CF members using state-of-the-art technologies.

Information will be viewed as a critical resource, and will be managed accordingly with an information technology framework designed to increase communications and accessibility to information by both legal officers and CF members.

Performance Measurement: To develop an accountability framework in support of business plans. Internal and external reporting

Business planning practices will be an integral part of management, and will include an accountability framework supported by agreed upon performance indicators.

E. Comptrollership and Corporate Management

1. OBJECTIVES

- Provide comptrollership guidance, accounting systems, and the financial authorities framework and advice necessary to support the resource management process; and

- Provide corporate management and support services.

2. OPERATING CONTEXT AND KEY INITIATIVES

The Finance and Corporate Services Group will continue to provide comptrollership guidance and the financial authorities framework and advice necessary to support the resource management process, and will provide corporate management and support services. To achieve this we will need to promote excellence in resource management and strive to provide top quality service to our customers in the most efficient and effective manner possible. It will be essential for the Group to develop new service delivery strategies to meet the many increasing demands imposed upon the Department by the delegation of authority and the strengthening of accountability.

Finance and Corporate Services exercises its responsibilities in three broad areas:

- Comptrollership and Financial Processes - is exercised through its mandated functional control within the Department and the Canadian Forces(CF);

- Corporate Management - to include quality control and compliance monitoring activities to ensure that all NDHQ entities, including Command HQ, fulfils their Departmental and legislated management responsibilities in such areas as Access to Information/Privacy, preparation of Ministerial correspondence and coordination/promulgation of departmental administrative policies and regulations; and

- Corporate Services - through Canadian Forces Support Unit - Ottawa provides support services for the day-to day needs of all DND/CF organizations located within the National Capital Region.

The Finance and Corporate Services Group initiatives for the next year include the following:

- develop financial strategies to enable the Department to best deal with imposed reductions, reallocation of resources based on management decisions;

- improve the efficacy of financial dealings with both the UN and NATO, including the enhancement of current financial management practices related to resources devoted to these organizations;

- further the simplification of departmental administrative practices through the elimination of superfluous regulations, and process and authority restrictions currently reflected in our administrative policies;

- develop and implement a new financial management information and decision support system;

- improve DND/CF's ability to respond to applicants under the Access to Information and Privacy Acts as required by law; and

- to focus on effective human resource management and the rejuvenation of the workforce as essential elements in the Group's renewal efforts.

3. CHANGE MANAGEMENT ISSUES

In order to meet reductions targets and in an effort to realize greater efficiencies, the Finance and Corporate Services Group has streamlined its organization. A major feature of this organizational re-structuring has been the elimination of one level of management across the board. The requirement to ensure the Department operates within its funding envelope will require strenghtening the financial management framework, implementing a more robust financial information system and tightening the financial accountability framework. Reductions in overhead costs will only be achieved with the streamlining of administrative processes to make the Group more efficient. Technology and training are key factors which will assist in ensuring that appropriate decisions are made in a manner consistent with government administrative procedures.

4. RESULTS EXPECTATIONS

In concert with the Finance and Corporate Services Key Initiatives, the following results are expected:

- The Finance and Corporate Services Group will ensure that allocated resources are used in an effective and prudent manner, and that efficiencies are achieved in all areas. The adoption of operating budgets, corporate accounts, and business planning are key measures which encourage efficiency and flexibility;

- To ensure NATO's current and forecasted funding allocation is consistent with Canada's policies towards NATO. Canada continues to take a firm position on a number of issues involving resources; such a stance is necessary in order to align the consumption of resources in NATO with fiscal realities;

- To streamline, effect change, or eliminate superfluous and unncecessary practices and processes that contribute no added value;

- The Financial and Managerial Accounting Project (FMAP) which encompasses the functionality currently available in Departmental accounting systems will be implemented 01 April 1998;

- To reduce the overall volume of active files which respond to applicants under the Access to Information and Privacy Acts through the streamlining of the staffing pricess and by the addition of additional resources; and

- The implementation of a changed role for managers, from one of paternal direction to one of supportive coaching. To educate, train, and use any means of intervention from the highest corporate level to permeate the entire organization resulting in the driving downward of responsibility and accountability.

C.8 DEPARTMENT/FORCES EXECUTIVE (Continued)

F. Financial Summary

Figure 20: Business Lines/Activities Financial Plan

(thousands of dollars)	Main Estimates* 1996-97	**Main Estimates 1997-98**	**Planned 1998-99**	**Planned 1999-00**
Department/Forces Executive				
Operating Expenditures				
Personnel	203,676	193,190	188,511	189,415
Operations and Maintenance	97,956	97,748	95,901	103,233
Operating Requirement	301,632	290,938	284,412	292,648
Capital	21,266	22,386	13,919	15,010
Grants & Contributions	167,481	161,339	156,527	149,149
Total Requirement	490,379	474,663	454,858	456,807
Less: Revenue credited to the Vote	18,366	18,863	16,183	16,038
	472,013	455,800	438,675	440,769

* Does not reflect Supplementary Estimates .....Actual Mains only

Section III
Departmental Performance

A. Summary of Departmental Performance

Canada's current defence policy calls for the Canadian Forces to be properly equipped, supported and trained. While the initiatives required as a result of the 1994, 1995 and 1996 federal budgets will have had an impact in all these areas, the objectives and missions entrusted to the Canadian Forces and the Department of National Defence by the 1994 Defence White Paper were met.

Throughout 1995-96:

- the Maritime Forces conducted operations in the following areas: Sovereignty and surveillance patrol in defence of Canada's maritime interests and North America; collective alliances; support to other government departments; humanitarian assistance and search and rescue. The most notable examples are: Operations OCEAN VIGILANCE, DND's name for the Turbot Dispute; and operation SHARP GUARD, Canada's contribution in the Adriatic in the enforcement of the United Nations embargo against the Balkans;

- the Land Forces contributed to the defence of Canada and the maintenance of Canadian sovereignty through the maintenance of land and general purpose combat ready forces, and the provision of support to civil authorities in the maintenance of public order and security; assisted other government departments through the provision of support in situations of civil unrest; ground searches, counter-drug operations and disaster relief operations; contributed significantly to international security through participation in multi-lateral operations and alliances, supporting humanitarian relief efforts and the restoration of conflict devasted areas. The most notable examples are: the assistance provided to the RCMP and British Columbia government at Gustafsen Lake, and to the OPP and Ontario government at Camp Ipperwash and the Ipperwash Provincial Park; the participation in the United Nations Protection Force (UNPROFOR) in the Balkans; the contribution of a Brigade Headquarters and supporting sub-units to the Implementation Force (IFOR) in Bonsia-Herzegovina; the provision of a signals regiment; a composite medical unit; a second line combat service support unit and a logistics mission support group to the United Nations Mission in Rwanda (UNAMIR).

- the Air Forces fulfilled the mission objectives of the defence of Canada, North America and the contribution to international peace and security, through the conduct of operational activities in aerospace surveillance and control; air support to Maritime and Land Forces; air mobility; support to national interests; and contingency support operations. Some of the most notable contributions of the Air Forces are: the provision of tactical and strategic airlift to operations in Bosnia-Herzegovina for assisting in the distribution of relief supplies (including operations AIRBRIDGE-Sarajevo Airlift); the contribution of Sea King helicopters in support of the Maritime Forces and Aurora maritime patrol aircraft in the Adriatic to monitor and enforce UN trade and shipping sanctions against the Balkans.

B. Departmental Overview

1. KEY RESPONSIBILITIES AND OBJECTIVES

The Defence Services Program brings together the activities and the resources which enable the Department of National Defence and the Canadian Forces to carry out their defence roles. Properly trained and adequately equipped military and civilian personnel of the Forces and the Department provide operational and related support capabilities to protect Canada, cooperate in the defence of North America, and contribute to international peace and stability. In addition to its military roles the Department of National Defence, in co-operation with Transport Canada, provides maritime and land search and rescue services and provides assistance to Fisheries and Oceans Canada and to other government departments as required. The Department also provides assistance to provincial governments in the event of emergency or disaster, such as floods, forests fires or medical emergencies.

Substantial progress continues to be made in carrying out these roles. The delivery of defence is being streamlined through measures designed to ensure a more effective and efficient use of defence resources. New management practices that provide better “value-for-money” are being introduced. Expenditures on overhead, command and control, headquarters and administration are being reduced. Comprehensive performance measures are being developed.

2. DEVELOPMENT OF PERFORMANCE MEASUREMENT SYSTEM

Performance measurement is an integral part of the strategic management framework and associated business planning process. Performance measurement contributes to increased accountability and an improved ability to manage risk. While1996-97 business plans of the various Business Lines/Activities represented a positive first step in the development of a departmental performance measurement system, significant work remains to be done. Accordingly, the effort to develop a practical and credible performance measurement system will continue over the course of the next year for implementation in 1998-99. This will be done taking into account the recent Treasury Board initiatives on improved reporting to Government which focused on results and desired outcomes.

A Performance Measurement Steering Committee (PMSC) will stand-up before the end of 1996-97 and will be responsible to guide the Strategic Objective Working Groups (SOWG) in the development of a detailed framework and complementary reporting structure. Once approved, the framework and reporting structure will be promulgated in the Defence Planning Guidance (DPG) 98. It is envisaged that the outcome of this work will satisfy both internal and external reporting requirements. Directly related to the performance measurement regime will be the new structure for the Reports to Government aligned with Planning, Reporting and Accountability Structure (PRAS) and their accompanying orientation towards "Business Lines" or "Outcomes". Program accountability rests at the Deputy Minister/Chief of Defence Staff level and the Program Management Steering Committee will attempt to link outcomes to the organization at the ADM level. This is very much "work in progress" by the central agencies and we anticipate future adjustments to the performance measurement framework to reflect "Business Lines/Outcomes".

Performance Measurement Components

Performance measurement comprises the quantitative and qualitative assessment of results, where actual performance is compared against prescribed standards or benchmarks. The DND/CF objective is to develop a balanced, results-oriented, user driven performance measurement system. The system will be fully integrated with business planning, support departmental risk management and accountability strategies and assist managers at all levels in decision making. It is essential the system focus on measuring items which directly contribute to the Department's ability to deliver results and manage activities. At the strategic level, the overall focus will be on the efficiency and effectiveness of policies and programs.

There are five essential components to the system:

- the identification of Defence Outcomes and Strategic Objectives;
- the selection of Critical Success Factors/ measurement areas/ indicators;
- the establishment of standards for performance and outcomes;
- the analysis and reporting of results; and
- the utilization of the information for decision making and control.

Performance Measurement Framework

The Defence Outcomes are supported by Strategic Objectives that must be achieved if the organization is to realize its Mission and Vision. As such, they provide a fundamental underpinning for the overall performance measurement system. The Defence Outcomes also provide the overall context for performance measurement and serve as a nucleus for the development of Strategic Objectives at subordinate levels in the organization. To support the Department's Strategic Objectives, a framework of Critical Success Factors, Performance Measurement Areas and Performance Indicators has been developed. These elements reflect initial thinking on the subject. It should be considered a "strawman" at this stage of development. It is included here to illustrate the connection that must exist between strategic (and other) objectives and the supporting performance measurement framework and to serve as a vehicle for the development of this work at the strategic level, as well as to condition the work of subordinate organizations in building the performance measurement frameworks needed to support their own requirements.

The key requirement over the next several months will be to further refine the performance measurement framework so that it meets the collective needs of the Deputy Minister/Chief of Defence Staff and all organizations involved in internal business planning, and also meets the requirements of the Reports to Parliament. There will also be a need to review the elements of the Business Lines/Activities performance measurement frameworks to ensure their consistency and fit with the strategic level objectives and relevance to the Defence Outcomes noted above. The overall aim is to establish a performance measurement system that is usable by advisors in developing their internal business plans for 1998-99. Comprehensive performance measurement will then commence

as part of the 1998-99 business planning cycle. This schedule is not intended to impede or negate current performance measurement activities that may be underway; however, the one year development period should allow planners to relate their efforts to the overall performance measurement system and to validate the usefulness of individual initiatives in relation to the overall system. Additionally, it will allow time to develop individual performance standards where none exist, hopefully leading to the adoption, over time, of a framework of inter-linked standards that support performance measurement throughout DND and the CF. A reporting framework and the analysis process will also need to be developed. In the end, the use of the information for decision making and control will provide the greatest benefits to the Department. The Maritime, Land and Air Forces will, to the extent possible, develop their frameworks for the next cycle and articulate them in their business plans. These developments will be reviewed to ensure coherence across the Department.

To meet near-term strategic performance reporting requirements for 1997-98, an interim strategic reporting process has been adopted. To ensure the interim system causes a minimum degree of disruption for subordinate organizations, the interim process has been based largely on existing reports but following a streamlined schedule and with reduced information requirements.

3. FINANCIAL SUMMARY

Figure 21: Departmental Appropriated Planned and Actual Spending

(thousands of dollars)

	Actuals 1993-94	Actuals 1994-95	Main Estimates 1995-96	Actuals 1995-96
Business Lines/Activities				
Maritime Forces	2,416,289	2,514,806	2,283,717	2,287,056
Land Forces	2,648,693	2,930,525	2,949,695	3,133,374
Air Forces	3,465,863	2,721,777	2,801,600	2,676,071
Joint Operations and Civil Emergency Preparednes	330,358	299,594	282,418	318,132
Communications and Information Management	434,879	443,429	399,535	439,896
Support to the Personnel Function	1,044,986	1,228,842	870,532	1,086,572
Materiel, Infrastructure and Environment Support	1,158,271	1,190,756	996,599	929,931
Department/Forces Executive	503,740	443,981	495,904	502,774
Total	**12,003,079**	**11,773,710**	**11,080,000**	**11,373,806**

C. Details by Business Lines/Activities

C.1 MARITIME FORCES

1. RESULTS EXPECTATIONS

During 1995-96, Maritime Forces had planned to conduct operations in the following areas: sovereignty and surveillance patrols in defence of Canada's maritime interests and North America, collective alliances, support to other government departments, humanitarian assistance and search and rescue. Maritime Command had also intended to continue with fleet modernization by means of various capital equipment programs. Finally, a number of cost saving efficiency enhancement measures were to be initiated or progressed during the period.

2. DEMONSTRATION AND DISCUSSION OF ACTUAL PERFORMANCE

Results of Operational Plans

Sovereignty and Surveillance: Maritime Forces responsibilities for the conduct of sovereignty and surveillance operations were met through air and surface patrols, port visits and the provision of support to other government departments. During all operations in Canadian waters the ships of Maritime Forces and the aircraft of Maritime Air Group maintained military surveillance of Canadian territorial waters and the 320 kilometre exclusive fishing zone. As well, ships were tasked to conduct dedicated naval sovereignty patrols throughout the year. In support to other government departments, the Maritime Forces dedicated a total of 185 seadays and 1116 flying hours to Fisheries and Oceans Canada research and patrol activities. Sixty seadays were provided for preventive patrols in support of the Solicitor General /RCMP coastal patrol activities. These patrols were conducted in order to allow the RCMP the opportunity to raise public awareness and conduct community relations in areas to which they would not normally have access.

OPERATION OCEAN VIGILANCE was the DND's name for the Turbot Dispute. Maritime Forces Atlantic provided a warship on station throughout the dispute; a second was deployed as the operation reached its peak on 15 April 1995. A total of five naval vessels participated. Additionally Aurora aircraft assisted Fisheries and Oceans Canada in aerial surveillance.

Defence of North America: The air, surface and sub-surface resources of Maritime Forces and Maritime Air Group maintained a high level of operational readiness through a balanced schedule of independent and joint training, tactical evaluations, and planned maintenance. In order to make the most of available sea time and improve operational readiness, extensive use was made of Canadian, United States and NATO naval ranges, target services and fleet support services.

Three formation-level Canadian fleet operations exercises, as well as one Maritime Coordinated Training exercise, were conducted on the East coast, while four squadron exercises and a Maritime Coordinated Training exercise were conducted on the West coast. These exercises included participation by naval ships and aircraft from various nations.

Collective Defence Arrangements and Alliances: Maritime Command continued to meet its commitment to the NATO Standing Naval Force Atlantic (STANAVFORLANT) by assigning a frigate on a continuous basis. As in the previous years, the STANAVFORLANT Squadron continued operations in the Adriatic as part of Operation SHARP GUARD. This operation was created to enforce the United Nations embargo against the Balkans. Maritime Forces also provided a frigate for a one month period to the Standing Naval Force Mediterranean (STANAVFORMED). This force was also operating in the Adriatic as part of Operation SHARP GUARD. This participation in STANAVFORMED was significant as it was the first time that a Canadian ship was assigned to this naval force. In addition to these NATO activities, the Maritime Forces Atlantic task group also participated in the NATO exercise LINKED SEAS 95.

Maritime Forces Pacific (MARPAC) units conducted WESTPLOY 95, a Western Pacific deployment in support of Canada's security interests, and bilateral naval programs with various Western Pacific countries. Additionally, MARPAC ships and Maritime Air Group aircraft participated with United States Navy and Coast Guard units in several exercises during the year in Canadian and American territorial waters.

During the year, one ship from each coast deployed to participate in selected phases of Exercise UNITAS 95. This annual South American exercise is comprised of a series of naval training operations. Each phase is planned and executed by a different host nation in South America.

International Peacekeeping Operations: As well as the significant participation in Operation SHARP GUARD, previously mentioned, HMCS PRESERVER provided at-sea logistic support to the ships on patrol duties and two Aurora aircraft from Maritime Air Group conducted operations out of Sigonella, Italy. HMCS CALGARY was assigned to the Maritime Interception Force in the Arabian Gulf enforcing the United Nation Sanctions against Iraq.

Support to Other Government Departments: Dedicated support was provided to the Department of Foreign Affairs and International Trade (DFAIT) with the deployment of HMCS FREDERICTON to Saudi Arabia in support of DFAIT initiatives. Additional support to DFAIT was accomplished when naval ships participating in exercises throughout the world conducted brief port visits between operations phases.

Maritime Forces Atlantic provided significant resources to support the G7 Summit Conference held in Halifax Nova Scotia in June 1995.

Naval Reserve Operations: Increasing involvement of the Naval Reserves as part of the Total Force was evident by the conduct of selected DFO and preventive patrols by Naval Reserve crewed vessels. The two primary roles of the Naval Reserve are Maritime Coastal Defence and Naval Control of Shipping. Training for these roles has continued at the unit level as well as with participation in major exercises along-side their regular force counterparts.

Results of Force Generation Plans

Progress on Capital Projects: The pressure of a declining defence budget impacted first on the Capital Equipment Portion of the Defence Services Program by limiting the funds available for new initiatives. The introduction of the HALIFAX Class frigates continued with all but two of the twelve

being delivered by the end of the fiscal year. The Tribal Update and Modernization Project (TRUMP) finished with the last of the IROQUOIS Class completing its reconfiguration. The Maritime Coastal Defence Vessel project progressed on schedule with delivery of the first ship, HMCS Kingston, in late 1995. Both the Canadian Submarine Capability Life Extension Project and the Maritime Helicopter Project were progressed through various departmental staffing milestones and are expected to be presented for governmental decisions in 1996-97. Activity in a wide variety of smaller material projects maintained fleet material readiness in areas ranging from more efficient ship-shore communications to less personnel-intensive trainers and simulators.

Infrastructure/Establishment Initiatives: The regular force maritime establishment was reduced from 10,400 in 1993-94 to 9,600 in 1995-96 partly as a result of the closure of Mill Cove, Aldergrove and Shelburne. The Naval Engineering Maintenance Systems Functional Review took a business case approach to the provision of maintenance support to the fleet. It resulted in the restructuring of headquarters support in the Ship Repair Unit, Naval Engineering Unit and Fleet Maintenance Group and combined military and civilian personnel into one work environment. These three units were reorganized as the Fleet Maintenance Facilities Cape Scott and Fleet Maintenance Facilities Cape Breton on the east and west coasts respectively.

3. CHANGE MANAGEMENT ISSUES

During 1995-96, the first Maritime Command Business Plan was developed which increased our understanding of the concepts and principles of capability planning. However, the business planning process has been hindered, somewhat, by the continuing change in the requirement.

With management renewal, Maritime Command committed to the principle of delegation of authority giving an increased managerial flexibility at all levels. Similarly, devolution of authority and resources permitted an increased flexibility in delivering output through application of the operating budget. The departmental commitment to devolve authority and budgets, where it makes sense, is paramount to the success of the Command's re-engineering efforts. Continued further devolution of authority and flexibility is vital if Maritime Command is to achieve its mission given the planned resource reductions the next few years.

4. COMPARATIVE FINANCIAL PERFORMANCE

Figure 22: Business Line/Activity Financial Performance

(thousands of dollars)	Actuals 1993-94	Actuals 1994-95	Main Estimates 1995-96	Actuals 1995-96
Maritime Forces				
Operating Expenditures				
Personnel	883,795	919,530	829,584	903,360
Operations and Maintenance	562,576	609,089	648,455	595,924
Operating Requirement	1,446,371	1,528,619	1,478 039	1,499,284
Capital	993,541	1,009,246	830,567	808,406
Total Requirement	2,439,912	2,537,865	2,308,606	2,307,690
Less: Revenue credited to the Vote	23,623	23,059	24,889	20,634
	2,416,289	2,514,806	2,283,717	2,287,056

5. IMPACT ON FUTURE PLANS

Fiscal pressures and the requirement to maintain fleet capability to conduct the same tasks had a significant impact on the development of plans for 1996-97 and 1997-98. There are two general areas that will be effected. The first is equipment spending; the second is the continued need for efficiency measures.

While major capital equipment programs such as the Canadian Patrol Frigate Project and the Tribal Class Update and Modernization Project will likely continue to spend as planned, the availability of funds for new initiatives will become critical and a serious reduction in mission capability would be the immediate result.

A key to further efficiency measures was recognition of the requirement to develop a meaningful comprehensive performance management system for Maritime Forces. Work is ongoing in this area and, once completed, will lay the foundation for both the costing and performance management systems. The outcome of this approach will be an improved decision-making support system which will assist commanders at all levels in determining the impact of resource reductions in order that the correct balance between operations and support activities may be achieved. Business planning will, in the long term, prove to be an essential mechanism for managing complex resource decisions at all levels.

C.2 LAND FORCES

1. RESULTS EXPECTATIONS

During 1995-96, Land Forces had expected to continue to plan and conduct operations in the following areas: in contributing to international security through the provision of forces to ongoing operations or through forces provided to the United Nations Stand By Arrangements System; assistance to civil authorities and aid to the civil power; assistance to other government departments; humanitarian assistance; and land based search and rescue. The Land Forces also expected to continue participation in collective defence initiatives through its assigned forces and other planning and training opportunities including participation in the Conference of American Armies. The Land Forces also expected to continue with equipment modernization in order to carry on with their plans to address the shortfalls of their obsolete and obsolescent equipment. In conjunction with the rest of the department, Land Forces intended to continue to develop plans for downsizing of headquarters with implementation early in 1996-97, and increasing the strength of its operational forces. Finally the Land Forces expected to continue cost saving and efficiency measures in order to maximize their investment in the field force.

2. DEMONSTRATION AND DISCUSSION OF ACTUAL PERFORMANCE

- **Results of Operational Plans**

Defence of Canada: Defence of national territory and maintenance of Canadian sovereignty responsibilities were met through the maintenance of land surveillance and general purpose combat ready forces, and the provision of support to civil authorities in the maintenance of public order and security. The Land Forces maintained within each Land Force Area a combat capable Immediate Reaction Unit of battalion size ready to respond to any domestic or territorial defence emergency, and the capability to further generate, if required, forces up to multi-purpose brigade group size. A standard level of operational readiness was maintained in each Land Force Area through the conduct of a balanced plan of individual training and collective exercises.

Assistance to Civil Authorities: The Land Forces aid to the civil power and armed/unarmed assistance to other federal department's operations, normally on very short notice situations, included operations or the provision of support to civil unrest, ground searches, counter-drug operations and disaster relief operations such as forest fires, floods and air crashes, and law enforcement agencies. Of particular note, was the assistance provided to the RCMP and British Columbia government at Gustafsen Lake, and the OPP and Ontario government at Camp Ipperwash and the Ipperwash Provincial Park. Support was provided to ceremonies, national interest activities, and national sports and recreational events. The Land Forces also provided expertise and resources in the support of other commands and elements of the Canadian Forces.

Defence of North America: The defence of North American territory, in partnership with the United States, was met through the provision of land surveillance and general purpose combat ready

forces. The Land Forces contribution, under the auspices of the Canada-US Regional Planning Group (CUSRPG) included a task force headquarters and a multi-purpose mechanized brigade group.

Contributing to International Security: The Land Forces made significant contributions to international security through participation in multi-lateral operations and alliances, other regional organizations, or in coalitions of like minded nations, supporting humanitarian relief efforts and the restoration of conflict devastated areas, and participating in arms control and other confidence-building measures.

The Land Forces assigned to NATO a high readiness infantry battalion group for the Immediate Reaction Force (Land), and a mechanized brigade group to Allied Command Europe in the augmentation forces category. A task force headquarters and multi-purpose mechanized brigade were NATO earmarked under the auspices of CUSRPG. As well, a second mechanized brigade was designated as other forces for NATO through exploitation of territorial defence arrangements in the context of CUSRPG. In addition, the Land Forces provided the preponderance of the staff required for the deployable Joint Force Headquarters, drawing upon 1 Canadian Division Headquarters Staff, the Signals Regiment and 1 Intelligence Company, all based in Kingston, Ontario. Training at the joint and combined level was conducted to support these commitments through exercise STRONG RESOLVE 95 in North Norway.

The Land Forces are Canada's major contributor to UN peacekeeping operations, including the monitoring of other organizations' missions. The missions below are those to which the Land Forces provided personnel and equipment.

United Nations Protection Force (UNPROFOR). The Land Forces completed its commitments to UNPROFOR in the Balkans, which consisted of: an infantry battalion group of 860 personnel deployed in Sector South, Croatia, which monitored the cease-fire in UN Protected Areas under UN Security Council Resolution 908; a battle group of 826 personnel based in Bosnia-Hercegovina, this all-arms group providing armed escorts to UN Humanitarian Relief Operations under UN Resolutions 776 and 836, and performing tasks in support of the cease-fire negotiated by the Bosnian Muslims and Bosnian Croats under UNSCR 908; a Canadian Contingent Headquarters and staff to UN Sector Headquarters throughout the former Yugoslavia of approximately 140 personnel; and a National Support Element, the Canadian Logistics Battalion of 270 personnel.

Implementation Force (IFOR). The Land Forces contributed a Brigade HQ and supporting sub-units, totalling approximately 1000 personnel in support of IFOR, the UN sanctioned, NATO led implementation force in Bosnia-Hercegovina. Its task, the enforcement and monitoring of the general framework agreement for peace in Bosnia - Hercegovina also known as the Dayton Peace Accord.

United Nations Mission in Haiti (UNMIH). As authorized under UNSC Resolution 1048, Canada provided a contingent of approximately 750 personnel in a Land Forces generated composite unit. The Canadian Contingent consisted of an infantry battalion (minus), engineer squadron, transportation platoon, military information support team, utility helicopter squadron, and a logistic group. This composite unit was responsible to provide the Haitian government a secure and stable environment, and to support the professionalization and training of the Haitian National Police

(HNP) in the greater Port-au-Prince area of operations. Additionally, this contingent provided the UN Force Commander with an immediate reaction force for employment throughout Haiti.

United Nations Mission in Rwanda (UNAMIR). Canada's commitment to Rwanda ended in January 1996. This mission began with the provision of a signals regiment, changing later to reflect the capabilities required by the UN, including at different times a composite medical unit, a second line combat service support unit and finally a logistics mission support group.

Military Observers. The Land Forces provided personnel and equipment in support of various United Nation Military Observer (UNMO) missions around the world, in particular the United Nations Disengagement Observer Force (UNDOF) based in the Golan Heights and the Multi-national Force and Observers (MFO) in the Sinai.

- **Results of Force Generation Plans**

Progress on Implementation of the Operational Enhancement Positions:

During 1995-96, the Land Forces finalized the planning for the implementation of the 3,000 additional personnel to be assigned to the field force. Some of these personnel were already in place as a result of the cancellation of planned reductions, with the last personnel planned to arrive in Land Forces units in 1997-98.

Progress on Capital Projects: Capital equipment expenditures on the Land Forces continued, allowing for partial recapitalization of Land Forces equipment stocks. The nature of the Land Forces is such that there is a constant requirement for replacing many of different major weapons and equipments in service, and 1995-96 was no different. Deliveries of the Light Support Vehicle Wheeled were completed; deliveries continued of the electronic warfare systems acquired under the Land Tactical Electronic Warfare Improvements project; deliveries began of the Short Range Anti-Armour Weapons ERYX and of the Lynx Replacement Vehicle; work continued at a high pace on the Tactical Command, Control and Communications System although no equipment has yet been delivered. A number of smaller projects designed to maintain operational capability saw equipment delivered. Project definition work began or continued on a number of other projects, and yet others saw the continuation or completion of the integrated logistics systems for other major equipments.

Infrastructure, Environment and Establishment Initiatives: Land Force Command closed CFBs Toronto and Chatham, and Detachment London, retaining only small local support detachments. The responsibilities for CFBs Edmonton and St.-Jean were transferred to Land Force Command. Concurrent with plans to reduce headquarters staffs, civilian personnel and infrastructure, the Land Forces were increased through operation ENHANCEMENT from 21,107 to 21,367 regular force personnel in order to field additional operational units. New infrastructure was constructed at CFB Edmonton to accommodate the Land Forces Western Area field units to be moved from CFBs Chilliwack and Calgary. 4 AD Regiment moved from CFB Chatham into accommodation at Gagetown and Moncton. There were new armouries constructed for Victoria, Bathurst, Quebec City, Laval and Georgetown. Other capital projects were underway at CFBs Montreal, Calgary, Chilliwack, and Shilo, and at the Military Training Support Center Meaford. Significant

environmental initiatives occurred in FY 1995-96. The Land Forces hosted the first NATO Army Sub Group - Environmental Training Working Group in Montreal, and the DND National Environmental Officers Conference in Toronto. The Land Forces also published the new Environmental Action Plan, the Land Force Environmental Training and Education Strategy and Plan, and the DND Contaminated Sites Remediation Framework. About nine million dollars were expended in environmental clean-up, decontamination, upgrading of POL sites, environmental management and pollution prevention initiatives.

3. CHANGE MANAGEMENT ISSUES

Year 1995-96 saw the production of the first Land Forces Business Plan for 1996-97. The main effort focused on process definition and development, identification, understanding and refinement of the concepts and principles of capability based planning.

From the outset, within the context of management renewal, the Land Forces have been committed to increasing managerial flexibility and accountability at all levels through the principles of delegated authority and devolved resources. Continued expansion of this management philosophy, which embraces empowerment, innovation, risk and accountability, is considered fundamental to making this process one which will provide the necessary accountability framework with which to manage more efficiently and effectively. To support this process development, the Land Forces will continue to build on the implementation results gained from the Land Forces Integrated Business Plan Project, designed to provide the necessary activity based costing, performance measurement and information management tools to support this accountability framework within this new management environment.

D2000 and Alternate Service Delivery initiatives have been instituted to a limited degree, with further development being required in this area. However, progress in this area forms an integral part of the Land Forces re-engineering efforts.

4. COMPARATIVE FINANCIAL PERFORMANCE

Figure 23: Business Lines/Activities Financial Performance

(thousands of dollars)

	Actuals 1993-94	Actuals 1994-95	Main Estimates 1995-96	Actuals 1995-96
Land Forces				
Operating Expenditures				
Personnel	1,402,815	1,510,807	1,430,822	1,475,862
Operations and Maintenance	632,619	632,327	857,073	876,235
Operating Requirement	2,035,434	2,143,134	2,287,895	2,352,097
Capital	725,319	935,805	842,983	933,878
Total Requirement	2,760,753	3,078,939	3,130,878	3,285,975
Less: Revenue credited to the Vote	112,060	148,414	181,183	152,601
	2,648,693	2,930,525	2,949,695	3,133,374

5. IMPACT ON FUTURE PLANS

Fiscal realities had a limited impact on plans for 1996-97 and a major impact on plans for 1997-98. A Land Forces option analysis is underway to critically examine alternatives for change in equipment, infrastructure and organization. This analysis will include a review of apportioned corporate accounts and will focus on major structural and organizational change in order to establish fiscal stability while maintaining the operational integrity of the Land Forces during 1997-98 and the following years.

C.3 AIR FORCES

1. RESULTS EXPECTATIONS

During 1995-96, Air Forces planned to conduct operations in support of Canada's three defence policy mission objectives: defend Canada, defend North America, and contribute to International Peace and Security. In fulfilling these mission objectives, the Air Forces carried out operational activities in six main areas, namely: Aerospace Surveillance and Control, Air Support to Maritime Forces, Air Support to Land Forces, Air Mobility, Support to National Interests, and Contingency Support Operations. The Air Forces also intended to support and progress a number of capital projects to enhance their capability to meet assigned mission objectives. Finally, the Air Forces intended to initiate a number of cost saving measures in order to meet Government and Department mandated reductions.

2. DEMONSTRATION AND DISCUSSION OF ACTUAL PERFORMANCE

- **Results of Operational Plans**

Aerospace Surveillance and Control: Air Forces activities in this operational area catered to national aerospace surveillance, management, enforcement, air-to-air refuelling and offensive air capabilities which contribute to the defence of Canada, the collective defence arrangements of North America, and Canadian Forces operations worldwide. Through carefully planned training activities, Air Forces personnel were able to maintain operational readiness and a high level of proficiency. Operational activities for Aerospace Surveillance and Control included:

- regular air-to-air refuelling exercises to maintain proficiency for both fighter and tanker crews. The air-to-air refuelling capability is necessary to meet Defence White Paper 94 mandates for both global contingency and Canadian sovereignty operations;

- regular Air Combat Training for CF18 aircrew using the Air Combat Manoeuvering Range facility located at Cold Lake. Air Combat Training also included training opportunities with a variety of fighter aircraft from the United States Air Force, Navy, Marine Corps, Air National Guard and other NATO countries;

- on an annual basis, one MAPLE FLAG, one COPE THUNDER, and one COALITION FLAG exercises held in co-operation with the United States Air Force to enhance tactical fighter skills. MAPLE FLAG was hosted by Canada, where COPE THUNDER and COALITION GUARD exercises were hosted by the United States;

- one COMBAT ARCHER weapons evaluation exercise;

- periodic deployments to the Forward Operating Locations (FOLs) in northern Canada in order to exercise northern deployment options. Deployments included AMALGAM WARRIOR and FABRIC BRAVE exercises, one each in Eastern Canada and Western Canada; and

- no-notice Aerospace Surveillance and Control operations to support the RCMP in the conduct of their drug interdiction mission.

Air Support to Maritime Forces: Air Forces activities in this operational area provided air support to the maritime component for the enforcement of Canada's sovereignty over its maritime approaches in peacetime, for the collective maritime defence of North America and for Canadian Forces operations worldwide. The following operational activities resulted in improved proficiency and a renewed level of readiness:

- NATO/Pacific Rim exercises to demonstrate and improve the ability of NATO and Pacific Rim nations to conduct maritime operations and to maintain control of the sea lines of communication;

- national exercises to test participating Maritime Forces in all aspects of coordinated operations concerned with multi-threat warfare;

- joint maritime warfare exercises in the United Kingdom, United States, and South American operations areas, designed to provide training in multi-threat environment;

- foreign national exercises in the United Kingdom, Spanish, French, and Italian operations areas, to test maritime forces in all aspects of coordinated operations in a multi-threat environment; and

- NATO deployments to exercise maritime air/ground communications air control system, while providing NATO with surveillance reports in both the Northern and Southern European Command areas.

Air Support to Land Forces: Air Forces activities in this area provided air support to the land component for the enforcement of Canada's territorial sovereignty in peacetime, the collective land defence of North America and for Canadian Forces operations worldwide. Activities in this operational area included:

- formation-level exercises conducted in Canada in support of 1 Canadian Brigade Group and 5e Brigade Mécanisée;

- national exercises, some of which were conducted under live fire, to test participating aviation forces in all aspects of air mobile operations; and

- NATO deployments to exercise the ACE Mobile Force (Land) in the Northern European Command area.

Air Mobility: Activities in this operational area were designed to enhance the ability to provide routine, and when directed, surge air transport services in support of Canadian Forces operations at home and worldwide. All Air Mobility activities were focused on maintaining the highest level of currency in world-wide operations and included:

- two annual exercises involving CC130 Hercules crews and aircraft, CROSSCHECK with the Royal Air Force and BULLSEYE with the Royal New Zealand and Royal Australian Air Forces, for the purpose of permitting an exchange of valuable information on equipment, procedures, tactics and training;

- eight tactical airlift exercises conducted annually to practice tactical airlift (TAL) continuation training for CC130 crews and Mobile Air Movement Section;

- two exercises, RED FLAG in USA and MAPLE FLAG in Canada, to expose ATG crews to realistic tactical flying in a simulated war-time environment; and

- one annual international competition hosted by the United States, AIRLIFT RODEO, to enhance air drop capability, and to provide training for aircrews, maintenance crews, combat control teams and security police.

Air Support to National Interests: Activities in this operational area were intended to enhance the ability to provide on-demand search, rescue, emergency and utility airlift, jurisdictional, and air support services in concert with other government agencies and in support of the national well-being and interests within Canada and internationally as required. Operational training activities included:

- one annual Search and Rescue competition, SAREX, in which Search and Rescue teams from all SAR units competed and exchanged information on equipment, procedures and training;

- one annual exercise to practice response to a major air disaster, MAJAID;

- routine flying training activities to prepare to support the mounting of responses to terrorist incidents;

- northern operational readiness patrols to provide surveillance in support of Maritime Command requirements;

- no-notice operations to support the RCMP in the conduct of their drug interdiction mission;

- regular flights to support Fisheries and Oceans Canada were provided by using Aurora, Arcturus and Challenger aircraft;

- regular flights over the maritime approaches to Canada to support Transport Canada (Coast Guard); and

- in cooperation with Transport Canada, the provision of administrative flight services for dignitaries and VIP travel.

Contingency Support: Air Forces activities in this operational area provided specialized air wing support services for the collective defence of Canada, North America and for Canadian Forces operations worldwide. Activities included:

- two annual fly-over deployment exercises to NATO's European Region; and

- on a routine basis, the deployment of airfield support units in support of fighter aircraft operations from Forward Operating Locations in Canada's northern and Arctic regions.

Additional Tasks and Contingency Operations: In addition to the planned operational and training activities listed above, Air Forces was also called upon to provide support to the following additional tasks and contingency operations:

- OP HARMONY - United Nations Protection Force (UNPROFOR) in Croatia to ensure that the UN Protected Areas were demilitarized and the inhabitants protected from attack. Air Command provided tactical and strategic airlift, and personnel support for various field and headquarters positions;

- OP CAVALIER - UNPROFOR mission in Bosnia-Herzegovina for assisting in the distribution of relief supplies, monitoring local cease-fires and tasks related to weapon exclusion zones. Air Command provided tactical and strategic airlift including OP AIRBRIDGE - (UNHCR) Sarajevo Airlift, and personnel support for various field and headquarters positions including in-theatre Forward Air Controllers for NATO Close Air Support Operations;

- OP SHARP GUARD - a multi-national maritime force in the Adriatic to monitor and enforce UN trade and shipping sanctions against the Balkans. Air Command involvement included the contribution of Sea King helicopters in support of Canada's Maritime Forces and Aurora maritime patrol aircraft;

- OP LANCE - UN mission in Rwanda to contribute to the security and protection of displaced persons, to provide security and support for humanitarian assistance operations, and to promote national reconciliation in Rwanda. Air Command provided tactical and strategic airlift, and personnel support for various field and headquarters positions;

- OP PIVOT - UN Security Council mandated mission to assist in the restoration of the democratic process in Haiti. The Canadian contingent of approximately 600 personnel included staff officers, a tactical helicopter squadron, a construction engineering squadron and a wheeled transport squadron; and

- OP ALLIANCE/DENY FLIGHT - NATO-lead implementation force in Bosnia-Herzegovina. Canadian aircrew served aboard NATO AWAC aircraft with

Canadian Forward Air Controllers providing support for NATO Close Air Support from the ground.

The Air Forces provided numerous personnel as United Nations Military Observers (UNMOs) to UN missions such as OP SNOWGOOSE and OP DANACA. Canadian observers were also employed in non-UN missions such as OP CALUMET.

3. CHANGE MANAGEMENT ISSUES

Flight Plan 97

As a result of the 1994 Defence White Paper, Budget 95 and the 1995 DND/CF Programme Review, the Air Forces implemented and further progressed a number of change management programmes and initiatives during1995-96. The Commander of Air Command's coordination plan to integrate all change initiatives into one overarching activity is known as Flight Plan 97 . FP 97includes:

- Project Genesis. Project Genesis, in partnership with the Materiel Group, has been the re-engineering programme for achieving efficiencies in all air force fleets to reduce the cost of fighter operations by 25%. The Genesis approach has since been expanded to encompass all fleets with a target savings of some $600 million annually. So far, the air force has achieved approximately 40% of this target and has identified ways to achieve the remaining 60%.

- Air Force Command and Control Review (AFCCR). The aim of the AFCCR has been to establish effective and efficient staff structures for the Chief of the Air Staff (CAS) and the Commander of the Operational Level HQs employing approximately 50% of existing air force HQ personnel resources and to recommend an effective reassignment of strategic, operational and tactical responsibilities. The AFCCR has defined the organizational structure of the new headquarters and the shadow organizations are in place. The new HQ structures will be stood up by summer 1997.

- Management Renewal. The task of the management renewal team has been to develop and facilitate the implementation of tools and techniques that are necessary to support new departmental management principles that emphasize devolution of authority and responsibility, accountability, mission alignment, and continuous improvement. The Management Renewal tools have been the basis for air force Business Planning and include: Cost Centre Management; Activity Based Costing; Output Model; Performance Measurement, and Unit Self-Assessment. A Quality and Excellence Framework, developed to include Accountability, Continuous Improvement, and Compliance, will be implemented throughout Air Command by the fall of 1997.

- Culture & Training. The task of the Culture and Training initiative has been to promote Air Command's excellence and continuous improvement initiative. The flagship of this process has been a three day course known as Flight Plan 97

Ground School. The aim of FP 97 Ground School is to expose all 20,000 members of the air force team within one year, to a programme that is designed to better prepare all its members to deal with the unprecedented level of change that lie ahead. Additionally, FP 97 Ground School was intended to serve as a mechanism to communicate the Core Values of the air force and solicit feedback from every level within the organization. With more than 250 trained facilitators and instructors across the air force, FP 97 Ground School remains on track to be completed by the summer of 1997.

4. COMPARATIVE FINANCIAL PERFORMANCE

Figure 24: Business Lines/Activities Financial Performance

(thousands of dollars)

	Actuals 1993-94	Actuals 1994-95	Main Estimates 1995-96	Actuals 1995-96
Air Forces				
Operating Expenditures				
Personnel	1,330,687	1,293,700	1,183,475	1,142,987
Operations and Maintenance	1,583,826	1,243,406	1,269,166	1,145,443
Operating Requirement	2,914,513	2,537,106	2,452,641	2,288,430
Capital	684,677	340,656	536,641	535,372
Total Requirement	3,599,190	2,877,762	2,989,282	2,823,802
Less: Revenue credited to the Vote	133,327	155,985	187,682	147,731
	3,465,863	2,721,777	2,801,600	2,676,071

5. IMPACT ON FUTURE PLANS

Capital Equipment

The last few years have imposed significant cuts to the capital program of the CF. As a result, the Air Forces face a serious risk of obsolescence and capability degradation in a number a key areas. Prioritization between Air Command's top five capital equipment procurement projects is problematic as they represent the minimum essential requirement to maintain interoperability with our allies while maintaining the fundamental air power capabilities necessary to meet the current and future security needs of Canada.

Defence policy and budget documents have stated since 1994 that personnel reductions were necessary in order to provide funding for the Capital Equipment Modernization Plan and to ensure that operational capabilities would not deteriorate as a result of cuts to defence budgets. Personnel reductions within Air Command were based upon the procurement of new, lower maintenance equipment that would in turn permit the air force to operate with less personnel.

With force reduction personnel end-states almost achieved, it is imperative that capital equipment programmes progress without delay to procure the equipment that was intended to allow the air force to operate with fewer personnel. Extended operations of existing equipment is increasingly expensive in operations and maintenance costs and personnel man-hours.

Personnel

Difficulties associated with the retention of key operations personnel as a result of negative media attention, quality of life issues, pay freezes, and career limitations due to downsizing could impact Air Command's ability to meet assigned operational tasks and commitments. This situation is expected to affect Military Occupation Classifications across the entire air force, but will have its greatest effect on those classifications that possess the skills and qualifications desired by the civilian sector. As an example, an increased demand for pilots by civilian airlines is creating a severe shortage of operationally experienced pilots in the military that will affect all of the Air Forces operational capabilities. As a result, the air force's ability to sustain current levels of flying operations will be adversely affected during the planning period. An air force study to investigate this attrition problem, and to determine what actions and measures may be implemented to curtail the loss of experienced pilots from the military will be completed early in 1997. The findings and recommendations of this study will be made known once a positive plan of action is decided.

Operations and Maintenance

With the introduction of Business Planning across DND and the CF, and with the ongoing development of cost analysis and force development planning tools such as Cost Centre Management (CCM), Activity Based Costing (ABC), and the Operations Personnel Risk Assessment Model (OPRAM) Air Command is now closer to being able to determine the true cost of doing business within our military units and organizations. Notwithstanding, we are currently undergoing an unprecedented level of restructuring, downsizing and budget reductions . For this reason, it still remains to be seen whether Air Command will be able to effectively meet the tasks and commitments called for by Defence Planning Guidance 1997 with the financial resources provided.

C.4 JOINT OPERATIONS AND CIVIL EMERGENCY PREPAREDNESS

1. RESULTS EXPECTATIONS

This issue of the National Defence Estimates represents a transition to a new format thus a comparison of results obtained compared to the previous year's expectations is not available. To provide for a transition the following overview is offered:

2. DEMONSTRATION AND DISCUSSION OF ACTUAL PERFORMANCE

Military operations are, and will continue to be, the primary focus of the Canadian Forces and the Department of National Defence. The Deputy Chief of the Defence Staff Group in National Defence Headquarters plans, coordinates, controls and directs these operations on behalf of the Chief of the Defence Staff. During the recent past, despite significant resource reductions imposed by government budget cuts, the Canadian Forces have maintained an average of over 2000 personnel in the field on peacekeeping and related operations. Canada is the worlds most experienced and successful peacekeeper having participated in every United Nations peacekeeping operation since these began in the late 1940's and this fact is demonstrated by Canada being chosen by the nations of the UN in November 1996 to lead a multinational military humanitarian mission to the Great Lakes area of Central Africa.

A synopsis of significant achievements in Peacekeeping and related Operations can be found in Section IV Supplementary Information page 4-132.

Canadian Force operations other than peacekeeping have also been intense in the recent past. Domestic operations, brought into sharp focus by the Oka crisis in 1992, continue with operations in 1995 to support civil authorities in Gustafsen Lake B.C and the G7 summit in Halifax N.S., the Department of Fisheries and Oceans operations for the Atlantic fishery, particularly the Canada-European Union fisheries dispute in March and April of 1995, continuing counter-drug operations in partnership with law enforcement agencies and a successful counter-terrorist exercise at Toronto's Pearson International Airport in September of 1996.

Arms Control Verification has been an important tasking since the various treaties came into effect in the early 1990s. Under the umbrella of the Organization on Security and Cooperation in Europe (OSCE) in Vienna, the Conference on Disarmament(CD), the North Atlantic Treaty Organization (NATO) and the United Nations(UN) the Joint Operations and Civil Emergency Preparedness activity has conducted successful field operations for the Canadian Government in accordance with four different Treaties:

- the **Treaty on Conventional Forces in Europe (CFE)**: For 1995-96 the Department of National Defence lead 3 equipment destruction/reduction monitoring inspections and participated in 13 other NATO lead inspections. It is planned to lead 4 and participate in 12 inspections in 1997-98. Since this treaty came into force in 1992 Canada has lead in 50 operations and participated in 128.

the **Vienna Document 92**: since 1992 Canada has conducted 6 inspections and 7 evaluations. During 1995-96 Canada responded to 2 invitations to inspect and 2 to evaluate specified military activities. It is planned to conduct 2 inspections and 2 evaluations in 1997-98;

the **Open Skies Treaty:** This confidence building treaty, which will allow signatory nations the freedom to conduct surveillance overflights of each others territory in accordance with agreed terms has been completed and was expected to enter into force in 1996. However, the treaty has not yet been ratified by all nations. In anticipation of the treaty entering into force in the near future preparations continue with exchanges of data, tests and evaluation of surveillance equipment being progressed and practice overflights being conducted; and

the **Chemical Weapons Convention (CWC)**: Activity to date under this convention has not occurred because the necessary agreements have not been finalized. Some exchanges of data have taken place and activity is planned under the convention for 1997-98. In 1997-98 Canada would expect to receive one inspection.

Emergency Preparedness Canada has made significant strides in recent years to advance its mandate of safeguarding the lives of Canadians as well as reducing damage to property by fostering better preparedness for civil emergencies in Canada. Some achievements have been:

- updating the federal government's policy for emergencies. First enunciated in 1980 *A Federal Policy for Emergencies* was formally updated and issued by the Government in May of 1995;

- developing a National Earthquake Support Plan. Officials from EPC and representatives of 20 other federal departments and agencies have been working with officials from British Columbia and Alberta to develop this plan. A large scale exercise in the Canadian National Exercise (CANATEX) series to test the plan and its interfaces with provincial plans was held in 1994 (CANATEX-2); and

- assisting Health Canada to update the Federal Nuclear Emergency Response Plan. This prototype plan has recently been completed and will be exercised under the Canadian National Exercise program.

Additional information on Emergency Preparedness Canada can be found in Section IV, Supplementary Information, page 4-87

Other main achievements of the Joint Operations and Civil Emergency Preparedness activity in 1995-96 have set the stage for the continual enhancement of its operational command, control and intelligence capabilities. Of greatest significance is the recognition that many of the problems being faced are shared in common with other military forces and large corporations in the developed world. In many cases, the global market place has already developed information technology which can be adapted to the needs. Therefore, there is a shift away from developing internal software and hardware solutions, and moving towards purchasing commercially based systems “off the shelf” at much less cost. In this regard, the main accomplishments have been:

- a complete rationalization and realignment of The Joint Operations and Civil Emergency Preparedness Group Information Management which terminated the Intelligence and Security Complex project, achieved a 50% reduction in planned program spending, and will provide more effective support to operations, intelligence and security and military police activities;

- the deployment of an operational prototype as a precursor to and proof-of-concept of the Joint Command, Control and Intelligence System project;

- the establishment of a minimum basic architecture permitting the sharing of intelligence information within the Canadian Forces (the Joint Deployable Intelligence Support System, JDISS) and with national forces deployed in NATO roles using the Linked Operational Intelligence Centers Europe (LOCE) system; and

- delivery of 70% of the Restricted Access System project which provides an essential operational intelligence imagery capability.

3. SECTORAL CHANGE AND MANAGEMENT ISSUES

During the period, Joint Operations and Civil Emergency Preparedness was confronted by the same pressures as the other activities in National Defence. Resource constraints and the related downsizing measures began to take hold while at the same time operating tempo was increasing.

Rapid and expansive developments in Information Technology by Allies became apparent signalling the types of investments that would be required in this area by the Joint Operations and Civil Emergency Preparedness activity. Initial investments will lead to other follow-on projects to build the infrastructure required to accommodate closer ties with Allies and the related interoperable capabilities for intelligence and command and control purposes.

4. COMPARATIVE FINANCIAL PERFORMANCE

Figure 25: Business Line/Activity Financial Performance

(thousands of dollars)

	Actuals 1993-94	Actuals 1994-95	Main Estimates 1995-96	Actuals 1995-96
Joint Operations and Civil Emergency Preparedness				
Operating Expenditures				
Personnel	216,979	198,736	187,729	193,598
Operations and Maintenance	69,418	49,271	54,145	68,494
Operating Requirements	286,397	248,007	241,874	262,092
Capital	48,573	55,757	44,893	59,013
Total Requirement	334,970	303,764	286,767	321,105
Less: Revenue credited to the Vote	4,612	4,170	4,349	2,973
	330,358	299,594	282,418	318,132

C.5 COMMUNICATIONS AND INFORMATION MANAGEMENT

1. RESULTS EXPECTATIONS

For the year 1995-96, the Communications and Information Management activity expected to achieve the following results:

- **support to operations:** to meet the requirement for Information Management (IM) support to operations;
- **Information management strategic direction:** to develop and promulgate DND/CF IM policy and strategic guidance;
- **Information resource management:** to provide and integrate IRM services to exploit and manage IM resources; and
- **Information management infrastructure services**: to provide, integrate and manage common IM infrastructure facilities and services.

2. DEMONSTRATION AND DISCUSSION OF ACTUAL PERFORMANCE

Support to Operations

1993-94 - Elements of Canadian Forces Communications Command namely 79 Communications Regiment, provided strategic extension and restoration of communications to deployed forces operating in Croatia, Bosnia-Herzegovina and Somalia.

1994-95 - Personnel from 79 Communications Regiment provided strategic extension and restoration of communications to deployed forces operating in Uganda, Rwanda, Haiti, and the former republic of Yugoslavia.

1995-96 - The deployment of Communications and Information Management personnel overseas, along with major improvements in the capability to support United Nations peacekeeping operations with J6 services and satellite telecommunications were major activities this year.

Information Management Strategic Direction

1993-94 - The first draft of the Communications Reserve Development Plan was issued outlining Communications Reserve unit size, responsibilities and tasks.

1994-95 - The first review of all departmental IM projects was carried out in November 1994, resulting in several projects being amalgamated or deleted from the Defence Services Program. Also, an Information Management Plan (IMP) providing IM vision, strategic guidance, and IT investment guidelines was promulgated, while a global IM training concept with IM skills was also developed.

1995-96 - The conduct of a comprehensive analysis of IM projects and the formulation of recommendations to improve the project approval process were accomplished, along with the promulgation of significant elements of the essential information environment-shaping instruments, such as a new IM Policy Directive, the Information Technology Architecture Design Manual and the security architecture framework. Also an in-depth review was completed of the Defence Information Services Organization (DISO's) portion of the capital equipment program and the reshaping of projects to effect savings, and gain efficiency and effectiveness. The Defence Message Handling System (DMHS) and the Supplementary Radio System (SRS) Remoting projects were advanced for approval, and the development of a Command and Control Information System (C2IS) interoperability framework and the launching of a C2IS prototype were initiated.

Information Resource Management

1993-94 - The Communications Reserve Management Information System (CRMIS) was developed.

1994-95 - Information Holdings and IT policies were contained in several different publications. Work was undertaken during this fiscal year to harmonise and review all of these policies and integrate them into one Information Policy Manual. Significant contributions were made in the maintenance of more than 66 Information Management Systems to the clients' satisfaction despite doing more work with less personnel.

1995-96 - The completion of several life cycle management studies and the formulation of extensive recommendations for regrouping the electronics and engineering maintenance component of the Department's Materiel Group under DISO, which should result in major improvements to IM life-cycle-support, were accomplished.

Information Management Infrastructure Services

1993-94 - Canadian Forces Communication Command continued to operate and maintain the strategic communications systems for the Canadian Forces, enhancing operational efficiencies with equipment upgrades, procedural changes and circuit reconfiguration. The Defence Integrated Service Digital Network migrated 1,900 circuits over 80 nodes with the establishment of digital access at more than 40 locations outside the National Capital Region. Also a Circuit Operational Evaluation, where all circuits were reviewed to achieve annual savings of $310K, was completed.

The installation of Command Computer Aided Design and Drafting work stations at Communications Group Headquarters at Trenton, Winnipeg, and CFS Leitrim was completed, along with the provision of an automated Cable Management System for the NCR. The installation of Packet Assembler/Disassembles (PADS) to support distributed data bases, client server facilities and quick data transfer between Communications Groups and CFCC HQ were provided, along with the installation of a Leased Facility Financial Information System and a DND-controlled real-time network management capability.

1994-95 - ITSEC services were provided throughout the year in support of all DND/CF systems requiring this service, as was Frequency Spectrum Management Services to DND/CF units within Canada and abroad. The insertion of IT in several areas resulted in significant Personnel, operations and maintenance savings in the Department.

1995-96 - The initiation of data centre consolidations and major streamlining of the Strategic Message Switching System started to allow the downsizing of the operating arm of DISO while maintaining capability and achieving efficiency gains.

3. SECTOR AND CHANGE MANAGEMENT ISSUES

A couple of sector management issues have already been brought forth in the performance results expectations section. These are both the interoperability and co-developed infrastructure issues. The requirement for interoperability across the department is paramount for maximum benefits to be accrued from a common infrastructure, but this concept must be sold to DISO's clients when it conflicts with attainment of their objectives. In addition, reality dictates that no single entity can acquire the resources necessary to provide the full capability. A difference in perspectives can introduce severe limitations to the enterprise capability.

4. COMPARATIVE FINANCIAL PERFORMANCE

Figure 26: Business Line/Activity Financial Performance

(thousands of dollars)

	Actuals 1993-94	Actuals 1994-95	Main Estimates 1995-96	Actuals 1995-96
Communications and Information Management				
Operating Expenditures				
Personnel	212,072	245,299	222,504	228,278
Operations and Maintenance	90,099	74,049	80,803	104,769
Operating Requirements	302,171	319,348	303,307	333,047
Capital	136,120	127,561	99,997	109,730
Total Requirement	438,291	446,909	403,304	442,777
Less: Revenue credited to the Vote	3,412	3,480	3,769	2,881
	434,879	443,429	399,535	439,896

5. IMPACT ON FUTURE PLANS

The results of DISO's Business Line/Activity will impact heavily on the development of departmental business planning. The common infrastructure and services, including departmental data warehousing are essential. Client business plans are based on this capability being available, and any delay would seriously hamper achievement of those plans.

Critical success factors and possible performance measures have been identified against each of DISO's strategic objectives. These indicators are not yet fully developed or exhaustive. However, a sample of the framework developed so far is offered here after:

Strategic Objective	Critical Success Factor	Performance Measure
Provide strategic IM leadership progressing Dept towards IIE, making available correct IM tools	• Market DISO vision • Develop strategic direction • Develop integrated IM process	• compliance to Stds/Procedures • availability of Stds/Procedures • complete business models
Provide quality, efficient & effective IM tools to clients on time, utilizing dynamic partner-ships built on good comms	• Provide Common IM Tools (including services) • Products meet client needs • Client service orientation • Timely delivery of products	• availability & usage metrics (end to end) • client survey & usage metrics • compliments and complaints • metrics on outstanding actions
Increase DISO's efficiency in delivering IM products, services and support responsibly	• Optimize use of resources • Optimize organization for role • Maximize process efficiency	• cost per unit of output/ benchmark • meet reduction targets • time to market/cost of delays
Create rewarding, productive work environment of shared core values in understood framework	• Focus leadership/share vision • Empower, motivate work force • Work force reflects competency	• employee rating / environment metrics metrics on retention/rotation • skill set profile (ideal vs actual)

C.6 SUPPORT TO THE PERSONNEL FUNCTION

1. RESULTS EXPECTATIONS

The Personnel Group expected to achieve the following:

- provide recruitment, individual training, personnel management and personnel services for all Canadian Forces personnel;
- provide specialized training and educational institutions necessary to support the Canadian Forces;
- provide personnel management functions and personnel services for all civilian personnel with the Department;
- provide medical and dental services for all members of the Canadian Forces, and for dependents of military personnel and selected Departmental civilians located outside of Canada; and
- oversee personnel allocations required to support military training and major capital project management requirements.

2. DISCUSSION OF PERFORMANCE

During 1995-96, re-engineering and renewal initiatives resulted in major changes to key Personnel Management and Support processes which included:

- Linking key personnel processes to Strategic Direction;
- Re-engineering activities which resulted in devolved authority and accountability in selected areas as well as establishing a new way of doing business;
- Proposed changes to personnel career management;
- Implemented alternative ways to deliver personnel services - Canadian Forces Personnel Support Agency (CFPSA) and Canadian Forces Housing Agency (CFHA);
- Increased focus on operations in the redesign of Health Services and developing Alternative Service Delivery options for in-garrison health care requirements; and
- Separating policy and planning from service delivery.

3. COMPARATIVE FINANCIAL PERFORMANCE

Figure 27: Business Line/Activity Financial Performance

(thousands of dollars)

	Actuals 1993-94	Actuals 1994-95	Main Estimates 1995-96	Actuals 1995-96
Support to the Personnel Function				
Operating Expenditures				
Personnel	778,114	994,400	631,342	795,135
Operations and Maintenance	215,503	185,261	158,940	216,928
Operating Requirements	993,617	1,179,661	790,282	1,012,063
Capital	55,748	58,985	80,508	73,629
Grants and Contributions	24,104	17,391	23,274	19,137
Total Requirement	1,073,469	1,256,037	894,064	1,104,829
Less: Revenue credited to the Vote	28,483	27,195	23,532	18,257
	1,044,986	1,228,842	870,532	1,086,572

C.7 MATERIEL INFRASTRUCTURE AND ENVIRONMENT SUPPORT

A. Materiel

1. RESULTS EXPECTATION

The Materiel Group's reengineering and renewal efforts were expected to achieve the following:

- an increase in quality and responsiveness of materiel and acquisition support services to the Canadian Forces and the Department, facilitated by the development and implementation of agreements with service recipients;
- a reduction in the overall number of specialities and expertise required in order to focus on the Group's core competencies;
- clearer lines of authority and responsibility through defined management frameworks;
- a substantial reduction in the cost of providing the services to meet mandated reductions;
- improved visibility into the costs of the services by allocating costs to processes, outputs and service recipients; and
- increased collaborative relationships with industry, other Government departments and international partners

2. DEMONSTRATION AND DISCUSSION OF ACTUAL PERFORMANCE

The severe constraints in available resources have strained the Group's ability to sustain its level of service. Nothwithstanding, the Materiel Group has accomplished its stated mission and provided timely, quality, and cost effective materiel support to the Canadian Forces and the Department,under the capital acquisition, national procurement,and research and development programs . The following are a few examples of the achievements:

- project management for 206 capital equipment projects including 23 major crown projects;
- procurement and financial support to 56 capital information management projects;
- operations and maintenance support to all existing equipment;
- 33 ongoing research & development projects in 10 technology areas; and
- materiel and transportation management support to all Canadian Forces needs at home and abroad in ten UN Operations an one NATO operation.

In addition, work is underway to determine the core competencies and skill requirements of the future organization and to energize and motivate the workforce. High level management frameworks have been developed and work is continuing to further define them.

The Materiel Group has contributed to Departmental reductions by downsizing 33% since 1 April 94. To further improve our efficiency, cost visibility pilot projects have been undertaken in two areas of the Group with planned implementation across the Group in the current and future years based on the lessons learned during the pilot projects. A first attempt was made to identify planned costs to processes, outputs and service recipients and these efforts will continue in the current and future years with the assistance of automation.

The Materiel Group is focussing their efforts on the collaborative relationships with industry, other Government departments and international partners that provide added value to the Canadian Forces and the Department and which may also further national objectives.

3. SECTORAL AND CHANGE MANAGEMENT ISSUES

Last year the Materiel Group witnessed significant organizational changes. The Assistant Deputy Minister (Infrastructure and Environment) organization moved from the Materiel Group and became a separate Group reporting directly to the Deputy Minister and the Chief of the Defence Staff. The Assistant Deputy Minister's (Equipment Program Management) organization was disbanded, the five Equipment Program Management Divisions thus reported directly to the Assistant Deputy Minister (Materiel), eliminating one level of management.

Subsequently, two of the Divisions merged to further streamline the organization.

While in real terms the Materiel Group's workload has diminished somewhat since 1 April 1994, the pace of resource reduction has been much faster as the Group acted to achieve the reduction targets set for it. The resulting situation has placed the Group's workforce under extraordinary pressure - which continues to increase - as it simultaneously strives to:

- meet the requirements of the Canadian Forces and the Department; and
- execute a comprehensive renewal program.

4. IMPACT ON FUTURE PLANS

Reductions to Departmental resources will require the Materiel Group to closely consult with the recipients of the services to ensure that the effort is focussed on the highest priorities. The rate at which resources are being reduced will have to be examined to ensure that the reengineered processes and enablers can be implemented before the resources are reduced to a point where the required service levels cannot be met.

For each strategic objective, critical success factors, performance measures and performance indicators will be developed to measure the degree to which the objective is achieved and to focus the efforts of the organization. This will enable to Group to provide improved performance reporting in future years.

B. Infrastructure

1. RESULTS EXPECTATIONS

The Infrastructure and Environmental Renewal Project (IER) was expected to achieve the following:

- To contribute to the departmental aim to reduce the size of HQ staff by 50%;
- To redefine the roles of all personnel involved in the infrastructure activity;
- To streamline approval processes; and
- To provide advise on infrastructure requirements and real property management.

2. DEMONSTRATION AND DISCUSSION OF ACTUAL PERFORMANCE

The Infrastructure pre-MCCRT organization consisted of 268 positions. The IER team identified 85 positions to be deleted by 1999. So far, 61 positions have been deleted from the establishment.

The process re-engineering and reorganization of Infrastructure Group is still ongoing.

The approval process for replacement construction projects has been reduced from up to to eight years to two years or less.

The ownership of the following bases and sites have been transferred to others: CFBs Cornwallis and Penhold and the sites of CFSS, LETE and Carp. The transfer of the following bases and sites has been approved by TB and is ongoing: CFB Chatham and the sites of St-Hubert, Government Pointe at Shelburne and the lower site at Mill Cove.

3. SECTORAL AND CHANGE MANAGEMENT ISSUES

The Infrastructure Group has reorganized itself under the IER initiative. Director General Nuclear Safety (DGNS) was added to the Infrastructure Group in 1996-97 and responsibilities for Aboriginal Affairs will be added to Infrastructure portfolio in early 1997. Continuous improvement is expected to take place in the next year.

4. IMPACT ON FUTURE PLANS

Reductions to departmental resources will require all to properly prioritize infrastructure requirements and make wise investment decisions. The amount of projects to be managed by the group on behalf of the other activities will determine the role of project delivery for Infrastructure.

The ongoing re-engineering project will determine all processes involved in the activity of infrastructure in DND and the roles of those still involved.

The performance measurement system currently being developed will be critical to the Infrastructure Group role of corporate asset management advisor and assessor of the performance standards of infrastructure in DND.

C. Environmental Protection and Stewardship

Canadians want to live in a healthy environment now, and want to safeguard the health of the environment for coming generations. They look to the federal government for environmental leadership. As a result, the Government of Canada has pledged to "green" its own operations, to be accountable for its management of the public environmental trust, and to be a leader in environmental protection and sustainable development. Environmental laws such as the *Canadian Environmental Protection Act (CEPA)*, the *Canadian Environmental Assessment Act (CEAA)* and the pollution prevention portions of the *Fisheries Act* demonstrate this commitment.

The potential for the Department of National Defence and the Canadian Forces (DND/CF) to affect the environment is considerable. Military operations and exercises take place across the country; fuels are used to power some 30,000 vehicles (including aircraft and ships); hazardous waste is generated; energy is consumed to operate bases and equipment in approximately 10,000 facilities (excluding married quarters); and more than 2,000,000 hectares of owned and leased land, in more than 1700 different locations, are administered. Some 125,000 military and civilian personnel are employed by National Defence. It is widely recognized by those personnel that constant environmental vigilance is required, and that every precaution must be taken to avoid environmental incidents.

Consequently, the potential for impact presents DND/CF with many opportunities to protect the environment with which it has been entrusted. DND/CF has proven to the Canadian public that it takes its role as environmental steward very seriously. National Defence and the Canadian Forces adhere fully to the principles of sustainable development and to the spirit of environmental protection laws. We aim, in the course of our daily operations, to conserve both non-renewable and renewable resources, while using them efficiently and effectively.

1. RESULTS EXPECTATIONS

The ultimate goal of DND/CF environmental activities is to integrate them into daily activities, simply as the way we do business. Over the years, many environmental activities have been so integrated. For those initiatives which had not been budgeted for or consolidated into daily activities, beginning in 1992-93, DND/CF established a corporate account which provided funding for environmental initiatives, known as the Incremental Environmental Program (IEP). It was intended that the IEP would fund one-time, non-recurring expenditures such as site clean-ups, and that, in time, environmental activities would be absorbed into regular Operating and Maintenance budgets of managers.

Although the National Defence and Canadian Forces policy on the environment was issued in 1992, specific guidance on environmental objectives was not issued until 1995-96. That guidance has been refined each year since that time. Therefore, much environmental activity which has taken place since the policy was issued has been directed by the funding criteria established for the IEP. Since its inception in 1992-93, the IEP consisted of several categories of projects submitted yearly by elements of the Department and the Canadian Forces. The program categories included:

- national initiatives;
- fuel storage replacement program;
- training and communications;

- hazardous materiel (hazmat) management
- site remediation;
- pollution prevention;
- environmental monitoring and investigations;
- baseline studies and assessment;
- ozone-depleting substances; and
- unique requirements.

Results expected were dependant upon the projects approved for funding under the IEP. A unique feature of the IEP is that, in recognition of the fact that environmental issues are very volatile, flexibility has been built in to allow funds for approved projects to be reallocated to projects of a higher priority that demand immediate attention. In acknowledgment of the fact that limited resources dictate that not all activities can be implemented immediately, a set of four prioritization criteria was developed to assist in determining the relative priority of undertaking environmental activities. The criteria are:

- risk to human health, either direct or indirect;
- compliance with legislation and regulations;
- compliance with government policy and risk to the environment; and
- restoration/enhancement of the environment.

2. ACTUAL PERFORMANCE

National Defence's policy includes a commitment to environmentally-sustainable operations — the obligation to protect, and employ wisely, the land and resources used to carry out day-to-day operations from unmitigable damage. Pro-active measures have been taken to develop sustainable operational practices, capable of meeting current needs without sacrificing future potential use. Environmental protection and stewardship within the DND/CF encompass a wide range of activities. They include the following:

Environmental assessments. Environmental Assessments (EAs) are one of the Department's cornerstones for achieving sustainable operations. They are conducted before projects and activities are approved or undertaken, as required by the *Canadian Environmental Assessment Act* and departmental policy. While many of the EAs are conducted for compliance reasons, others are carried out because departmental procedures have integrated the use of environmental assessments in the planning process for projects and activities.

Decommissioning. When a site is decommissioned or downsized, it is assessed for environmental concerns. Clean-up, if required, is carried out according to standards in line with the past use of the site. When ownership is transferred, the site is in sound environmental condition.

Clean-up Activities. The major contamination problem facing DND/CF is that of hydrocarbon contamination on bases. A newly-released Contaminated Site Remediation Framework and Database System now provides DND/CF with an effective means of dealing with known contaminated sites. This allows National Defence to establish clean-up priorities based on a thorough review and testing of the site indicating the scope of the contamination, and the degree of risk it poses. This information becomes the basis for choosing the appropriate remediation technology options for each contaminated site in a timely manner, and for a more accurate estimate of clean-up costs.

Fuel storage tanks. Older and leaking storage tank systems containing petroleum, oil or lubricants have been the main source of present contamination on bases. In compliance with *CEPA s* technical guidelines and timetables, these storage tank systems have mostly been replaced by more secure tanks equipped with monitoring devices. Each base is required to keep an updated tank registry database, and to provide an annual update to the national tank registry in accordance with *CEPA* regulations.

Special clean-up projects. When the nature and the extent of the contamination are such that remediation will lead to complex management and technological challenges, the costly remediation is treated as a special clean-up project. Contaminated sites have resulted, for the most part, from harmful and negligent practices from the past when environmental consciousness was markedly different. This is the case for abandoned military sites such as those of the Distant Early Warning Line (DEW Line). The Longue Pointe site at CFB Montréal is another example of a special clean-up project.

- ***The DEW Line Clean-up:*** The most significant standalone remediation project is that of the clean-up of 21 National Defence DEW Line sites in Canada's Arctic. After several years of careful planning, and consultations/negotiations with the local populations, the project was approved in January 1996. It will be phased-out over 10 years and is expected to cost $242 million.

- ***Lead decontamination at the Longue Pointe Garrison, CFB Montréal:*** It is estimated that 115,000 tonnes of soil were contaminated with lead in the 1970s by two battery-recycling and smelting industries, now defunct, operating on DND and adjacent land. Innovative Canadian environmental technology is being used in the Longue Pointe clean-up project in the first full-scale demonstration of its kind in North America. The clean-up contract, valued at $26.4 million, is 65 per cent completed.

Waste Reduction. DND/CF is determined to meet the challenge of reducing solid and hazardous waste by one half by year 2000 from 1989-90 amounts. Incinerators are being replaced with shredders and/or disintegrators to discourage the practice of burning classified waste. A generic waste reduction manual, based on the results of five separate waste characterization studies, or audits, will guide bases in completing their own waste reduction plans.

Toxic Substances. DND/CF is participating in Environment Canada's voluntary Accelerated Reduction/Elimination of Toxics (ARET) Programme. Thirty-five ARET substances were found in nearly one thousand products used in the Department. National Defence is committed to reduce by 90 per cent the use of products containing bioaccumulative toxic substances identified under the ARET programme by the year 2000. A review is underway to find more environmentally responsible alternatives.

Destruction and Phase out of PCBs. Most of the Polychlorinated Biphenyls (PCB) wastes previously held in secure storage have been destroyed. In 1995-96, 400 tonnes of an inventory of 440 tonnes were destroyed, and in 1996-97, the inventory is expected to be further reduced to six tonnes. On-line transformers and light ballasts containing PCB will be identified and inventoried by the end of 1998. As this material is being replaced or upgraded, the PCB waste is stored and collected annually for safe disposal.

Ozone Depleting Substances (ODS). National Defence is responding to the requirements of the Montréal Protocol aimed at decreasing the use of ozone depleting substances such as Halon and Freon. Air-conditioning and refrigeration systems containing Freon are being phased out. Fire suppressant systems which contain Halon are being removed from DND/CF buildings. The Halon is recovered and safely stored for reuse only when it is essential and critical to the mission such as in combat vehicles, ships and aircraft.

Building Energy. In the past 15 years, National Defence has reduced the energy used in its facilities by 30 percent. For the most part, this was achieved through effective maintenance, adjustment of controls, avoidance of waste, making existing facilities more energy efficient, and ensuring that new facilities are more efficient. Conservation efforts are still being pursued. An Energy Performance Contract, with large savings of both energy and financial resources expected, is running its course at CFB Halifax. A number of other bases are at different stages of studies and negotiations to enter such contracts.

Transportation Energy. Over the last 10 years, consumption of fuels used to power our sea, land and air fleets has decreased noticeably. This is due to such measures as use of smaller vehicles where appropriate, gradual conversion from gasoline to diesel power in the commercial fleet, use of simulators for a significant portion of training, and sustained efforts to increase efficiency and reduce waste. Where cost effective and operationally feasible, alternative fuel will be used in all automobiles, passenger vans and light trucks by the year 2004.

Water. At National Defence Headquarters in Ottawa, consumption of water was reduced by 50 per cent over three years, saving about $10,000 a month. A number of water-saving initiatives are underway nationally to reach the goal of reducing the annual water consumption by 20 per cent by year 2001 from 1989-90 levels.

Land. Responsible for more than 2,000,000 hectares of owned or leased land (the largest amount of administered land in Canada), DND/CF uses approximately half for the active military training of its troops. To ensure that military training is carried out in a sustainable manner, the Canadian Forces have adopted the Manoeuvre Area Planning System which integrates training needs, environmental protection and rehabilitation and natural resources management.

Forests. Approximately one half of National Defence land is forested. With the assistance of the Canadian Forest Service, DND/CF is actively managing its forests to improve their overall health, while providing environmental and economic benefits to local communities. Applying sustainable forest management principles will ensure that forests will continue to thrive into the future.

Wildlife. National Defence land provides habitat for a great diversity of wildlife. In many cases, rare or endangered species of birds, mammals, reptiles and plants no longer found in the surrounding region due to loss of habitat, are protected and growing on DND/CF lands. Home to one of the largest expanses of native Mixed Grass Prairie remaining in Canada, the *CFB Suffield National Wildlife Area* is an example of National Defence's commitment to good environmental stewardship.

Pesticide reduction. In keeping with its Integrated Pest Management Programme (IPM), DND/CF aims to reduce by 50 per cent the use of pesticides, herbicides and fertilizers by the year 2001 from base-year 1989-90 levels, as well as reducing associated costs. Low maintenance grounds designs, and mechanical and biological control of pests are used. National Defence's comprehensive eight-volume IPM manual is now available on CD ROM. It promotes techniques for controlling pests and ensures consistency and compliance with relevant laws, regulations, policies and procedures.

Environmental emergency response. DND/CF is committed to provide assistance in environmental emergencies to civil agencies and the local private sector. Upon request from the Lead Agency tasked with responding to the environmental emergency, the CF will respond to immediate needs such as equipment, transportation and communications or other services to the public. Each CF base has the trained personnel

and the appropriate equipment needed to respond to environmental emergencies that may occur as a result of their own activities, and therefore that equipment and those skills are available to respond when so requested.

Environmental surveillance. The Canadian Forces also conduct environmental surveillance operations, monitoring Canadian territory for causes and effects of pollution. During patrol, exercise and training activities over much of Canada, the CF gathers valuable data for use by scientists involved in environmental research.

Environmental training. An extensive training project has been established to ensure that green considerations become second nature to decision-makers and operators. Environmental training is offered to unit environment officers; to base and command environment officers as well as to senior managers. Also, the Training and Education for Environmental Stewardship (TrEES) initiative calls for environmental considerations to be integrated into all civilian and military occupational training.

Environmental awareness. Defence personnel are subject to timely environmental awareness activities and publications. The army, navy and air force are showing their respective environmental awareness videos to their personnel. Pertinent educational activities are organized to mark specific environmental days which are observed throughout National Defence. Environmental responsibility and personal liability were explained clearly in a pamphlet distributed to each civilian employee and military member. The "how" and "why" of Environmental Assessments were described to those personnel required to conduct them. *The Commander's Guide on Environmental Protection*, a handy source of information on what commanders need to know to protect the environment, is available to military officers who assume a position of commander.

Pollution Prevention. By greening day-to-day operations and integrating environmental considerations into project planning, personnel of DND/CF are clearly making pollution prevention their main environmental protection goal, thus shifting from a position of pollution control to one of pollution prevention.

International Co-operation. National Defence co-operates with other NATO nations and with the former Warsaw Pact Nations in all areas of Defence environmental activities. Canada is considered one of the leaders in environmental protection in Defence activities in the Western World.

Network of trained Environmental Officers (EnvOs). Trained full-time EnvOs are now in place throughout DND/CF, providing advice to their respective commands, areas or bases. Also, most units have appointed Unit Environmental Officers with part-time, secondary duties.

The Maritime Environmental Protection Plan (MEPP). The navy is implementing the MEPP to upgrade waste and fuel handling systems aboard ships in order to meet Marine Pollution Convention (MARPOL) standards.

CFB 2001 Green Base. This project supports a demonstration initiative at Halifax, Shilo, Winnipeg and Borden. These four bases focus on sustainable operations through projects in energy and water conservation, the management of natural resources, waste reduction, green office practices and environmental technologies. Lessons learned are shared with other bases to achieve the goal of operating "green" bases in the 21st century.

Research and Development. Defence Research Establishments provide valuable scientific and technological assistance to the CF in areas such as alternative power sources, communications, bioremediation, sensor technology and protection from nuclear radiation and chemical agents.

Noise Exposure Forecasts. Forecasts are produced for military airfields, helicopter bases, small arms shooting ranges and impact noise areas in Canada to indicate the level of noise to which nearby communities may be exposed. In addition, land use around military airfields is controlled by zoning regulations under the *Aeronautics Act* to avoid possible hazards to aircraft movements. In conjunction with some NATO countries, the Department is modernizing its Noise Exposure Forecast Program both for military and civilian uses by adding topography and atmospheric effects.

Low-Level Flying Training Activities. Low-level training is conducted from Goose Bay, Labrador by various air forces in an area the size of England. A comprehensive mitigation programme is in place to protect sensitive human and wildlife locations on the ground. In co-operation with wildlife agencies from Newfoundland and Québec, the programme is reassessed every year. An independent Institute, established in 1996, with members from aboriginal groups/communities, will conduct research into the ongoing effects of low-level flying, and will assist in defining the required mitigation efforts. Also, the Institute will perform a valuable role in public education on training activities.

Defence Environmental Advisory Committee (DEAC). Established in 1992 by the Minister of National Defence, DEAC advises the Minister on the impact of DND/CF activities and operations on the environment. Its members are drawn from environmental agencies, industry and academia. DEAC presented its second report to the Minister in May 1996.

3. SECTORAL CHANGE/MANAGEMENT ISSUES

Originally, the life of the Incremental Environmental Program (IEP) was expected to be at least ten to fifteen years and was to have covered most identified multi-year projects. It is now expected that the funding program itself will be phased out over a five-year period, beginning with 1997-98, to be replaced by specific designation of environmental projects in business plans. This will have the effect of transferring the accountability for results from corporate management to local managers.

The development of a risk management approach to dealing with contaminated sites has meant a much more systematic method of ensuring that scarce financial resources are expended judiciously. Rather than remediating contamination at the first sign, time is taken to determine whether the contamination is migrating or is likely to pose a risk to human health. For those sites where immediate attention is not required, a rigorous monitoring program has been implemented, ensuring that expensive remediation will be embarked upon only in cases where there is no choice.

4. COMPARATIVE FINANCIAL DATA

Funds expended under the IEP for the period of 1993-94 to 1995-96, broken down by IEP category are shown at Figure 28.

Figure 28: Expenditures under the Incremental Environment Program, 1993-94 to 1995-96

Incremental Environment Program Expenditures ($ million)			
Category	**1993-94**	**1994-95**	**1995-96**
National Initiatives	0.4	1.7	6.5
Fuel Storage Replacement Program	8.5	5.0	4.7
Training and Communications[1]	1.8	1.3	1.5
Hazmat Management	1.7	1.7	0.4
Site Remediation	13.1	14.9	6.7
Pollution Prevention	1.5	4.4	3.4
Environmental Monitoring and Investigations	5.8	2.5	0.6
Baseline Studies and Assessment	1.0	0.6	0.4
Ozone-depleting Substances	1.1	2.0	2.3
Unique Requirements[2]	0.8	3.9	5.5
Longue Pointe Decontamination	0.2	3.3	10.4
Decommissioning[3]	3.4	3.3	3.7
Other	0.0	0.2	0.0
Total	**39.3**	**44.8**	**46.1**

[1]Includes the Training and Education for Environmental Stewardship (TrEES) project

[2]Includes projects such as the environmental program at the Proof and Engineering Test Establishment (PETE) at Nicolet, QC, and POL remediation at CFB Goose Bay, Labrador

[3]Does not include base closures associated with reductions arising from Budget ’94 and Budget ’95

5. IMPACT ON FUTURE PLANS

DND/CF's move toward operating budgets and business planning presents an ideal opportunity for line managers to integrate environmental activities into their existing operations. To that end, Environmental Protection and Stewardship has been recognized as a common, mandated program which is to be integrated into all levels of business plans. IEP funding will be limited to remediating contamination which occurred prior to 1992 (legacy issues) and special projects (e.g., the Halon replacement program and the Training and Education for Environmental Stewardship (TrEES) initiative). All other environmental projects are expected to be funded through the business planning process. Major standalone projects, or legacy issues, such as the clean-up of the Distant Early Warning Line (DEW Line), will be budgeted for on an exception basis.

Recent amendments to the *Auditor General Act* require the Department of National Defence to prepare a Sustainable Development Strategy, and to table it in Parliament by December 1997. That strategy will outline concrete goals and action plans for integrating sustainable development into departmental policies, programs and operations. The objectives cited below are expected to form the nucleus for those goals and action plans. The strategy will provide benchmarks against which progress will be measured, and, in keeping with Government direction, we will report annually thereafter on progress toward sustainable development in Part III of the Main Estimates. The Commissioner of the Environment and Sustainable Development, who has standing as a Deputy Auditor General, will monitor the Department's progress in achieving the stated objectives.

C.7 MATERIEL, INFRASTRUCTURE AND ENVIRONMENT SUPPORT (continued)

D. Comparative Financial Performance

Figure 29: Business Line/Activity Financial Performance

(thousands of dollars)

	Actuals 1993-94	Actuals 1994-95	Main Estimates 1995-96	Actuals 1995-96
Materiel, Infrastructure and Environment Support				
Operating Expenditures				
Personnel	619,037	629,786	540,389	444,406
Operations and Maintenance	359,306	311,701	314,721	315,900
Operating Requirements	978,343	941,487	855,110	760,306
Capital	185,037	255,154	148,222	174,383
Total Requirement	1,163,380	1,196,641	1,003,332	934,689
Less: Revenue credited to the Vote	5,109	5,885	6,733	4,758
	1,158,271	1,190,756	996,599	929,931

C.8 DEPARTMENT/FORCES EXECUTIVE

A. Management of the Defence Services Program

1. RESULTS EXPECTATIONS

To manage the defence Services program

2. DEMONSTRATION AND DISCUSSION OF ACTUAL PERFORMANCE

Internal Business Planning process has been successfully implemented and work is being done to extend it downward to the lower levels of management accountable to them. The depth of the business planning system varies from one organization to the next, but the difficulty of synchronizing multiple levels of business plan makes it unlikely that full implementation of the system at all levels of management will be achieved before 1998-99. At present, the department is just beginning to document what is still an evolving system. Current plans are to have documentation for the Defence Management System circulated during 1997-98.

The development of an effective performance measurement system is much more difficult than anticipated, but work is underway to allow the individual Business Lines/Activities to start internal performance reporting during 1997-98. Department-level performance reporting, which draws upon the individual systems for key inputs, is in a transitory phase as a result of the requirement to map capability based performance measurements to the strategic objectives set by the department. The iterative nature of this transition phase will not allow the envisaged new performance measurement system to be fully operational until 1998-99.

3. SECTORAL AND CHANGE MANAGEMENT ISSUES

The Management Command and Control Renewal Team (MCCRT) has a mandate to identify and facilitate resolution of common change management issues. These are generally related to the areas of human resources, information management, National Capital Region accommodation, communications and culture. This mandate is expected to remain focused on the common issues for the remainder of the MCCRT life -- to July 1997. After that, residual responsibilities will be stopped, devolved to the matrix, or passed on to the CMRS follow-on organization. While the main goal of MCCRT has been to find ways to work more effectively overall, a necessary focus has been to reduce the portion of Departmental resources assigned to headquarters. The target set by Defence Management Committee of 50% reduction by 1999 of resources in those headquarters outside base and wing fences remains valid. About 22% reductions have been achieved by October 1996 and this percentage is expected to rise to 33% by September 1997.

4. FUTURE PLANS FOR PERFORMANCE REPORTING

Performance measurement will become an integral part of the new strategic management framework to strengthen accountability for resource decisions and make risk more manageable within the DSP. The performance measurement system will be developed to satisfy the following objectives: initiating corrective action to activities while still in-progress, guiding the redistribution of resources and providing support to departmental decision-making. Measured performance and reporting of actual achievement will be made, along with policy and capability requirements, a major input to the development of strategic direction.

B. Management of the Defence Policy

1. RESULTS EXPECTATIONS

To formulate and manage all aspects of defence policy.

In 1995-96, the Policy Group's work was centred on:

- strategic monitoring and analysis;
- provision of defence policy advice;
- support to senior management; and
- management of defence policy outreach.

2. DEMONSTRATION AND DISCUSSION OF ACTUAL PERFORMANCE

Measurement of the Policy Group's performance remains largely subjective, because the quality of advice is rarely quantified. Ultimately, the only tangible measure of success may well be the degree of satisfaction or "comfort level", of senior management to when advice is given and who have to base their decisions on it. The ability of DND to adapt the broad parameters of defence policy to shifting circumstances suggests that defence policy advice and support continue to be satisfactory.

3. SECTORAL AND CHANGE MANAGEMENT ISSUES

The ongoing program to review and, as required, rationalize mandates and responsibilities within the Group will continue, and every effort will be made to ensure that this process does not adversely affect either the quality of the support or the scope of the analysis provided. Selective use of contracts may be needed to provide additional expertise, or to cater for special analytical requirements.

4. IMPACT ON FUTURE PLANS

The relevance of current defence policy will continue to be monitored and the Policy Group will be prepared to respond should a change of government priorities or international circumstances, or major issues arising from the implementation -- or lack of implementation -- of current policy lead to a political decision to update or change defence policy.

C. Provision of Review Services

1. RESULTS EXPECTATIONS

To provide review services comprising internal audit and program evaluation.

2. DISCUSSION OF ACTUAL PERFORMANCE

A performance management framework is under development for CRS which will be based on the following three "pillars":

- productivity,
- client satisfaction, and
- work environment.

The overall effectiveness of the CRS Branch is dependent upon these three pillars in approximately equal measure. Productivity measurement is linked directly to the CRS Internal Business Plan. Measurement of client satisfaction, including that of the DM/CDS, is linked to every individual review product. The measurement of the work environment is linked to individual productivity which ensures the achievement of the other two pillars.

Over the next several months, specific indicators and measurement techniques will be developed for each pillar. For example, the first three CRS capabilities discussed above will be the subject of measurement under the productivity pillar.

D. Provision of Legal Services

1. RESULTS EXPECTATIONS

To provide legal services, advice and training.

2. PLANS FOR FUTURE PERFORMANCE REPORTING

For each of the Judge Advocate General JAG objectives (key results), critical success factors, measurement areas, performance indicators and performance standards will be developed. Outlined below are the highlights of the JAG performance measurement system.

Military Justice System

Objective/Key Result

- a fair and efficient military justice system
- processes and procedures do not fail with respect to judicial scrutiny

Measurement Areas/Performance Indicators

- timeliness of JAG efforts to implement amendments to the National Defence Act or regulations because of court decisions;
- timeliness of courts martial;
- success of summary trial reform implementation; and,
- perception of the fairness and efficiency of the military justice system.

Legal Advice and Services

Objectives/Key Results

- accurate, timely legal advice and services to DND/CF clients
- rule of law applied throughout DND/CF day-to-day activities

Measurement Areas/Performance Indicators

- quality of legal advice and services based on:
- initial contact/direction;
- usefulness;

- timeliness;
- clarity;
- thoroughness; and,
- reliability.
- timeliness of implementation of required statutory or regulatory amendments..

International Humanitarian Law Training

Objectives/Key Results

- CF members are aware of, understand, and comply with their obligations pursuant to international humanitarian law

Measurement Areas/Performance Indicators

- compliance and respect of legal obligations by CF members on international missions

CF Operations

Objectives/Key Results

- accurate, timely legal advice and services to domestic and international military operations
- legal foundation is present for the proper deployment of troops both internationally and domestically

Measurement Areas/Performance Indicators

- mission success based on proper legal foundation
- quality of legal advice and services based on:
- timeliness;
- usefulness;
- knowledge of CF operations;
- knowledge of international law;
- clarity;
- thoroughness; and,
- reliability.

E. Comptrollership and Corporate Management

1. RESULTS EXPECTATIONS

The Finance and Corporate Services Group provided leadership in the comptrollership function, ensured cost effective financial services that met departmental, government and statutory requirements, and provided corporate management and support services to the Department and the Canadian Forces. This was accomplished by providing;

- Comptrollership Services - the development and dissemination of comptrollership principles and the provision of guidance and training in the area of comptrollership practices;

- Financial Management Services - provision of financial authorities, delegation, policy and support systems to ensure sound and ethical financial management within the Department;

- Accounting Systems/Decision Support - provision of financial/managerial accounting tools to allow analysis, advice and decision support for management decisions to include strategic financial planning;

- Centralized Financial Services - providing for Total Force (Regular and Reserve Force) pay and pension services, centralized accounts payable/receivable services and other related financial services;

- DND/CF Financial Operations - capability to provide financial support to departmental/CF operations to include costing, preparation of financial arrangements and the provision of advice and comptroller services;

- Corporate Support Services - continued support to NDHQ and other units within the NCR; and

- Corporate Management Services - the maintenance provision and promulgation of the Department's regulations, providing specified executive correspondence support and administering the Access to Information and Privacy Acts.

2. DEMONSTRATION AND DISCUSSION OF ACTUAL PERFORMANCE

The Finance and Corporate Services Group, through participation in the Treasury Board Reform of the Estimates initiative, provided enhancements to the departmental expenditure management system by improving and integrating the Level 1 and Level 0 Business Plan processes. This initiative improved strategic financial planning which has increased the cost- effectiveness of Defence spending and the devolution of authorities.

A broad range of initiatives was achieved by the Group which enhanced financial management practices and improved financial recovery policy and procedures in DND's dealings

with the UN, NATO and other Allies, other government departments and non-defence agencies and individuals. Significant revisions were made to revenue administration and the forecasting and rationalization of revenue assignment.

A project was created to re-engineer the Regular Force pay system and to modify and improve the Reserve Force pay system. Major improvements were made and future integration is planned between the CCPS and the Reserve Integrated Information Project(RIIP).

As part of the downsizing of NDHQ, an accommodation project called NDHQ 97 was initiated to decrease the number of buildings the department currently occupies and integrate the generic footprint to achieve long term savings and maximize the use of available space.

A pilot project at CFB Esquimalt was implemented with Canadian Forces Support Unit - Ottawa to re-engineer the processes of electronic invoicing. This was implemented department wide in Apr 96.

3. CHANGE MANAGEMENT ISSUES

The Finance and Corporate Services Group has undergone a major reorganization and delayering of its management which has greatly increased the span of control to the Group Principal. In addition, the reduction targets of $5.7M in human resources were met this past year, and plans for additional reductions were aggressively initiated.

A thorough review of client needs, devolution of purchasing functions to clients and other technical services functions is underway. We remain committed to reducing resources by pursuing Employee Takeovers and Alternate Service Delivery initiatives within the Group.

4. IMPACT ON FUTURE PLANS

As the CF devotes a greater proportion of its resources to operational requirements and looks within the Department to find savings, there will be a greater need to review options such as alternate service delivery as well as decentralization of authority. Senior management continues to seek an appropriate balance between centralization and decentralization, between empowerment and accountability, and to create an appropriate accountability framework.

C.8 DEPARTMENT/FORCES EXECUTIVE

F. Comparative Financial Performance

Figure 30: Business Lines/Activities Financial Performance

(thousands of dollars)

	Actuals 1993-94	Actuals 1994-95	Main Estimates 1995-96	Actuals 1995-96
Department/Forces Executive				
Operating Expenditures				
Personnel	219,130	191,931	169,811	208,015
Operations and Maintenance	101,800	69,537	76,415	106,527
Operating Requirement	320,930	261,468	246,226	314,542
Capital	2 858	2 250	90 140	11 186
Grants & Contributions	192 576	192 397	174 673	194 966
Total Requirement	516,364	456,115	511,039	520,694
Less: Revenue credited to the Vote	12,624	12,134	15,135	17,920
	503,740	443,981	495,904	502,774

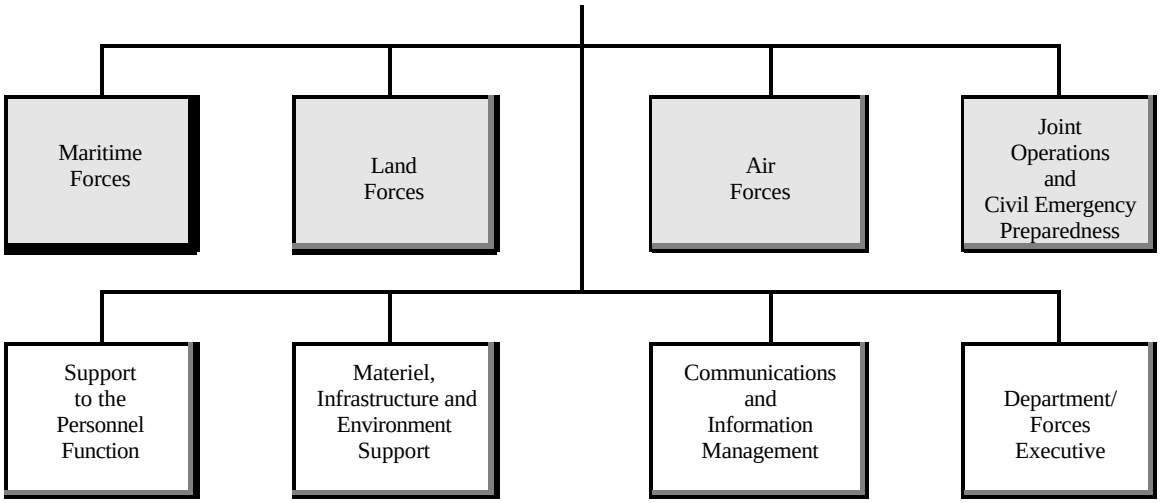
Section IV
Supplementary Information

A. Organization

1. ACTIVITY STRUCTURE

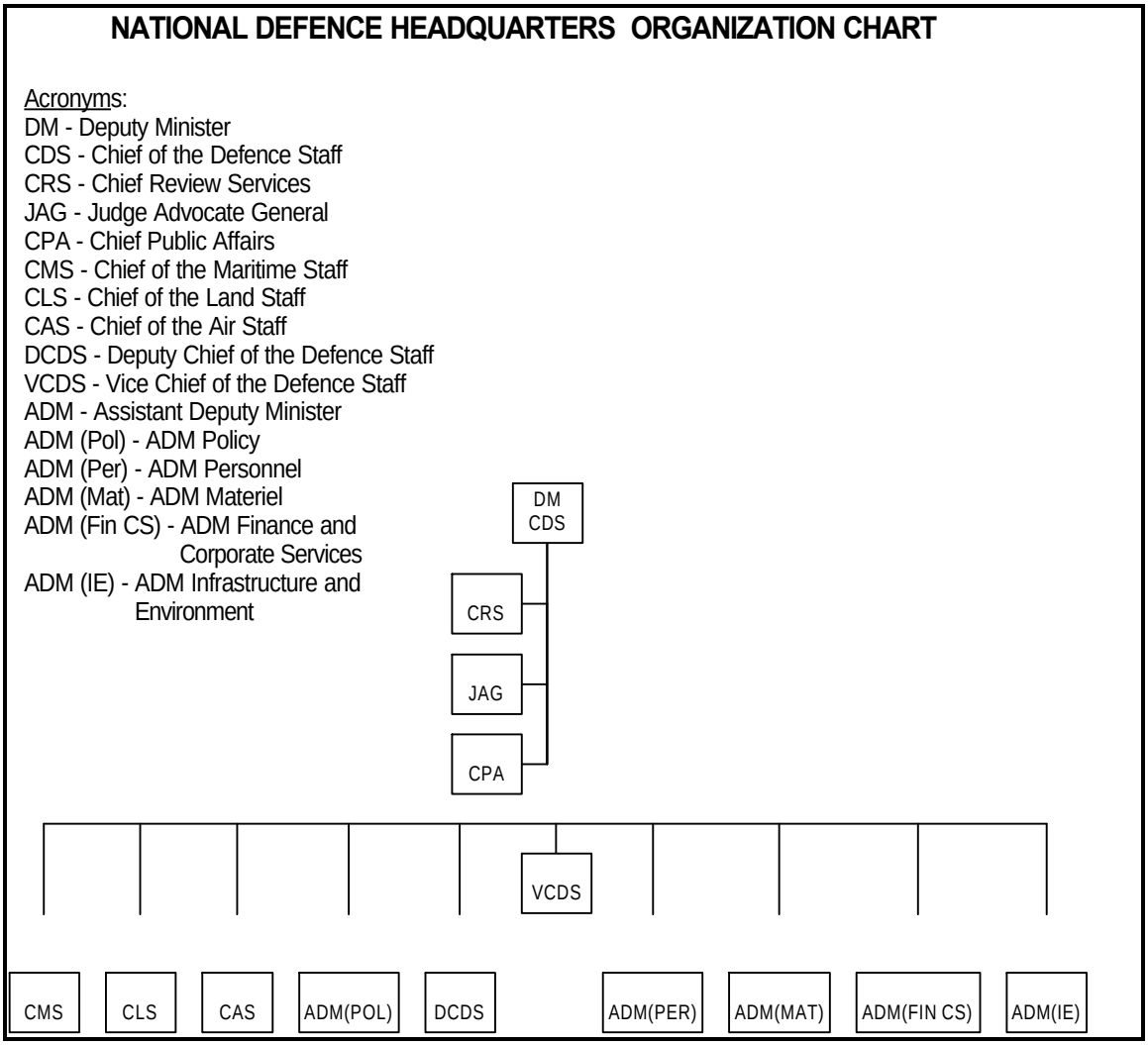
Figure 31:

Defence Services Program



2. NATIONAL DEFENCE HEADQUARATERS ORGANIZATION CHART

Figure 32: Organization Chart



3. RESOURCE REQUIREMENTS BY BRANCH AND BUSINESS LINE/ACTIVITY

Figure 33: Defence Services Program

(thousands of dollars)

Management Structure	Commanders and/or Group Principals	Centralized Accounts			**Total**
		ADM(Per)	ADM(Mat) and ADM(IE)	ADM(Fin CS)	
Expenditures by Spending Authority					
Military Pay/Allowances	302,894	2,954,602	----	----	3,257,496
Civilian Pay/Allowances	915,837	102,103	----	----	1,017,940
Operating Budgets	1,545,123	----	----	----	1,545,123
Research and Development	----	----	98,100	----	98,100
National Procurement*	----	----	1,379,907	----	1,379,907
Revenue	----	----	----	(389,878)	(389,878)
Capital	149,916	----	1,968,084	----	2,118,000
Transfer Payments	166,322	19,175	----	----	185,497
Statutory Costs	----	704,333	----	----	704,333
TOTAL	**3,080,092**	**3,780,213**	**3,446,091**	**(389,878)**	**9,916,518**

* Includes Ammunition and Sonobuoys

(thousands of dollars)

Activity Structure	Operating Budgets	Pay Allowances and EBP*	Materiel Support	Revenue	Net Total
Expenditures by Activity					
Maritime Forces	586,480	639,530	832,224	(24,094)	2,034,140
Land Forces	817,432	1,091,116	952,026	(157,947)	2,702,627
Air Forces	653,977	895,626	992,179	(156,596)	2,385,186
Joint Operations and Civil Emergency Preparedness	122,584	131,632	87,870	(3,983)	338,103
Communications and Information Management	105,349	158,531	143,360	(3,106)	404,134
Support to the Personnel Function	219,167	534,757	100,289	(20,444)	833,769
Materiel, Infrastructure and Environment Support	296,291	189,351	281,962	(4,845)	762,759
Department/Forces Executive	278,812	139,670	56,181	(18,863)	455,800
TOTAL	**3,080,092**	**3,780,213**	**3,446,091**	**(389,878)**	**9,916,518**

* EBP: contributions to Employee Benefit Plans

B. Personnel Requirements

1. PERSONNEL REQUIREMENTS BY BUSINESS LINE/ACTIVITY

Figure 34: Civilian Workforce (FTEs)

	Actuals 1994-95	Actuals 1995-96	1996-97 Estimates	1997-98 Estimates	1998-99 Planned	1999-00 Planned
Civilian - FTE						
Maritime Forces	6,288	5,534	6,323	5,338	4,762	4,759
Land Forces	6,169	6,950	6,416	4,499	3,729	3,721
Air Forces	5,797	4,819	4,854	3,497	2,735	2,703
Joint Operations and Civil Emergency Preparedness	1,127	1,003	1,110	1,451	1,308	1,306
Communications and Information Management	635	737	638	713	639	637
Support to Personnel Function	4,077	2,185	1,894	2,593	2,339	2,339
Materiel, Infrastucture and Environment Support	5,611	4,457	3,744	3,917	3,528	3,527
Department/Forces Executive	1,382	1,235	1,258	1,247	1,126	1,126
Civilian FTE	**31,086**	**26,920**	**26,237**	**23,255**	**20,166**	**20,118**

Figure 35: Military Workforce (FTEs)

	Actuals 1994-95	Actuals 1995-96	1996-97 Estimates	1997-98 Estimates	1998-99 Planned	1999-00 Planned
Military (Regular Force) - FTE						
Maritime Forces	11,278	10,284	10,835	10,985	10,543	10,304
Land Forces	21,797	23,515	24,034	22,135	23,174	22,619
Air Forces	20,124	16,124	16,434	15,830	15,237	14,040
Joint Operations and Civil Emergency Preparedness	1,838	1,968	2,083	1,690	1,967	1,908
Communications and Information Management	3,295	2,856	2,515	2,896	2,264	2,197
Support to Personnel Function	9,041	7,818	7,341	7,988	5,630	5,436
Materiel, Infrastucture and Environment Support	3,644	2,540	2,402	2,243	2,106	2,039
Department/Forces Executive	1,347	1,356	1,337	1,229	1,226	1,205
Military (Regular) - FTE	**72,364**	**66,461**	**66,981**	**64,996**	**62,147**	**59,748**

Figure 36: Details of Personnel Requirements -Combined Workforce (FTEs)

	Actuals 1994-95	Actuals 1995-96	1996-97 Estimates	1997-98 Estimates	1998-99 Planned	1999-00 Planned
Combined Workforce						
Maritime Forces	17,566	15,818	17,158	16,323	15,305	15,063
Land Forces	27,966	30,465	30,450	26,634	26,903	26,340
Air Forces	25,921	20,943	21,288	19,327	17,972	16,743
Joint Operations and Civil Emergency Preparedness	2,965	2,971	3,193	3,141	3,275	3,214
Communications and Information Management	3,930	3,593	3,153	3,609	2,903	2,834
Support to Personnel Function	13,118	10,004	9,235	10,581	7,969	7,775
Materiel, Infrastucture and Environment Support	9,255	6,997	6,146	6,160	5,634	5,566
Department/Forces Executive	2,729	2,591	2,595	2,476	2,352	2,331
Total FTE	**103,450**	**93,381**	**93,218**	**88,251**	**82,313**	**79,866**

2. SUMMARY BY PROFESSIONAL CATEGORY (CIVILIAN)

Figure 37: Civilian (FTEs)

	Actual 1994-95	Actuals 1995-96	1996-97 Estimates	1997-98 Estimates	1998-99 Planned	1999-00 Planned
OIC Appointments [1]1	1	1	1	1	1	1
Executive[2]	138	112	109	94	84	83
Scientific and Professional	2,018	1,758	1,717	1,510	1,317	1,314
Administrative and Foreign Services	3,042	2,668	2,589	2,848	1,999	1,995
Technical	2,831	2,488	2,431	2,066	1,864	1,860
Administrative Support other than Clerical	3,331	2,553	2,493	2,129	1,912	1,908
Clerical & Regulatory	5,541	4,247	4,148	3,626	3,181	3,173
Operational other than General Labour and General Services	3,514	3,244	3,996	2,757	2,430	2,424
General Labour & Trades	5,566	5,137	4,797	4,403	3,848	3,839
General Services	5,104	4,712	3,956	3,821	3,530	3,521
Total	**31,086**	**26,920**	**26,237**	**23,255**	**20,166**	**20,118**

[1] This includes all those at the DM level and all GICs.

[2] This includes all those in the EX-1 to EX-5 range inclusive

Figure 38: Summary by Rank (Military - Regular Force)

	Actual 1994-95	Actuals 1995-96	1996-97 Estimates	1997-98 Estimates	1998-99 Planned	1999-00 Planned
General/Lieutenant-General	11	11	9	9	9	8
Major-General	26	24	21	21	20	19
Brigadier-General	57	58	49	48	46	44
Colonel	310	290	288	263	251	242
Lieutenant-Colonel	1,085	1,032	1,008	958	916	881
Major	3,475	3,352	3,225	2,941	2,812	2,704
Captain	7,779	7,035	7,218	6,075	5,809	5,584
Lieutenant	2,030	1,575	1,884	2,628	2,511	2,414
Officer Cadet	1,666	1,497	1,546	2,796	2,675	2,572
Chief Warrant Officer	812	729	755	623	596	573
Master Warrant Officer	2,208	2,048	2,050	1,772	1,694	1,628
Warrant Officer	4,609	4,359	4,277	3,906	3,735	3,591
Sergeant	9,046	8,351	8,393	7,357	7,035	6,763
Corporal	34,475	32,258	31,827	28,423	27,177	26,128
Private	4,775	3,842	4,431	7,176	6,861	6,597
Total	**72,364**	**66,461**	**66,981**	**64,996**	**62,147**	**59,748**

C. Capital Projects

1. CAPITAL EXPENDITURES

Figure 39: Expenditure Details by Business Line/Activity

(thousands of dollars)

	Actual 1994-95	Actuals 1995-96	1996-97 Estimates	1997-98 Estimates	1998-99 Planned	1999-00 Planned
Business Lines/Activities						
Maritimes Forces	1,009,246	808,406	629,475	503,783	358,281	342,669
Land Forces	925,034	917,525	859,064	639,380	665,261	620,113
Air Forces	340,656	534,007	480,912	545,041	529,731	748,434
Joint Operations and Civil Emergency Preparedness	50,375	59,013	37,819	67,072	48,980	34,948
Communications and Information Management	127,561	109,196	94,692	108,851	76,019	59,717
Support to the Personnel Function	58,985	73,629	64,426	73,824	35,043	35,420
Materiel, Infrastructure and Environment Support	255,154	173,335	296,543	157,663	62,766	46,689
Department/Forces Executive	2,250	11,186	21,266	22,386	13,919	15,010
Total	**2,769,261**	**2,686,297**	**2,484,197**	**2,118,000**	**1,790,000**	**1,903,000**

All major capital projects are displayed with information on the class of the estimate (Substantive) (S) or indicative (I) and the extent of Treasury Board authority, i.e., delegated to the department (DA), Preliminary Project Approval (PPA) or Effective Project Approval (EPA). The following definitions apply:

Substantive Estimate - This estimate is one of sufficiently high quality and reliability so as to warrant Treasury Board approval as a Cost Objective for the project phase under consideration. It is based on detailed system and components design and taking into acount all project objectives and deliverables.

Indicative Estimate - This is a low quality, order of magnitude estimate that is not sufficiently accurate to warrant Treasury Board approval as a Cost Objective. It replaces the classes of estimates formerly referred to as Class C or D.

Preliminary Project Approval (PPA) - This is Treasury Board's authority to initiate a project in terms of its intended operational requirement, including approval of the objectives of the project definition phase and any associated expenditures. Sponsoring departments submit for PPA when the project's complete scope has been examined and costed, normally to the indicative level, and when the cost of the project definition phase has been estimated to the substantive level.

Effective Project Approval (EPA) - This is Treasury Board's approval of the objectives (project baseline), including the Cost Objective, of the project implementation phase and provides the necessary authority to proceed with implementation. Sponsoring departments submit for EPA when the scope of the overall project has been defined and when the estimates have been refined to the substantive level.

Departmental Approval (DA) - Treasury Board approval is not required.

2. LIST OF CAPITAL PROJECTS

Figure 40: Details by Business Line/Activity ($000)

	Currently Estimated Total Cost	Forecast Expenditures To March 31, 1997	Planned Expenditures 1997-98	Future Years Requirements
Maritime Forces				
Construction				
St. John's, Newfoundland				
HMCS Cabot (I-PPA)	2,600	2,162	438	----
Halifax, Nova Scotia				
SRU (A) Facilty (I-PPA)	2,800	504	2,296	----
Main Supply Building (S-EPA)	44,601	42,041	2,560	----
Jetty NN (S-EPA)	15,327	11,465	3,024	838
Jetty NB (S-EPA-DA)	37,831	34,296	3,535	----
Fire Fighter Training Facility (S-EPA)	15,180	1,096	6,163	7,921
Charlottetown, Prince Edward Island				
Naval Reserve Division (S-EPA)	11,753	9,853	1,900	----
Hamilton, Ontario				
Naval Reserve Division (S-EPA-DA)	5,150	3,200	1,950	----
Esquimalt, British Columbia				
SRU Shop Consolidation (I-PPA)	16,200	2,900	7,530	5,770
Refuelling Facility Upgrade (I-PPA)	3,900	1,200	2,700	----
Fire Fighter Training Facility (S-EPA)	18,456	1,297	7,549	9,610
New Venture NOTC Facilities(S-EPA-DA)	5,997	195	5,549	253
Equipment				
Towed Array Sonar System (S-EPA)	99,087	95,250	3,837	----
Canadian Patrol Frigate (incl. Phase II) (S-EPA) (see page 4-17)	9,005,394	8,611,551	174,775	219,068
Tribal Class Update and Moderization (S-EPA) (see page 4-19)	1,417,851	1,331,526	48,785	37,540
Canadian Military Satellite Communications System (S-EPA)	21,866	20,048	1,818	----
Operation System Mark III (S-EPA)	44,659	6,044	12,760	25,855
Torpedo Defence System (S-EPA)	14,005	13,805	200	----
Replacement Electronic Warfare System for DDH-280 (S-EPA)	53,954	52,438	1,101	415
Naval Combat Op Trainers (S-EPA)	32,968	5,858	11,919	15,191
Maritime Coastal Defence Vessels (S-EPA) (see page 4-25)	707,627	487,153	125,441	95,033
Blind Pilotage Trainer (S-EPA-DA)	3,289	3,002	152	135
Junior Officer Bridge Simulator (S-EPA)	16,444	11,942	4,238	264
Electronic Support Measures for Ships (S-EPA-DA)	9,434	8,732	702	----
Phalanx Close-In Weapon Systems (S-EPA)	31,626	29,520	1,256	850
Pollution Control Systems for Ships (S-EPA)	49,396	5,945	10,903	32,548
Submarine Electronic Support Measures Replacement (S-EPA-DA)	9,054	8,480	574	----
Active Phased Array Sonar (S-EPA)	50,495	32,141	11,658	6,696

Figure 40: Details by Business Line/Activity ($000) (continued)

	Currently Estimated Total Cost	Forecast Expenditures To March 31, 1997	Planned Expenditures 1997-98	Future Years Requirements
Improved Point Defence Missile (S-EPA)	31,930	19,054	6,627	6,249
Message Handling System (S-EPA-DA)	6,902	4,732	2,170	----
Remoting of Naval Radio Stations (S-EPA)	39,366	156	2,320	36,890
Communications - Data Link 16 (S-EPA-DA)	21,840	1,464	6,676	13,700
Communications - Data Link 22 (I-PPA)	5,549	765	1,575	3,209
SHINCOM 2100 Series Dual Switch (S-EPA-DA)	2,580	305	2,275	----
Deep Seabed Intervention System (S-EPA-DA)	2,800	1,500	1,300	----
Land Forces				
Construction				
Sydney, Nova Scotia				
Victoria Park Armoury (S-EPA)	23,377	11,200	10,634	1,543
Gagetown, New Brunswick				
Militia Training and Support Centre (I-PPA)	6,060	6,060	----	----
Camp Petersville Improvement (S-EPA)	12,790	620	8,000	4,170
Base Medical/Dental Clinic (S-EPA-DA)	7,100	4,000	3,100	----
Quebec City, Quebec				
Militia Training Support Centre (I-PPA)	55,024	37,686	15,001	2,337
5 Service Battalion Complex (I-PPA)	2,000	1,500	500	----
Petawawa, Ontario				
Light Infantry Bn Facilities (S-EPA)	15,595	6,710	7,264	1,621
Signals Squadron Facilities (S-EPA)	13,688	11,388	2,300	----
Shilo, Manitoba				
RCHA Complex (S-EPA)	25,025	8,786	13,394	2,845
Wainwright, Alberta				
MSA Building (S-EPA)	14,972	5,488	9,007	477
Militia Training and Support Centre (S-EPA)	11,933	8,500	3,433	----
Edmonton, Alberta				
Fitness Facilities (S-EPA)	4,637	3,150	1,487	----
Equipment				
Howitzer Upgrade and Augmentation (S-EPA)	47,146	25,068	13,161	8,917
Unmaned Airborne Surveillance and Acquisition Systems (I-PPA)	1,070	1,070	----	----
Low Level Air Defence (S-EPA) (see page 4-57)	1,075,798	1,030,105	27,277	18,416
Small Arms Replacement (S-EPA) (see page 4-59)	347,953	346,208	1,745	----
Tactical Command Control Communications System (S-EPA) (see page 4-61)	1,899,489	1,176,005	207,634	515,850
Land Forces Command Systems (S-EPA)	178,386	1,140	53,835	123,411
Light Support Vehicle Wheeled (S-EPA) (see page 4-67)	273,419	256,107	17,312	----
Meteorological Systems (S-EPA)	10,688	6,733	3,110	845
Equipment for Live Firing Ranges (S-EPA)	37,070	8,935	15,011	13,124
Grenade Projector (S-EPA)	14,756	40	6,630	8,086

Figure 40: Details by Business Line/Activity ($000) (continued)

	Currently Estimated Total Cost	Forecast Expenditures To March 31, 1997	Planned Expenditures 1997-98	Future Years Requirements
Composite Fibre Helmets (S-EPA)	16,311	7,247	7,684	1,380
Short Range Anti-Armour Weapons (S-EPA) (see page 4-69)	179,269	133,235	18,684	27,350
Land Software Engineering Facility (S-EPA-DA)	6,584	658	4,213	1,713
Laser Based Direct Fire Weapon Effects Simulator and Instrumentation (I-PPA)	1,136	726	410	----
Land Tactical Electronic Warfare Improvements (S-EPA)	78,459	57,706	16,913	3,840
Night Observation Device - Long Range (S-EPA)	51,963	46,970	743	4,250
Fragmentation Protective Jackets (S-EPA)	15,198	11,408	1,600	2,190
Medical Management Information System (S-EPA-DA)	6,578	5,741	837	----
Under Armour Machine Guns (S-EPA)	34,222	31,222	3,000	----
Surface Munitions Clearance Device (S-EPA-DA)	5,692	4,689	781	222
Central Power Vehicle (I-PPA)	1,437	726	711	----
Weapon Simulation Equipment (S-EPA)	57,254	2,175	18,689	36,390
Lynx Replacement Vehicle (S-EPA) (see page 4-65)	859,281	649,968	150,166	59,147
Armoured Personnel Carriers (S-EPA) (see page 4-71)	811,022	14,760	124,162	672,100
Leopard Thermal Sight (S-EPA) (see page 4-76)	145,439	35,000	34,762	75,677
Long Range Infrared Search and Track System (S-EPA)	16,084	8,757	4,987	2,340
Improved Landmine Detection Capability (S-EPA)	27,011	----	21,238	5,773
Heavy Dump Truck Replacement (S-EPA)	11,241	9,994	1,247	----
APC Life Extension (I-PPA)	5,008	937	4,071	----
Recognition Trainer (S-EPA-DA)	2,281	400	1,000	881
Air Forces				
Construction				
Bagotville, Quebec				
Extension to Multi-Use Maintenance Facility (S-EPA-DA)	3,000	250	2,750	----
Cold lake, Alberta				
AETE Facility (I-PPA)	3,500	950	2,550	----
Electrical and Mechanical Engineering Facility (I-PPA)	1,000	200	800	----
Comox, British Columbia				
Wash Facility (S-EPA-DA)	4,944	1,150	3,626	168
CF School of Search and Rescue (S-EPA-DA)	1,850	850	1,000	----
Equipment				
CF-18 Fighter Aircraft (S-EPA) (see page 4-29)	4,837,164	4,837,164	----	----
Electronic Support and Training Systems (S-EPA) (see page 4-50)	202,679	154,115	29,518	19,046

Figure 40: Details by Business Line/Activity ($000) (continued)

	Currently Estimated Total Cost	Forecast Expenditures To March 31, 1997	Planned Expenditures 1997-98	Future Years Requirements
North American Air Defence Modernization (S-EPA) (see page 4-34)	1,067,598	1,048,282	7,231	12,085
Automated Pilot Selection System (S-EPA)	3,927	3,493	434	----
CF18 - Air to Air Missiles (S-EPA) (see page 4-32)	316,460	303,306	3,320	9,834
Air to Air Weapons (I-PPA)	1,580	1,580	----	----
Search and Rescue Satellite (S-EPA)	69,984	58,716	5,871	5,397
EW Self Protection Suites for Tactical Tanker Aircraft (S-EPA)	46,375	39,789	6,586	----
Electronic Countermeasure Resistant Ultra High Frequency Communications (S-EPA-DA)	4,089	3,293	796	----
CF18 - Radar Warning Receiver Modernization (I-PPA)	6,529	1,758	3,194	1,577
Tatical Transport Tanker (S-EPA) (see page 4-42)	342,888	293,978	36,715	12,195
Military Automated Air Traffic System (S-EPA) (see page 4-53)	179,214	45,830	41,873	91,511
CT114 - Tutor Avionics Update (S-EPA)	6,506	5,995	233	278
CC130 - Avionics Update (S-EPA)	87,308	7,590	33,303	46,415
Advanced Aircraft Navigation Systems (I-PPA)	1,902	1,171	731	----
CT133 - Systems Upgrade (S-EPA)	25,317	20,652	1,321	3,344
Arctic and Maritime Surveillance Aircraft (S-EPA) (see page 4-39)	205,629	205,629	----	----
Utility Tactical Transport Helicopters (S-EPA) (see page 4-45)	1,193,114	749,187	204,271	239,656
ROCC/SOCC Modernization Project (S-EPA)	6,394	4,286	2,108	----
Stategic Airlift Aircraft (S-EPA) (see page 4-48)	422,636	378,870	39,554	4,212
Helicopter Self-Protection Equipment (I-PPA)	1,019	1,019	----	----
CP - 140 Operational Mission Simulator (S-EPA-DA)	6,221	5,198	1,023	----
CF18 - Radar Upgrade (S-EPA)	70,925	61,674	2,812	6,439
CF18 - Integrated Support Station (S-EPA-DA)	7,839	820	3,242	3,777
CF18 - Ground Proximity Warning System (S-EPA)	8,915	4,587	4,249	79
Two CC - 130 Aircraft (S-EPA)	105,897	82,181	18,856	4,860
Advanced Air-to-Surface Missiles (S-EPA) (see page 4-55)	103,484	18,632	61,362	23,490
Environmental Clothing (I-PPA)	62,721	286	4,411	58,024
Canadian Search and Rescue Helicopter (I-PPA) (see page)	2,939	2,318	621	----
Position Determination and Navigation System (S-EPA)	69,674	29,002	22,412	18,260
Support Operations Protective Clothing (S-EPA-DA)	5,783	5,763	20	----
Low Profile Night Vision Goggles (S-EPA-DA)	1,926	199	1,727	----
Joint Operation and Civil Emergency Preparedness				
Equipment				
Nuclear, Biological and Chemical Masks (S-EPA)	31,723	30,773	950	----

Figure 40: Details by Business Line/Activity ($000) (continued)

	Currently Estimated Total Cost	Forecast Expenditures To March 31, 1997	Planned Expenditures 1997-98	Future Years Requirements
Nuclear Emergency Response Team (S-EPA-DA)	6,457	3,561	2,070	826
Personnel and Casualty Decontamination System (S-EPA-DA)	1,066	509	557	----
Joint Command, Control and Intelligence System (I-PPA)	7,272	1,724	5,548	----
Communications and Information Management				
Equipment				
Narrowband Secure Voice Terminals (S-EPA)	10,230	10,102	78	50
High Arctic Data Communications System (S-EPA)	33,709	14,170	15,219	4,320
Defence Message Handling System (I-PPA)	42,160	5,625	23,340	13,195
Interim Electronic Warfare Operational Support Center (S-EPA)	20,223	13,321	3,500	3,402
CFSRS Remote Collection Facilities (S-EPA)	47,545	42,285	5,146	114
External Base Cable Network Modernization (S-EPA)	13,488	5,647	5,634	2,207
Cable Network Modernization Across Canada (S-EPA-DA)	7,367	3,866	1,786	1,715
NCR Cable Network Modernization (S-EPA-DA)	1,581	724	663	194
Defence Telephone System Evolution Project (S-EPA-DA)	4,642	3,120	1,522	----
Defence Information Network (S-EPA-DA)	2,285	1,435	850	----
Support to the Personnel Function				
Construction				
Greenwood, Nova Scotia Combined Food Services and Mess Facility(S-EPA)	11,835	6 ,780	4,756	299
Valcartier, Quebec Cadet and Militia Facilities (S-EPA)	38,482	38,448	34	----
Borden, Ontario CFSEME Material Training Building (I-PPA)	2,200	----	2,200	----
Wainwright, Alberta Trainee Qtrs (S-EPA)	13,777	10,542	2,589	646

Figure 40: Details by Business Line/Activity ($000) (continued)

	Currently Estimated Total Cost	Forecast Expenditures To March 31, 1997	Planned Expenditures 1997-98	Future Years Requirements
Equipment				
Reserve Integrated Information Project (S-EPA)	74,444	54,349	15,303	4,792
Computer Assisted Electronic Training (S-EPA)	17,102	17,102	----	----
Reserve Pay System (S-EPA)	15,766	14,669	1,097	----
Material Infrastructure and Environment Support				
Construction				
Gagetown, New Brunswick				
CFSME Range Support (S-EPA)	19,104	12,984	5,691	429
CFSME Ops/Training (S-EPA)	26,237	15,399	9,489	1,349
CFSME Technical/Support Services Facilities (S-EPA)	17,641	6,433	11,103	105
Quebec City, Quebec				
Operational Enhancements for the Light Infantry Battalion (S-EPA)	14,294	7,681	6,601	12
Montreal, Quebec				
Close St. Hubert (S-EPA)	12,850	4,000	8,468	382
Farnam, Quebec				
New Range Facilities (S-EPA)	9,490	8,016	1,132	342
St. Jean, Quebec				
Move Canadian Forces Officer Candidate School to St. Jean (S-EPA)	4,878	3,000	1,500	378
Supply Depot (S-EPA)	25,159	24,829	330	----
Trenton, Ontario				
Relocate CF Para Cen (S-EPA)	11,568	11,171	380	17
Borden, Ontario				
Cadet Camp Facilities (S-EPA)	15,310	3,000	12,310	----
Wainwright,Alberta				
Food Services Complex (S-EPA)	11,560	3,800	7,425	335
Edmonton, Alberta				
1 CMBG Hq & Sigs Sqn and 1 MP Pl Facility (S-EPA)	14,252	11,196	2,599	457
Relocate 1 PPCLI from Calgary (S-EPA)	18,799	9,170	8,889	740
Operational Enchancements for the Light Infantry Battalion (S-EPA)	11,721	5,467	6,250	4
Relocate 1 Field Ambulance and Vehicle Wash and Fueling Facilities (S-EPA)	2,696	2,641	55	----
Lecture Training Facility(S-EPA)	11,300	11,200	100	----
Range and Training Area Facilities (S-EPA)	6,000	4,371	1,191	438
Single Quarters (S-EPA)	24,580	14,780	9,800	----

Figure 40: Details by Business Line/Activity ($000) (continued)

	Currently Estimated Total Cost	Forecast Expenditures To March 31, 1997	Planned Expenditures 1997-98	Future Years Requirements
Equipment				
CF Supply System Upgrade (S-EPA) (see page 4-73)	288,020	122,781	69,078	96,161
CFAV Quest Mid - Life Refit (S-EPA-DA)	9,778	652	6,250	2,876
DRES Central Computer Replacement (S-EPA-DA)	9,192	2,809	1,640	4,743
Integrate Protective Clothing and Equipment - Phase 1 (I-PPA)	16,283	3,159	3,616	9,508
Department/Forces Executive				
Equipment				
New CF Pay System (S-EPA)	31,144	24,288	4,438	2,418
Ionizing Radiation Safety Equipment (S-EPA-DA)	8,402	926	6,391	1,085

3. MAJOR CROWN PROJECTS

This section contains the following Major Crown Projects

Projects (continued)

Canadian Patrol Frigate (CPF) Project

1. Overview

In 1983, the Government approved the procurement of six HALIFAX Class frigates to replace the aging ST LAURENT Class destroyers. On 29 July 1983, following a competitive contract definition phase, a contract was signed with Saint John Shipbuilding Limited, Saint John, New Brunswick, to supply six ships, shore facilities and related support to the Canadian Forces. An increase in the scope of the CPF Project from six to twelve ships was approved on 17 December 1987 and a contract amendment signed on 29 December 1987.

2. Lead and Participating Departments

• LeadAuthority:	Department of National Defence
• Service Department:	Public Works and Government Services Canada
• Third Parties:	Industry Canada
	Atlantic Canada Opportunities Agency
	Western Economic Diversification Canada
	Federal Office of Regional Development (Québec)

3. Prime and Major Sub-Contractors, Address

Prime Contractor:

Saint John Shipbuilding Limited
300 Union Street, P.O. Box 5111
Saint John, New Brunswick
E2L 4L4

Major Sub-Contractors:

Lockheed Martin Electronic Systems Canada
6111 Royal Mount Avenue
Montréal, Québec
H4P 1K6

Responsible for combat system integration

Marine Industries Limited
P.O. Box 130
Levis, Québec
G6V 6N7

Responsible for the construction of three ships.
This work is complete and the sub-contract closed.

4. Major Milestones

• Contract Award	Jul 1983
• Contract Amendment - Increase in the Work Scope	Dec 1987

- Delivery of First Ship — Jun 1991
- Delivery of Last Ship — Jul 1996
- Close-out of Prime Contract — Dec 1999
- Project Completion — 2000

5. Achievements and Explanations of Variances

The Project is in its final stages having delivered all 12 ships and virtually all of the support elements. The contract schedule established in 1987 required the last ship to be delivered by the end of September 1996. The actual delivery date was 31 July 1996, two months ahead of schedule.

The remaining work of the Project includes resolution of warranty and insurance claims, completion of the remaining logistic support elements (spares, trainers, etc.) and finalization of the technical issues.

6. Industrial benefits

The CPF Project industrial benefit commitments have been exceeded. The actual direct and offset industrial benefits achieved total in excess of $7.5 billion (BY).

7. Summary of Costs

The non-recurring costs associated with the approved project are:

Figure 41: Cost and Expenditure Detail

(thousands of dollars)	Currently Estimated Total Cost	Forecast Expenditures to March 31, 1997	**Estimates 1997-98**	Future Year Requirements
CPF	9,005,394	8,611,551	**174,775**	219,068

Tribal Class Update and Modernization Project (TRUMP)

1. Overview

In July 1983, the Government provided approval-in-principle for the update and modernization of the four ships of the DDH 280 (Tribal) class. Treasury Board provided Effective Project Approval in May 1986. This project covers the mid-life update of the DDH 280. Included are improvements to combat and command and control systems, increased supportability of existing equipment and improved interoperability with NATO countries. This project will extend the operational life of these ships into the 21st century.

On 6 June 1986, a contract was signed with Litton Systems Canada Ltd. (LSL) of Etobicoke, Ontario, the TRUMP Prime Contractor. Versatile Davie Ltd., now Marine Industries Ltd. of Sorel, Quebec, was the designated shipyard for the first two ships. Shipyard work on the last two ships was offered on a competitive basis and was subsequently also awarded by Litton to Marine Industries Ltd. By 1989, delays in the project had led to disputes between the prime contractor, its major subcontractors, and the Crown. Settlement discussions between the Crown and LSL resulted in the parties agreeing to restructure the contract.

Under the restructured contract signed 30 September 1991, LSL relinquished the prime contractor responsibility, limiting its contractual activity to integrated logistics and combat systems integration. The LSL subcontracts with Marine Industries Ltd., Pratt and Whitney Canada Ltd. of Longueuil, Quebec, and Marine Systems Engineering Inc., were assigned to the Crown who in turn performed the tasks associated with overall project management.

2. Lead and Participating Departments

• Lead Authority:	Department of National Defence
• Service Department:	Public Works and Government Services Canada
• Third Parties:	Industry Canada
	Atlantic Canada Opportunities Agency
	Western Economic Diversification Canada
	Federal Office of Regional Development (Quebec)

3. Prime and Major Sub-Contractors' Addresses

The MIL Group Inc.
c/o MIL Davie Inc.
22 George D. Davie Street
Levis, Quebec G6V 6N7

The MIL Group Inc
c/o MIL Systems Engineering Division
200-1150 Morrison Drive
Ottawa, Ontario K2H 8S9

Litton Systems Canada Ltd.
25 Cityview Drive
Etobicoke, Ontario M5W 5A7

Pratt & Whitney Canada Ltd.
Industrial and Marine Division
1000, rue Marie Victorin
Longueuil, Quebec J4G 1A1

Department of the Navy (Foreign Military Sales)
Navy International Programs Office
Washington, DC 20350-5000

4. Major Milestones

• Award of Contract	May 1986
• Start of Modernization of First Ship (Algonquin)	Nov 1987
• Start of Modernization of Second Ship (Iroquois)	Nov 1988
• Contract Restructured to Change Scope	Sep 1991
• First Ship Provisionally Accepted (Algonquin)	Sep 1991
• Start of Modernization of Third Ship (Athabaskan)	Oct 1991
• Start of Modernization of Fourth Ship (Huron)	Jun 1992
• Second Ship Provisionally Accepted (Iroquois)	Jun 1992
• First Ship Delivery (Algonquin)	Jan 1993
• Second Ship Delivery (Iroquois)	May 1993
• Third Ship Delivery and Provisionally Accepted (Athabaskan)	Aug 1994
• Fourth Ship Provisionally Accepted (Huron)	Jan 1995
• Fourth Ship Delivery (Huron)	Mar 1995
• Combat Systems Acceptance	Sep 1996
• Project Completion	Mar 1998

5. Achievements and Explanations of Variances

All major deliverables (i.e. facilities, ships and combat system software) have been delivered to the Navy. The project focus has now changed to : the finalization of work remaining with Litton Systems Canada Limited, the rectification of operational deficiencies as approved by the DND project Senior Review Board; and the audit and close-out of the sub-contracts, including contracts with the Department of Defence of the United States. In order to complete this work, Treasury Board approved an extension of the project to 31 March 1998.

6. Industrial benefits

The contractors have achieved all their industrial benefit commitments. These were distributed as follows:

Figure 42: TRUMP Industrial Benefits

(millions of dollars in BY$) Region	Direct Canadian Content	Offsets	Total
Atlantic	5.8	7.0	12.8
Quebec	266.0	136.8	402.8
Ontario	442.6	152.9	595.5
Western	9.4	33.7	43.1
TOTAL	**723.8**	**330.4**	**1054.2**
Waivers	-----	-----	40.1
Total Industrial Benefits	723.8	330.4	1094.3

Small Business Development: Within the total industrial benefit commitment, the contractors have provided the required $20.4 million worth of benefits to small business throughout the eight year implementation period from 1986 to 1994.

7. Summary of Costs

The non-recurring costs associated with approved projects are:

Figure 43: Cost and Expenditure Detail

(thousands of dollars)	Currently Estimated Total Cost	Forecast Expenditures to March 31, 1997	**Estimates 1997-98**	Future Year Requirements
TRUMP:				
Definition and Implementation	1,417,851	1,331,526	**48,785**	37,540
Personnel, Operations and Maintenance	307,800	303,647	**4,153**	-----
ASSOCIATED PROJECTS:				
Canadian Electronic Warfare Suite	52,405	51,083	**1,322**	-----
Cruise Engine (O&M)	20,918	20,918	**-----**	-----
	1,798,974	1,707,174	**54,260**	37,540

Once TRUMP is completed, the anticipated Incremental In-Service annual recurring Personnel, Operations and Maintenance costs are estimated to be $6.8 million.

Canadian Towed Array Sonar System (CANTASS) Project

1. Overview

The objective of the CANTASS project is to provide an operational and fully supported tactical passive towed array sonar system for the two DDH 265 class Destroyers and the twelve Canadian Patrol Frigates (CPF). Both the CANTASS Project and the CPF project share financial responsibility for the Canadian Towed Array Sonar System. Total funding for CANTASS has been approved at $305,000,000(BY) with $181,231,000(BY) provided from the CPF Project and the remaining $123,769,000(BY) from the CANTASS project (implemented in four parts).

Part I authorized the expenditure of $11,100,000 for the procurement of sonar equipment to support design studies and in-house engineering studies. This is complete.

Part II was authorized to expend an additional $15,454,000 for the installation, integration, testing and evaluation of the CANTASS Advanced Development Model (CANTASS ADM). This is complete.

Parts III was authorized in September 1988 with an expenditure limit of $38,854,000 to upgrade the CANTASS Advanced Development Model installation to production status. This is complete.

Part IV was also authorized in September 1988 with an expenditure limit of $59,361,000 to provide the production model processing and display systems for the Canadian Patrol Frigates. Contracts were awarded to:

a. Computing Devices Canada Ltd. (CDC Ltd.), Indal Technologies Inc. and Martin Marietta for the development and acquisition of various sub-systems of one Pre-Production Prototype and for the subsequent procurement of fourteen production models of the CANTASS Shipboard systems.

b. Litton Systems Canada Ltd. for the development and delivery of two shore-based Post Analysis Systems (PAS) which will provide advanced acoustic analysis capabilities.

c. Array Systems Computing Ltd. was awarded the contract to produce a CANTASS Mission Simulator (CMS) system for advanced operator training.

d. IOTEK Inc. for production of sonar test sets (STS) for the CANTASS electronics.

As the project nears its completion the most recent estimates for the total costs stand at $99,087,000.

2. Lead and Participation Departments

- Lead Authority: Department of National Defence
- Service Department: Public Works and Government Services
- Third Party: Industry Canada

3. Prime and Major Sub-Contractors, Address

Equipment	Prime	Sub-Contractor
CANTASS	Computing Devices Canada Ltd. Ottawa, Ont.	Indal Technologies Inc. Mississauga, Ont. Martin Marietta USA
PAS	Litton Systems Canada Ltd. Etobicoke, Ont.	Array Systems Computing Ltd. North York, Ont.
CMS	Array Systems Computing Ltd. N. York, Ont.	
STS	IOTEK Inc. Dartmouth, NS	

4. Major Milestones

• Treasury Board Effective Project Approval	Sep 1983
• Development Contract with CDC Ltd.	Nov 1984
Shipboard Systems	
• Delivery of First CANTASS System	Nov 1993
• Delivery of Last System	Dec 1996
Shore-based Systems	
• Delivery of Post Analysis Systems	Apr 1996
• Delivery of CANTASS Mission Simulator	Nov 1997
• Delivery of Sonar Test Sets	Dec 1996

5. Achievements and Explanations of Variances

CANTASS shipboard systems.
All but one system have been delivered and installed. The remaining system is scheduled for delivery in before the end of 1996-97. All systems will be retro-fitted with a revised version of the software currently under development by CDC. The CANTASS project is currently negotiating with CDC for the production of Shipboard Electronic Sub-system Interface Units as replacements for the Array Receivers originally produced by Martin Marietta which have become uneconomical to support.

Post Analysis Systems.
Both systems were delivered and installed in April 1996.

CANTASS Mission Simulator.
Delivery of this system has been delayed by eight months to Nov 1997 due to technical difficulties being experienced with the development and production by the contractor.

Sonar Test Sets.

The first unit has been delivered with delivery of the remainder scheduled by the end of 1996-97.

6. Industrial Benefits

An objective of this project was to provide Canadian companies with experience in project management, system engineering, design development, integration and life cycle support. This will enhance these companies' capabilities and credibility and lead to greater exposure and increased opportunities in the international market. The Industrial and Regional Benefit (IRB) commitments to Canadian Industry currently total $80 million and include the following obligations and reported achievements:

	Committed ($million)	Achieved ($million)
Computing Devices Canada Ltd. Shipboard Electronic Sub-System (SESS)	58.0	70.8
Indal Technologies Handling and Stowage Group (H&SG)	11.5	12.0
Litton Systems Post Analysis System (PAS)	12.0	15.1
Martin Marietta Receivers	0.4	0.4
Total	81.9	98.3

No further IRB's are being negotiated on the project.

7. Summary of Costs

The non-recurring costs associated with the approved project are:

Figure 44: Cost and Expenditure Detail

(thousands of dollars)	Currently Estimated Total Cost	Forecast Expenditures to March 31, 1997	**Estimates 1997-98**	Future Year Requirements
CANTASS Project	99,087	95,250	3,837	-----

The In-Service annual Personnel, Operations and Maintenance costs are estimated at 1.7 million.

Maritime Coastal Defence Vessel (MCDV) Project

1. Overview

The Maritime Coastal Defence Vessel Project addresses the significant deficiency in Canada's capability to defend Canadian ports and coastal waters, particularly the requirement to ensure that major ports and coastal routes are clear of mines in times of conflict. The project involves the acquisition of 12 Maritime Coastal Defence Vessels (MCDVs) to enter service between 1995 and 1999. The MCDVs will be crewed primarily by the Naval Reserve and, accordingly, will serve as the cornerstone of Naval Reserve revitalization.

In August 1988, the Government provided approval-in-principle for the acquisition of the 12 MCDVs. Subsequently, Treasury Board authorized resources for definition activities and the procurement of essential early training equipments during the period 1988 to 1992.

In July 1989, following competitive bidding, two Canadian prime contractors were awarded contracts to conduct project definition studies and submit implementation proposals and offers, including MCDV designs. The contracts, each valued at $4.5 million (Budget Year dollars), were awarded to Canadian Shipbuilding and Engineering Ltd. (CSE), St. Catherines, Ontario, and Fenco Engineers Inc.. An interdepartmental evaluation of the two studies and proposals was conducted and recommendations were submitted to Ministers regarding the selection of a prime contractor for the implementation phase of the project. Cabinet approved the project and selected Fenco Engineers Inc. (now called Fenco MacLaren Inc.), Willowdale, Ontario, as the Prime Contractor in October 1991. Following contract negotiations, Treasury Board gave effective approval as well as contract approval for the project in April 1992.

2. Lead and Participating Departments

• Lead Authority:	Department of National Defence
• Service Department:	Public Works and Government Services Canada
• Third Parties:	Industry Canada
	Atlantic Canada Opportunities Agency
	Western Economic Diversification Canada

3. Prime and Major Sub-Contractors, Address

Prime Contractor

Fenco MacLaren Inc.
110-6 Antares Drive
Nepean, Ontario
K2E 8A9

As Prime Contractor, Fenco MacLaren Inc. has total system responsibility, and has subcontracted for design, construction, systems/payloads, Integrated Logistics Support (ILS), and training to the following Canadian companies:

Major Sub-Contractors

Halifax Shipyard Ltd
3099 Barrington St
Halifax Shipyards
Halifax, N.S.
B3K 5M7 — Ship Design & Construction

MacDonald Dettwiler & Associates Ltd
13800 Commerce Parkway
Richmond, B.C.
V6V 2J3 — Ship Subsystems & Payloads & ILS

Thomson-CSF Systems Canada
49 Auriga Drive
Nepean, Ontario
K2E 8A1 — Ship Subsystems & Payloads & ILS

Tecsult Eduplus Inc (formerly Eduplus Management Group Inc)
6080 Young St., Suite 800
Halifax, N.S.
B3K 5L2 — Training

4. Major Milestones

• Treasury Board Preliminary Approval	Aug 1988
• Definition Contracts Awarded	Jul 1989
• Winning Proposal Selected by Cabinet	Oct 1991
• Treasury Board Effective Approval	Apr 1992
• Implementation Contract Award	May 1992
• First Ship Delivered	Dec 1995
• Project Completed	Mar 2000

5. Achievements and Explanations of Variances

As of 25 October 1996 the first four MCDV's have been accepted. The project is on schedule and within budget.

6. Industrial benefits

A secondary objective of the MCDV Project is to optimize the direct benefits to Canadian industry and the regions of Canada. Among the specific objectives are the following:

having a Canadian prime contractor undertake the Project;

having the MCDV designed in Canada;

building the ships in a Canadian shipyard;

using Canadian industry to develop and integrate systems which maximize Canadian content and have the potential for export sales;

where competitive, giving preference to Canadian firms in the sourcing of materiel, components, equipment, systems and their integration in the Project; and

utilizing the Canadian industrial base for MCDV life-cycle logistic and technical support.

Where Canadian capabilities cannot be directly applied to the project, long-term high-quality indirect benefits, which benefit the Canadian economy as a whole, are required. These benefits are directed towards the long-term enhancement of Canadian high technology industrial capability and are governed by the same considerations that apply to direct benefits.

Industrial and regional benefit plans were part of the overall evaluation for selection of the Prime Contractor. The benefits are enforceable contractual commitments and include:

85% direct Canadian content as a minimum;

construction of 12 ships by Halifax Shipyard Ltd (formerly Halifax-Dartmouth Industries Ltd.);

a minimum of $40 million (1990 dollars) worth of work to small business; and

a minimum regional distribution of $370 million (1990 dollars); $200 million in the Atlantic Region, $40 million in Quebec, $80 million in Ontario, and $50 million in the Western Region.

The Prime Contractor will also provide 3,000 person-years of employment of which approximately 1,500 person-years will be directly linked to vessel construction.

Achievements:

A study is being done to verify the information provided by the contractor on Industrial Regional Benefits. Preliminary indications are that the contractor will achieve the minimum 85% threshold as stipulated in the contract.

7. Summary of Costs

The non-recurring costs associated with the approved project are:

Figure 45: Cost and Expenditure Detail

(thousands of dollars)	Currently Estimated Total Cost	Forecast Expenditures to March 31, 1997	**Estimates 1997-98**	Future Year Requirements
MCDV Project	707,627	487,153	**125,441**	95,033

Once the 12 ships are fully operational, the anticipated In-Service annual recurring Personnel, Operations and Maintenance costs, including fuel are estimated to be $41.1 million.

CF-18 Fighter Aircraft Project

1. Overview

In 1980, the Government approved the procurement of the CF-18 aircraft to replace the CF-101 Voodoo, the CF-104 Starfighter and those CF-5 Freedom Fighters which were operationally committed. The CF-18, with suitable updates as required, is expected to meet Canada's air defence and NATO requirements into the 21st century.

On 16 April 1980, a contract was signed with McDonnell Douglas Corporation, U.S.A., to supply 137 (later revised to 138) CF-18 aircraft and related support to the Canadian Forces. The contract specified that the first aircraft was to be delivered in October 1982, and thereafter at a rate of approximately two per month until the delivery of the last aircraft in September 1988. The contract also specifies that $2.9 billion in industrial benefits was to be achieved by the end of 1995. The last of the 138 aircraft was officially accepted on 28 September 1988.

Since 1980, additional projects have been approved as a result of the Government decision to acquire the CF-18 aircraft. These include procurement of air-to-air missiles, pylons, fuel tanks, and chaff and flare equipment.

2. Lead and Participating Departments

Lead Authority:	Department of National Defence
Service Department:	Public Works and Government Services Canada
Third Parties:	Industry Canada
	Atlantic Canada Opportunities Agency
	Western Economic Diversification Canada
	Federal Office of Regional Development (Quebec)

3. Prime and Major Sub-Contractors, Address

McDonnell Douglas Aerospace
St Louis, Mo

4. Major Milestones

Contract Award	Apr 1980
First CF-18 Delivery	Oct 1982
Last CF-18 Delivery	Sep 1988
Logistics Support Finalized	Dec 1996

5. Achievements and Explanations of Variances

All deliveries have been completed with the exception of some minor items which are scheduled to be completed by the end of FY 96-97.

6. Industrial benefits

The CF-18 industrial benefits commitment was originally negotiated in 1980 to include $2,453 million (Budget Year) in indirect benefits, classed as firm commitments, coupled with an additional $457 million (Budget Year) of direct industrial participation commitments, classed as conditional upon being competitively obtained, for production of components and structure for Canada's CF-18s as well as other F/A-18 aircraft being produced in the United States. In all cases, benefits to Canada were to be awarded on competitive grounds. The total commitment of $2,910 million was also to include two specific investments, both within the Province of Quebec, for the establishment of an engine blade and vane production facility in the amount of $60 million and an investment in UDT Industries Limited of $3 million for the establishment of a numerically controlled machining production centre. The contract was further restricted by the application of an Industrial Benefits Distribution Plan, with specifics contained in article 34 of the contract. Specifically, 60% or greater of all benefits provided were to accrue to the combined electronics and aerospace sectors; this was to include at least 10% of the total commitment in the area of technology transfer, advanced program activities and licensing agreements (combined).

As of June 30, 1993, the contractor had achieved industrial benefits of $4,223 million against the total commitment of $2,910 million. Industrial benefits achieved through the transfer of technology total $294 million to date against a target of $291 million by 1995.

7. Summary of Costs

The non-recurring costs associated with the approved project are:

Figure 46: Cost and Expenditure Detail

(thousands of dollars)	Currently Estimated Total Cost	Forecast Expenditures to March 31, 1997	**Estimates 1997-98**	Future Year Requirements
CF-18 Aircraft	4,837,164	4,837,164	**----**	----

8. Associated Projects:

In addition, to ensure the continuing capability of the aircraft in its steady state, air-to-air missiles, system engineering support, pylons, external fuel tanks, and chaff and flare equipment are required to maintain operating capability over its operational life. The currently estimated non-recurring total costs of these associated projects are:

	$(000)
CF-18 Air-to-Air Missiles (covered separately)	316,460
Systems Engineering Support (Support facilities -Tools, Test Equipment, Computers, Storage Hangers etc.)	117,000
CF-18 External Fuel	59,858
CF-18 Pylon Equipment (project completed)	39,741
Chaff and Flare Expendables (project completed)	28,659

Once the CF-18 Fighter Aircraft project and its associated projects are completed, the anticipated In-Service annual recurring Personnel, Operations and Maintenance (Vote1) costs are estimated to be $76 million.

CF-18 Air-to-Air Missiles Project

1. Overview

The CF-18 Air-to-Air Missiles project involves the procurement of short and medium range air-to-air missiles with associated logistics support. Through the acquisition of these operational missile stocks, the Canadian Forces will be able to maintain the capability to deal with an enemy air threat and fulfill their role within NATO and NORAD as assigned by the Government of Canada.

2. Lead and Participating Departments

Lead Authority:	Department of National Defence
Service Department:	Public Works and Government Services Canada
Third Parties:	Industry Canada
	Atlantic Canada Opportunities Agency
	Federal Office of Regional Development (Quebec)

3. Prime and Major Sub-Contractors, Address

US Department of the Navy
under the Foreign Military Sales Program

4. Major Milestones

Letters of Acceptance	Jun 1984
First Missile Delivery	Sep 1986
Last Missile Delivery	Sep 1992
Project Closure	Mar 1998

5. Achievements and Explanations of Variances

All targeted milestones were achieved within the estimated cost. Delivery of the balance of the missiles is to be achieved prior to the end of 1997-98. Project closure was delayed by one year due to delay in the upgrade of the M7 missiles.

6. Industrial benefits

Industrial benefits of $46.4 million (1984-85 dollars) were achieved for this project.

7. Summary of Costs

The non-recurring costs associated with the approved project are:

Figure 47: Cost and Expenditure Detail

(thousands of dollars)	Currently Estimated Total Cost	Forecast Expenditures to March 31, 1997	**Estimates 1997-98**	Future Year Requirements
CF-18 Air-to-Air Missiles	316,460	303,306	3,320	9,834

North Warning System, Forward Operating Locations, Canadian Coastal Radar and Interoperability and Connectivity Components of the North American Air Defence Modernization (NAADM) Project

1. Overview

In March 1985, a Memorandum of Understanding was signed for joint US/Canada participation in North American Air Defence Modernization (NAADM). The project comprises a number of elements, of which four have commenced implementation. The North Warning System (NWS) element of the project modernized and extended the obsolete Distant Early Warning (DEW) Line, which has been in service since the mid 1950s. The Forward Operating Locations (FOLs) element of the project provided austere upgrades to four existing northern airfields to permit periodic deployments of NORAD-assigned US and Canadian fighter aircraft to conduct air defence operations in the North. A fifth site, at Kuujjuaq, Quebec, had been planned, but was subsequently cancelled. Canadian Coastal Radars (CCR) involved the replacement of obsolescent and maintenance-intensive radars at four existing East and West coast radar sites with modern, minimally attended surveillance radars.

The first element of the NAADM project (NWS) was considered by Treasury Board in December 1985, and a portion of the NWS was approved at a cost of $555 million. In September 1988, Effective Project Approval was received for the remainder of NWS including construction of the Short Range Radar (SRR) facilities. Expenditures of $830 million were authorized for the NWS element of NAADM.

The NWS includes 15 Long Range Radar (LRR) sites, of which 11 are located in Canada; and 39 unattended SRR sites, of which 36 are located in Canada. The system provides improved warning of bomber and cruise missile attack and is easier and less expensive to maintain than the obsolescent radars and communications of the DEW Line. Phase 1 of the NWS (LRR) became operational in 1988. The main Canadian Phase 2 responsibilities (SRR site construction and communications installations) were completed in 1992. The American Phase 2 responsibilities (provision and installation of Unattended Radars at 39 SRR sites (36 in Canada) were completed over the 1993-94 time-frame, with the final radar installation handed over for operational use in late 1994.

Canada assumed responsibility for overall program management and systems integration of the NWS; the design, acquisition, installation and integration of the communications network in Canada; and the design and construction of all new facilities required in Canada. The United States was responsible for the design, acquisition and installation of radar equipment for the LRR and SRR sites. Capital and Operations and Maintenance costs are shared 60/40 between the United States and Canada respectively, based primarily on functional allocations to each country.

The Supplementary Arrangement to the NAADM Memorandum of Understanding for FOLs required Canada to design and construct facilities at five northern sites (one site subsequently cancelled). The task involved the upgrading of existing airfields in the North so that they may support periodic/infrequent aircraft deployments. Costs of this component are to be shared 50/50 between the US and Canada.

In February 1990, effective approval for $261.1 million was received for the FOLs project. Work on the design of the FOLs, acquisition of the Transportable Arrestor Gear, and rough fill

earthwork for the extension of the runway at Rankin Inlet FOL was completed under a Preliminary Project Approval of $27.6 million. Site general contracts were subsequently awarded at four of the five sites and construction activities at these sites were completed in 1993 on schedule. The Yellowknife and Iqaluit FOLs were handed over to Air Command in 1993, and the other two FOLs (Inuvik and Rankin Inlet) were handed over in May and July 1994 respectively. As stated above, construction of the Kuujjuaq FOL facility had been cancelled as a budgetary restraint measure.

The CCR element was approved in June 1990 at a cost of $123.9 million, and implementation work, including the acquisition of four radars for installation at existing coastal sites, is complete. The conversion of the final upgraded CCR site (Gander) was completed in February 1994, and all four were handed over to Air Command for operational use in April 1994.

Interoperability and Connectivity (I&C) is the final NAADM element. On 20 September 1990, the I&C element was approved in principle by Treasury Board with a definition phase expenditure authority of $3.8 million. An I&C Supplementary Arrangement (SA) which prescribes the cost-sharing by function to be applied between the U.S. and Canada has been negotiated and signed by both countries. The approval documentation required to implement I&C activities received approval on 25 July 1995, at a cost of $25.5 million. The Request For Proposal for the Beyond Line of Site (BLOS) segment of I&C was intended for October 1996, with contract award targeted for February 1997. The implementation schedule calls for system handover by the end of 1998. The Line of Sight (LOS) communications system is currently being installed, with completion scheduled for the summer of 1997. The LOS is standard DND equipment obtained via Standing Offer Agreements or existing inventories, and is being installed by DND personnel or existing service arrangements.

2. Lead and Participating Departments

Lead Authority:	Department of National Defence
Service Departments:	Public Works and Government Services Canada
	Defence Construction Canada
Third Parties:	Industry Canada
	Department of Foreign Affairs and International Trade
	Department of Indian Affairs and Northern Development
	Transport Canada
	Employment and Immigration Canada
	Environment Canada
	Atlantic Canada Opportunities Agency
	Western Economic Diversification Canada
	Federal Office of Regional Development (Quebec)

3. Prime and Major Sub-Contractors, Address

With the exception of miscellaneous activities and final deliveries of spares, all Prime and Major Sub-Contracts are considered complete for the NWS, FOL and CCR projects. The Prime contract

for the I&C project will be awarded in the first quarter of 1997. A list of previous prime contractors as follows:

Canadian Coastal Radars

Martin Marietta Canada Ltd
90 Clayson Road
Weston, Ontario M9M 2G7

North Warning System

CANAC/MICROTEL
2441 United Boulevard
Coquitlam, BC V3K 6A8

BOT Engineering & Construction Ltd
1224 Speers Road
Oakville, Ont L6L 2X4

PCL-Foundation A Joint Venture
5400,99 Street
Edmonton, Alberta T6E 3P4

4. Major Milestones

North Warning System	
Signature of Memorandum of Understanding Canada/United States	Mar 1985
Phase 1 - Long Range Radar Sites - Operational	Nov 1988
Phase 2 - Construction and Communications Complete	Dec 1992
Final US Supplied Radar Installation Complete, and NWS Reaches Final Operational Capability	Nov 1994
Forward Operating Locations	
Signature of Memorandum of Understanding	Mar 1985
Site General Contracts Awarded	Aug 1990
Yellowknife FOL - Final Operational Capability	Dec 1992
Rankin Inlet, Inuvik and Iqaluit Construction Complete and FOLs at Final Operational Capability	Jul 1994
Canadian Coastal Radars	
Contract Awarded	Jun 1991
Fourth Canadian Castal Radar Installed	Feb 1994
Handover to Air Command	Apr 1994
Interoperability and Connectivity	
Approval of Supplementary Arrangement (SA)	Feb 1993

Departmental Approval	Feb 1995
Treasury Board Approval	Jul 1995
Final Operational Capability	Nov 1998

5. Achievements and Explanations of Variances

The release of the Request for Proposal for the BLOS portion of I&C has been delayed to October, 1997. Because the system is being deployed in the North, the windows of opportunity for site preparation and deployment are restricted by the short seasons with suitable weather conditions. It is anticipated that this may result in a delay of Final Operational Capability for this part of the I&C project to the last quarter of 1998.

To date the NWS, CCR and FOL total cost will be considerably lower than the approved expenditure authority. For CCR, the prime equipment came in lower than original estimates and a number of project initiatives reduced the cost of related items. As a result of the changing global political climate, a number of Cost Reduction Initiatives (CRI) were agreed to bi-nationally for NWS and FOL that deferred or eliminated cost items.

6. Industrial benefits

The NWS contract for the satellite-based communication system awarded to CANAC/Microtel Ltd of Coquitlam, British Columbia, was worth a total of $303 million. The contractor committed to achieve a minimum Canadian Content of 80% of the project cost. With respect to Industrial and Regional Benefit objectives, NWS contracts have created a minimum of 7,288 person-years of Canadian employment to date. For the contract period ending 31 December 1992, the Canadian Content Value (CCV) commitment was $197 million. The actual CCV claimed by the contractor was $226 million which exceeds its overall CCV commitments. Levels of Canadian content in remaining contracts for construction and project management ran in excess of 90%. The Operations and Maintenance (O&M) contract for the NWS was awarded in December 1994 to a joint venture composed of Frontec Logistics Corporation and Pan Arctic Logistics Corporation. The contract has a value of $254 million, covers a five-year period, and commits the contractor to a CCV of 94.8%. Specific Aboriginal/Northern Benefits are included within the contract, such as: $9 million of Northern Benefits through small business transactions; $12.5 million for employment of Northern residents; $0.5 million for training of Northern residents; $15 million for Northern expenditures excluding Labour and Training; and $10 million directed to Aboriginal training. The Contractor is committed within the contract to maximize the participation of aboriginal people under the Northern benefit requirements and is obliged to follow the Cooperation Agreement with the Inuvialuit Regional Cooperation under the Inuvialuit Final Agreement and the Nunavut Final Agreement and Land Claim Settlement Agreements.

Contractual commitments for Northern Benefits were met by all NAADM and NWS contractors. Lack of adequate training and skills development limited employment opportunities for some Northerners, particularly in high skill areas such as electronics and communications. With respect to the North Warning System Operations and Maintenance contract, the total Northern expenditures to December 31, 1993 amount to $65 million. Approximately 631 person-years of work

have been created for Northerners and 357 Northern residents have received specialized training. During 1993, between 139 and 144 Northern residents were employed at any given time on NWS sites. With respect to the NAADM construction contracts (NWS and FOLs) and including all communication contracts, the total Northern expenditures for goods, services and wages amount to $153 million. Approximately 1,600 northern residents have been employed representing 438 person-years, and 180 Northerners have received specialized training.

Canadian content exceeded 90% for FOL activities and involved a wide regional distribution. Northern Benefits contractual commitments were achieved.

Regarding CCRs, the radar equipment was manufactured by Martin Marietta Ltd (formerly General Electric (USA)) with a major subcontract to Cossor (UK). This equipment was installed in Canada, with Canadian labour, employing Canadian subcontractors whenever appropriate. The basic contract amounted to $54 million and commitments in direct Canadian Industrial and Regional Benefits amounted to approximately $5.2 million or 9.6% of the total contract value.

7. Summary of Costs

The non-recurring costs associated with the currently approved portions of the project are:

Figure 48: Cost and Expenditure Detail

(thousands of dollars)	Currently Estimated Total Cost	Forecast Expenditures to March 31, 1997	**Estimates 1997-98**	Future Year Requirements
NAADM				
NWS	738,609	736,844	**1,765**	-----
FOL	220,509	219,387	**1,122**	-----
CCR	84,058	82,095	**1,963**	-----
I&C	24,422	2,725	**2,381**	19,316
Total	1,067,598	1,041,051	**7,231**	19,316

The anticipated In-Service annual Personnel, Operations and Maintenance (Vote 1 PO&M) costs are shared between the United States and Canada on a 60/40 basis respectively. Canada's share for 1996-97 stands at $72 million; however, by 1998-99, this amount will have declined to $62 million as a result of cost reduction measures. To date, cost reduction initiatives have successfully achieved targets ahead of schedule. For FOLs, Canada is responsible for Operations and Maintenance costs except for incremental activities and costs associated with USAF deployments. The annual recurring cost to Canada for FOLs is estimated to be $8 million. CCR project PO&M costs are estimated to be $5 million which represent a significant saving from the old radar systems being replaced.

Arctic and Maritime Surveillance Aircraft (AMSA) Project

1. Overview

In June, 1989, the Government approved the purchase of three Arctic and Maritime Surveillance Aircraft for the Canadian Forces. These aircraft, called "Arcturus", will be used for maritime, Arctic, and environmental surveillance, as well as for fisheries patrols and training. They will also serve as back-up for search and rescue operations. Through the acquisition of these aircraft, the Canadian Forces will be able to more effectively patrol Canada's coastline and enforce Canada's sovereignty.

2. Lead and Participating Departments

Lead Authority:	Department of National Defence
Service Department:	Public Works and Government Services Canada
Third Parties:	Industry Canada
	Atlantic Canada Opportunities Agency
	Western Economic Diversification Canada
	Federal Office of Regional Development (Quebec)

3. Prime and Major Sub-Contractors, Address

Lockheed Martin Aeronautical Systems
86 South Cobb Drive Marietta, Georgia

IMP Group Ltd., Aerospace Division
2651 Dutch Village Road Halifax, Nova Scotia

4. Major Milestones

Contract Award	Jun 1989
DND Accepts First Aircraft	Dec 1992
Project Completion	Fiscal Year 1997-98

5. Achievements and Explanations of Variances

The radar part task trainer and all outstanding engineering change proposals will be completed by the end of Fiscal Year 1996-97. Project closure has slipped to Fiscal Year 1997-98 due the procurement leadtime associated with some of the remaining minor spares requirements. The project value has been reduced by $904,000 as these funds were not required to complete the remaining activities.

On 30 June 1989, a contract was signed with Lockheed Aeronautical Systems Company of Marietta, Georgia, to supply the three Arcturus. The first aircraft was delivered in December 1992 and the last in April 1993.

All remaining major activities will be completed by the end of Fiscal 1996-97. The project will remain open in Fiscal Year 1997-98 to allow for the final delivery and payment of some minor

spare parts requirements and formal closure of the project. Although the project will closeout in Fiscal Year 1997-98 Lockheed shall still be obligated to achieve their industrial benefits commitment stipulated in the main contract.

6. Industrial benefits

Industrial and Regional Benefits:

Lockheed Aeronautical Systems Company has committed to achieve a total of $106.5 million (U.S.) of Canadian value added. Included in the above benefits are the following:

Direct project participation in the supply of CP-140A structural components and systems by existing Canadian Suppliers (Canadair, Montreal, Quebec; IMP, Halifax and Amherst, Nova Scotia; Bristol Aerospace, Winnipeg, Manitoba; Fleet Aerospace, Fort Erie, Ontario; and Litton Systems, Rexdale, Ontario). Approximate value is $4.5 million (U.S.);

Further direct project participation by IMP, Halifax to perform the installation of the surveillance avionics and completion of the aircraft. Approximate value is $12 million (U.S.);

Indirect benefits derived from new or emerging Lockheed projects to be provided to the Western Region. Value is $20 million (U.S.) minimum;

Further indirect benefits in support of other national and regional industrial development programs such as Access Small Business, the Western Procurement Initiative, or the Atlantic Canada Supplier Development Program. Value is $20 million (U.S.); and

Participation in Lockheed's P-7 Anti-Submarine Warfare patrol aircraft at a value of $50 million (U.S.) was cancelled. The commitment has been re-negotiated and now ensures Canadian industrial participation in the F-22 aircraft which is the United States newest fighter program. Formal contract amendment to reflect this is now in place.

Achievements:

Lockheed has claimed a total of $50.266 million (U.S.) of Canadian value added, in their report dated May 31, 1996, which covers the period to the end of December 1995. All commitments are expected to be achieved by the year 2001 as specified in the contract.

7. Summary of Costs

The non-recurring costs associated with the approved project are:

Figure 49: Cost and Expenditure Detail

(thousands of dollars)	Currently Estimated Total Cost	Forecast Expenditures to March 31, 1997	**Estimates 1997-98**	Future Year Requirements
AMSA Project	205,629	205,629	**----**	-----

The anticipated In-Service annual recurring Personnel, Operations and Maintenance costs are estimated to be $18 million.

Canadian Tactical Transport Tanker (TTT) Project

1. Overview

In December of 1990, the Government approved the acquisition of five CC130 Hercules Tactical Transport Tanker aircraft to provide an immediate surge capacity in tactical airlift in support of operations in the Persian Gulf and, over the longer term, to provide additional air-to-air refuelling resources in support of CF18 operations, to augment existing strategic and tactical airlift capability and to provide additional resources for the CC130's expanded role as the primary fixed-wing Search and Rescue aircraft.

A contract was awarded to Lockheed Aeronautics Systems Corporation (now Lockheed Martin Aeronautical Systems) of Marietta, Georgia, for the delivery of five aircraft and related support to the Canadian Forces. Delivery of five transport capable aircraft was completed in April 1991. These aircraft were operated by the Canadian Forces in a transport configuration pending retrofit of the tanker kits in each aircraft. The first tanker capable aircraft was delivered in June 1992 and the last in April 1993.

There was also a requirement to acquire and install equipment to update and standardize the Avionics suite in the five CC130 Hercules Tanker aircraft. A contract for this requirement was awarded December 1994. This contract included an option to modify the twenty-five remaining Hercules aircraft in the CF fleet to a standard configuration, extending the supportable avionics life of these aircraft to well beyond the year 2000. This option was approved and the contract was awarded in March 1995. Expenditures for these equipment purchases and installation will extend over the period 1994-95 to 1998-99.

2. Lead and Participating Departments

Lead Authority:	Department of National Defence
Service Department:	Public Works and Government Services Canada
Third Parties:	Industry Canada
	Atlantic Canada Opportunities Agency
	Western Economic Diversification Canada
	Federal Office of Regional Development (Quebec)

3. Prime and Major Sub-Contractors, Address

Tanker Aircraft Acquisition:

Prime Contractor: Lockheed Martin Aeronautical Systems, 86 South Cobb Dr, Marietta, Georgia, 30063

Sub-Contractors: Flight Refuelling Ltd, Brook Rd, Wimborne, Dorset, England, BH21 2BJ

CAE Aviation Ltd, PO Box 9864, Edmonton International Airport, Edmonton, Alberta, T5J 2T2

Avionics Update Program:

Prime Contractor:	CAE Aviation Ltd, PO Box 9864, Edmonton International Airport, Edmonton, Alberta, T5J 2T2
Sub-Contractor:	Collins Avionics & Communications Division, Rockwell International Corp, 350 Collins Rd NE, Cedar Rapids, Iowa, 52498

4. Major Milestones

Contract Award	Dec 1990
Delivery of Last Transport Capable Aircraft	Apr 1991
Delivery of Last Tanker Capable Aircraft	Apr 1993
Contract Award for Avionics Update	Dec 1994
Contract Award for Fleet Avionics Update	Mar 1995
Delivery of First Aircraft with Avionics Update	Nov 1997
Delivery of last Tanker Aircraft with Avionics Update	Dec 1998
Delivery of Last Aircraft with Avionics Update	Oct 1999

5. Achievements and Explanations of Variances

Four Tanker Aircraft are now in squadron service. The fifth aircraft was withdrawn from service in July 1996 for prototype installation of the Avionics Update by CAE Aviation. Difficulties with the integration of the avionics suite and with the cockpit design have delayed both the introduction and the delivery of the prototype aircraft by five months. This five month delay is not expected to affect the overall contract schedule, as the contractor plans to recover this slippage during the fleet installation.

6. Industrial benefits

- Tanker Aircraft Acquisition:

Lockheed Martin Aeronautical Systems, Marietta, Georgia, is contractually committed to the achievement of industrial and regional benefits in the total amount of $139 million of Canadian value-added, measured in US budget year dollars. The benefits include the direct procurement, from Canadian sources, of components and services for the five aircraft, the establishment of CAE Aviation Ltd. as a Lockheed Authorized Hercules Service Centre, the procurement of assemblies, avionics or other equipment in Canada for Lockheed's C-5 transport aircraft, and other industrial and regional benefits yet to be specified. These will meet the eligibility criteria contained in the contract.

Lockheed's commitment includes the provision of industrial and regional benefits, in the minimum amount of US $80 million, to those regions in Canada where the Canadian Government has policies and programs to increase economic development through procurement.

Achievement:

CAE Aviation Ltd. was established as a Lockheed Authorized Hercules Service Centre in March 1992. According to the most recent report covering the period to June 30, 1995, Lockheed has claimed U.S. $71.8 million of industrial and regional benefits. The total commitments are expected to be achieved by the end of year 2002 as specified in the contract.

- CC130 Hercules avionics update and standardization project

This contract contains industrial and regional benefits totalling $62.8 million in Canadian Value added.

CAE Aviation Ltd., Edmonton, Alberta, the prime contractor, will manufacture the installation kits, and install all the avionics equipment, as well as providing the project management. These direct benefits amount to $31 million or 49 percent of the total. In their preliminary report, CAE Aviation has reported $8.2 million in benefits.

Collins Avionics (USA), the avionics systems integrator, will provide technology transfers to CAE Aviation to enhance the capabilities of CAE Aviation for CC130 avionics upgrade business and will jointly market and pursue these opportunities internationally. Collins Avionics will provide a proprietary Aircraft Interconnect Design Generation software programme to CAE Aviation for their use on this and other projects. In addition, Collins Avionics will make indirect purchases of electronics and related goods and services.

7. Summary of Costs

The non-recurring costs associated with the approved project are:

Figure 50: Cost and Expenditure Detail

(thousands of dollars)	Currently Estimated Total Cost	Forecast Expenditures to March 31, 1997	**Estimates 1997-98**	Future Year Requirements
TTT Project	342,888	293,978	**36,715**	12,195

The anticipated In-Service annual recurring Personnel, Operations and Maintenance costs of the TTT aircraft are estimated to be $3.5 million.

Canadian Forces Utility Tactical Transport Helicopter (CFUTTH) Project

1. Overview

The purpose of the CFUTTH project is to acquire 100 helicopters to accomplish national and international Utility Tactical Transport Helicopter roles. The primary task is tactical lift of troops and equipment. Other tasks include Base Rescue Flight, inland Search and Rescue, Joint Task Force 2 (the Federal Government's emergency response team), United Nations peacekeeping missions, medical evacuation, major air disaster response, surveillance, drug interdiction, fire fighting, assistance to civilian authorities, aid to the Civil Power and command, liaison and communications assistance.

The CFUTTH is intended to replace three aging fleets, comprising the CH-118 Iroquois, the CH-135 Twin Huey and the CH-136 Kiowa. Several helicopter models were evaluated against operational requirements and the Bell model 412HP, to be enhanced with various mission equipments, was selected.

The Project was approved by Cabinet on 7 April 1992 and by Treasury Board on 8 September 1992. On 9 September 1992, a contract, valued at $754.5 million was awarded to Bell Helicopter Textron Canada Ltd. (BHTC), of Mirabel, Quebec for the procurement of the 100 CFUTTHs, a flight simulator, and other equipment, documentation and services. The first helicopter was delivered in March 1995, and the last helicopter delivery will be in January 1998.

2. Lead and Participating Departments

Lead Authority:	Department of National Defence
Service Department:	Public Works and Government Services Canada
Third Parties:	Industry Canada
	Atlantic Canada Opportunities Agency
	Western Economic Diversification Canada
	Federal Office of Regional Development (Quebec)

3. Prime and Major Sub-Contractors, Address

Prime Contractor	Bell Helicopter Textron Canada Mirabel, Quebec
Aircraft Engines	Pratt and Whitney Canada Montreal, Quebec
Avionics Management System	Canadian Marconi Company Montreal, Quebec
Flight Simulator	CAE Ltd Montreal, Quebec

4. Major Milestones

Contract Award	Sept 1992

Critical Design Review	Apr 1993
First Helicopter Delivery	Mar 1995
Simulator Acceptance	Jun 1996
Last Helicopter Delivery	Jan 1998
Project Completion	Dec 2001

5. Achievements and Explanations of Variances

As of October, 1996, 62 of 100 helicopters and various mission kits were delivered. Helicopter deliveries remain on schedule and all project objectives will be met at a cost of approximately $100 million less than the previous estimated total cost of $1,193 million..

6. Industrial Benefits

BHTC has committed to achieve a total of $506.8 million of Canadian value-added direct and indirect Industrial and Regional Benefits (IRBs).

A major portion of BHTC's $284.4 million direct IRB commitment is the manufacture of the CFUTTH at the Mirabel, Quebec plant. The CFUTTH consists of the basic Bell model 412HP helicopter, including engines manufactured by Pratt and Whitney Canada, Longueuil, Quebec, and the customization of the helicopter to meet operational requirements. BHTC has awarded subcontracts to Canadian Marconi Company, Montreal, Quebec, for the avionics management system and to CAE Electronics Limited for the flight simulator. As a result of the CFUTTH purchase, both Canadian Marconi and CAE are expected to improve their competitiveness through the expansion of their capabilities and through the formation of new business relationships.

BHTC's indirect IRB obligations of $222.4 million involve Canadian supplier development, technology transfer and export sales commitments. These include a BHTC commitment to increase its sourcing in Canada of components for all of its helicopter models as well as the transfer to Canada of spares procurement and avionics engineering mandates previously located in the US, an initiative that will further increase the opportunities for Canadian suppliers. In addition, BHTC is committed to acquiring graphite epoxy composite technology capability which will enable the company to manufacture advanced composite helicopter components.

To date, BHTC has claimed a total of $282.3 million in IRBs for the program, $144.1 million in direct and $138.2 million in indirect IRBs. The majority of these claims relate to work performed in Quebec. The current claim represents 56% of the overall commitment and places BHTC well ahead of its anticipated goal for this stage of the project.

7. Summary of Costs

The non-recurring costs associated with the approved project are:

Figure 51: Cost and Expenditure Detail

(thousands of dollars)	Currently Estimated Total Cost	Forecast Expenditures to March 31, 1997	**Estimates 1997-98**	Future Year Requirements
CFUTTH Project	1,193,114	749,187	**204,271**	239,656

The anticipated In-Service annual recurring Personnel, Operations and Maintenance (PO&M) costs have yet to be determined. Preliminary indications are that, due to the commercial maintenance and support concepts, and the economies of operation of a single fleet, PO&M costs for the new helicopters will be lower than those for the current inventory of utility helicopters.

Strategic Airlift Replacement Project

1. Overview

On 24 August 1992, the Government approved the acquisition of five used A310 aircraft to meet the Canadian Forces strategic airlift requirement. On 31 August 1992, a contract was awarded to Canadian Airlines International Ltd. for three used Airbus Industrie A310-304 aircraft, spares and refurbishment of the aircraft. The two remaining aircraft were purchased in December 1992 and July 1993 from International Markets Ltd., and Blenheim Aviation Ltd., respectively. The contract for the freighter modification was awarded in June 1995 to Bombardier Ltd., Mirabel, Quebec.

2. Lead and Participating Departments

Lead Authority:	Department of National Defence
Service Department:	Public Works and Government Services Canada
Third Party:	Industry Canada

3. Prime and Major Sub-Contractors, Address

The prime contractor for the Freighter Modification is Bombardier Inc., Defence Systems Division, Mirabel, Quebec with the major sub-contractor as Sogerma Socea, Bordeaux, France.

4. Major Milestones

Implementation Contract Award (3 aircraft)	Aug 1992
First Aircraft Delivery	Nov 1992
Second Aircraft Delivery	Jan 1993
Third Aircraft Delivery	Jul 1993
Implementation Contract Award (4th aircraft)	Dec 1992
Fourth Aircraft Delivery	Feb 1993
Implementation Contract Award (5th aircraft)	Jul 1993
Fifth Aircraft Delivery	Aug 1993
Freighter Modification Contract (4 aircraft)	Jun 1995
Freighter First Delivery	Nov 1996

5. Achievements and Explanations of Variances

The Project has achieved all it's major milestones and is expecting delivery of the first modified aircraft at the end of November 1996.

6. Industrial benefits

There were no industrial and regional benefits negotiated in the initial acquisition of these used aircraft. The contract for the freighter modification contains industrial and regional benefits obligations for a total value of $35.6 million (U.S.) in Canadian value added. The direct industrial and regional benefits amount to $6.6 million (U.S.) or 20 percent, and represent the project management and other activities of Bombardier (Canadair) and Canadian Airlines International. The indirect benefits include repair and overhaul of the French Air Force C-130 and North American Airline A-320 landing gears, the manufacture of aircraft composite parts, the manufacture of SATCOM antennas for Airbus aircraft, as well as increases in the manufacture of Airbus aircraft subassemblies. As at the end of March 96, 11% of the committed Industrial benefits had been achieved.

7. Summary of Costs

The non-recurring costs associated with this approved project are:

Figure 52: Cost and Expenditure Detail

(thousands of dollars)	Currently Estimated Total Cost	Forecast Expenditures to March 31, 1997	**Estimates 1997-98**	Future Year Requirements
Strategic Airlift Requirement	422,636	378,870	**39,554**	4,212

Once the Strategic Transport Project is fully operational, the total recurring Personnel, Operations and Maintenance savings are estimated at $15 million.

Electronic Support and Training (EST) Systems Project

1. Overview

The EST Systems Project was approved to define, identify, procure and install equipment necessary to provide the Canadian Forces Land, Sea and Air elements with effective airborne electronic warfare (EW) training. This training will prepare the Canadian Forces for effective operations in an EW threat environment.

A contract was awarded to Lockheed Canada, Inc. of Kanata, Ontario, on 1 April 1988 to carry out the Definition Phase of the Project. Preliminary studies revealed that this EST requirement could be met most effectively by a combination of appropriately equipped Challenger CL-600 aircraft, EW training pods carried by CE-133 aircraft (T-birds), and EW simulators which will be procured under a separate project.

Negotiations were conducted on the Implementation Proposal presented by Lockheed Canada, Inc., and resulted in the award of an Implementation contract on 1 March 1993. A contract to design the aircraft modification to carry the new EW pods on the CE-133 aircraft; install it on the prototype aircraft and produce nine additional modification kits was awarded to CAE Aviation Ltd. on 15 July 1994.

2. Lead and Participating Departments

Lead Authority:	Department of National Defence
Service Department:	Public Works and Government Services Canada
Third Parties:	Industry Canada
	Atlantic Canada Opportunities Agency
	Western Economic Diversification Canada
	Federal Office of Regional Development (Quebec)

3. Prime and Major Sub-Contractors, Address

Prime Contractors:

Lockheed Martin Canada	Kanata, Ontario, Canada
CAE Aviation	Edmonton, Alberta

Major Sub-Contractors:

Bombardier Inc.	Mirabel, Quebec, Canada
Innotech Aviation Limited	Dorval, Quebec, Canada
Loral Federal Systems	Owege, N.Y., USA
AEL Systems	Montgomeryville, PA, USA
Sierra Networks Inc.	San Jose, California, USA
Lockheed Sanders Inc.	Nashua, N.H., USA
TRACOR, Lundy Division	Pompano Beach, FL, USA
Rodale Electronics Inc.	Garden City, N.Y., USA

4. Major Milestones

Contract Award	Mar 1993

Acceptance of Prototype CE-133	Jun 1996
Acceptance of First Challenger Aircraft	Nov 1997
Acceptance of Last Challenger Aircraft	Feb 1998
Project Completion	Jun 1999

5. Achievements and Explanations of Variances

To date the achievements of the EST Systems Project include the following:

a. Three Challenger aircraft have been delivered to Bombardier DSD for EST system installation.

b. Many of the subsystems and the System Processor Assemblies have been designed are built and are now in the final stages of qualification and environmental testing.

c. The pods procured under the contract have been designed and are either delivered or undergoing final qualification and environmental testing.

   1) A100 electronic counter measures pods: eight delivered,

   2) Chaff pods: five delivered,

   3) Threat emitter system electronic support measures pods: two of eight delivered.

d. The T33 prototype modification kit has been designed and is complete. The remaining nine installations will be carried out by Kelowna Flightcraft.

6. Industrial benefits

An objective of this project is to generate Canadian industrial activities that will enhance the long term capability of Canadian industry and provide any necessary world product mandates in the area of airborne Electronic Warfare (EW) systems design, systems integration, product development and manufacturing. Lockheed Canada, the prime contractor, is designing the system and providing the systems integration, and has a commitment to achieve a world product mandate for EST systems product. Canadair, the aircraft manufacturer, is modifying the Challenger aircraft and installing the EW equipment, which may lead to aircraft sales for similar roles.

The industrial and regional benefits (IRB) program totals $107.1 million of Canadian value added, with 75 percent being direct benefits. The majority of the benefits will accrue to Quebec and Ontario because of the specialized nature of EW equipment.

Achievements:

As of 29 February, 1996, Lockheed Canada has claimed $81.5 million of Canadian value added, which is 76.15 percent of their total obligation of $107.1 million.

7. Summary of Costs

The non-recurring costs associated with the approved project are:

Figure 53: Cost and Expenditure Detail

(thousands of dollars)	Currently Estimated Total Cost	Forecast Expenditures to March 31, 1997	**Estimates 1997-98**	Future Year Requirements
EST Systems	202,679	165,336	**29,518**	7,825

Once the Electronic Support and Training System Project is fully operational, the total incremental recurring Personnel, Operations and Maintenance cost is estimated at $10.5 million.

Military Automated Air Traffic System (MATTS) Project

1. Overview

In July 1993, Treasury Board approved the procurement of the Military Automated Air Traffic System (MAATS) in order to maintain interoperability with the national air traffic system which is being upgraded and automated by Transport Canada (TC) under the Canadian Automated Air Traffic System (CAATS) project.

The CAATS requirement was originally competed and a contract was awarded to Hughes Aircraft of Canada Limited (HACL) of Richmond, British Columbia, in December 1989. In order to avoid any adverse impact on military flying operations and to minimize cost and duplication of effort between TC and the Department of National Defence, it was determined that MAATS would acquire CAATS-identical equipment wherever feasible and would become operational simultaneously with CAATS.

To achieve this common approach, and in so doing, maximize economies of scale and minimize risk, an interdepartmental procurement committee endorsed directing the contract for the MAATS prime mission equipment to HACL, which has been tasked with total systems responsibility. The main contract was awarded in January 1994.

2. Lead and Participating Departments

Lead Authority:	Department of National Defence
Service Department:	Public Works and Government Services Canada
Third Parties:	Industry Canada
	Atlantic Canada Opportunities Agency
	Western Economic Diversification Canada
	Federal Office of Regional Development (Quebec)

3. Prime and Major Sub-Contractors, Address

Hughes Aircraft of Canada Limited
13951 Bridgeport Road
Richmond, British Columbia, V6V 1J6

4. Major Milestones

Prime Contract Award	Jan 1994
Initial Delivery	Jul 1999
Final Delivery	Jan 2000

5. Achievements and Explanations of Variances

A part of the design phase is now complete

Initial and Final Delivery delayed approximately two years due to delays in the Transport Canada CAATS project.

6. Industrial benefits

The non-military objectives related to the MAATS Project are established in the prime contract and represent the Direct Industrial and Regional Benefits valued at $49.5 million. This represents approximately 70% Canadian content and can be broken down as follows:

	($ million)
West	43.6
Ontario	1.2
Quebec	1.9
Atlantic	To Be Determined
Unspecified	To Be Determined

7. Summary of Costs

The non-recurring costs associated with the approved project are:

Figure 54: Cost and Expenditure Detail

(thousands of dollars)	Currently Estimated Total Cost	Forecast Expenditures to March 31, 1997	**Estimates 1997-98**	Future Year Requirements
MAATS Projects	179,214	45,830	**41,873**	91,511

Once the system is fully operational, the anticipated In-Service annual recurring Personnel, Operations and Maintenance (PO&M) Vote 1 cost is estimated to be $3.6 million.

Advanced Air-to-Surface Missiles

1. Overview

The Advanced Air-to-Surface Weapons project involves the procurement of Precision Guided Munitions, Target Acquisition/Designation Pods and associated logistics support. Through the acquisition of these stocks, the Canadian Forces will be able to deliver munitions with the accuracy expected and required in possible future conflicts or contingency operations which would require a precision attack capability and at the same time minimize damage to sensitive surroundings (civilians, non-combatants, friendly forces/facilities).

2. Lead and Participating Departments

Lead Authority:	Department of National Defence
Service Department:	Public Works and Government Services Canada

3. Prime and Major Sub-Contractors, Address

Prime Contractor	US Department of the Navy
(Foreign Military Sales)	
Sub-Contractor	McDonnel Douglas, Hughes

4. Major Milestones

First Missile Delivery	Completed Jun 1996
Pod Delivery	Apr 1997
Project Closure & Final Delivery	Mar 1999

5. Achievements and Explanations of Variances

First Missile Delivery completed on schedule.

6. Industrial benefits

The weapons, pods, test equipment and spares are being acquired through the US Government, there is no direct Canadian industrial involvement in the contracts.

7. Summary of Costs

The non-recurring costs associated with the approved project are:

Figure 55: Cost and Expenditure Detail

(thousands of dollars)	Currently Estimated Total Cost	Forecast Expenditures to March 31, 1997	**Estimates 1997-98**	Future Year Requirements
AATSM Projects	103,484	18,632	**61,362**	23,490

Once the Advanced Air-to-Surface Weapons project is fully operational, the anticipated annual recurring Personnel, Operations and Maintenance costs are estimated at $4.9 million.

Low Level Air Defence (LLAD) Project

1. Overview

On 5 October 1983, the Government agreed that the Canadian Forces required an adequate air defence capability and directed the Department of National Defence to conduct a Project Definition Phase to define an affordable low level air defence capability, based on a mix of modern anti-aircraft guns and area defence surface-to-air missiles. The scope of the project included the establishment of a training facility at Canadian Forces Base Chatham, New Brunswick.

The prime contract was awarded to Oerlikon-Buehrle with an effective date of 1 July 1986.

It is being implemented by Oerlikon Aerospace of St. Jean, Quebec where the Air Defence Anti-Tank System (ADATS) is being assembled. Litton Systems Canada Limited, Etobicoke, Ontario, is a major sub-contractor in this contract.

The ADATS is included in all LLAD air defence units and is complemented in the airfield defence role by 35mm anti-aircraft guns and fire control radars produced by Oerlikon-Buehrle of Zurich, Switzerland. The scope of the project included the logistics support of all acquired equipment, the construction of associated facilities, as well as the re-allocation of up to 700 existing positions to provide the required capability. The project is in the final stages of contract delivery. The remaining expenditures relate to support equipment, spare parts, and technical documentation in support of the fielded systems.

2. Lead and Participating Departments

Lead Authority:	Department of National Defence
Service Department:	Public Works and Government Services Canada
Third Parties:	Industry Canada
	Atlantic Canada Opportunities Agency
	Western Economic Diversification Canada
	Federal Office of Regional Development (Quebec)

3. Prime and Major Sub-Contractors, Address

Prime Contractor - Oerlikon-Buehrle of Zurich, Switzerland.

Implemented by - Oerlikon Aerospace of St. Jean, Quebec

Major Sub- Contractor - Litton Systems Canada Limited, Etobicoke, Ontario

4. Major Milestones

Approval of Project Definition Funds	Jan 1985
Treasury Board Effective Project Approval	Jun 1986
Contract Awarded to Oerlikon-Buehrle	Jul 1986
Initial Delivery of Main Equipment	Nov 1989

Initial Battery Operational Capability	Nov 1993
Final Delivery of Main Equipment	Feb 1995
Project Completion	Dec 1998

5. Achievements and Explanations of Variances:

Close out of the prime contract activities is anticipated by Mar 97, with the completion of remaining contracts by Dec 98. The increased time line and the increased estimated total cost is related to procurement of hardware and software modifications to the 35mm gun system, the total estimated cost is within the project budget.

6. Industrial benefits

Industrial and Regional Development: The non-military objectives of the LLAD project were achieved through the production, in Canada, of components for both domestic and export sales, as well as the establishment of a system integration facility in St. Jean-sur-Richelieu, Quebec. The approach taken in the contract was to establish the production of most elements of the missile system launcher (ADATS) in Canadian industries for domestic and foreign markets. Specific contractual targets were identified for the accomplishment of a large variety of discrete industrial development projects, each with sectoral, regional, and yearly targets. Achievement was measured by the accomplishment of financial targets for new production, and capital investment. Since the targets have been met, and in some cases exceeded, Industry Canada no longer tracks this project.

Small Business Development: Within the total contractual industrial benefit commitment, the contractor was committed to provide $82 million worth of benefits to small business. This commitment has been exceeded, and Industry Canada no longer tracks this project.

7. Summary of Costs

The non-recurring costs associated with the approved project are:

Figure 56: Cost and Expenditure Detail

(thousands of dollars)	Currently Estimated Total Cost	Forecast Expenditures to March 31, 1997	**Estimates 1997-98**	Future Year Requirements
LLAD Project	1,075,798	1,030,105	**27,277**	18,416

With the withdrawal of Canadian Forces from Europe, the anticipated In-Service annual recurring Personnel, Operations and Maintenance (Vote 1) costs for the Low Level Air Defence System, are under review.

Small Arms Replacement Project (SARP)

1. Overview

The small arms replaced by SARP had been used by the Canadian Forces for well over 25 years. Their performance fell short of that of modern lightweight, automatic firing weapons. The SARP objective is to acquire a modern 5.56mm small arms weapon system consisting of 94,135 C7 rifles, 2,365 C8 carbines, 6,750 C9 light machine-guns, 63,700 C79 optical sight assemblies, operational and initial training stocks of 5.56mm ammunition, logistical support items and accessories. Rifles and carbines are being manufactured by Diemaco (1984) of Kitchener, Ontario while the light machine-gun was produced by Fabrique Nationale of Belgium.

The Crown has contracted with Hughes Elcan Optical Technologies Ltd, of Midland, Ontario for development and production of the 3.5 power C79 Optical Sight which can be used interchangeably on the rifle or the light machine-gun. Contracts now exist to provide 63,700 sights for these weapons.

2. Lead and Participating Departments

Lead Authority:	Department of National Defence
Service Department:	Public Works and Government Services Canada
Third Party:	Industry Canada
	Federal Office of Regional Development (Quebec)
	Atlantic Canada Opportunities Agency
	Western Economic Diversification Canada

3. Prime and Major Sub-Contractors, Address

Devtek Corporation, Acting through its Diemaco Division, 1036 Wilson Avenue,
Kitchener, Ontario
Hugues Elcan Optical Technologies, 450 Leitz Rd.
Midland, Ontario.
Fabrique Nationale Herstal, SA, Voie De Liege 33, B-4040
Herstal, Belgium.

4. Major Milestones

Effective Project Approval	Nov 1983
Main Contract Award	Feb 1984
Initial Delivery of C7 Rifles	Apr 1985
Initial Delivery of C79 Optical Sights	Sep 1991
Final Delivery of C7 rifles	Feb 1995
Final Delivery of C79 Optical Sights	Mar 1997
Final System Delivery	Mar 1998

5. Achievements and Explanations of Variances

Deliveries of C7 rifles, C8 carbines and C9 light machine guns are complete.

Delivery of C79 Optical Sights is 87% complete.

Operational conversion of all units of the Canadian Forces to the 5.56mm weapon system is complete.

6. Industrial benefits

DIEMACO (1984) Inc. was committed to achieve phased Canadian production of the C7 rifle and the C8 carbine with the Canadian content equal to 85% of the value of the contract. In addition, 27,000 C7 rifles were to have 100% Canadian content; this commitment has been achieved.

Achievement: DIEMACO (1984) Inc. achieved an aggregate of 90.4% Canadian content through to the end of June 1994. The contractor was further committed to make a best effort to place 20% of the Canadian subcontract work in Quebec.

As of the end of June 1994, the company had placed only 8.3% of this work in Québec. To offset the shortfall, DIEMACO (1984) Inc., transferred production machinery and work to its Hochelaga Aerospace division in Montreal, Quebec. The equipment is valued at $750,000, and the work generated represents sales approaching $1 million annually.

7. Summary of Costs

The non-recurring costs associated with the approved project are:

Figure 57: Cost and Expenditure Detail

(thousands of dollars)	Currently Estimated Total Cost	Forecast Expenditures To March 31 1997	**Estimates 1997-98**	Future Years Require-ments
SARP	347,953	346,208	**1,745**	-----

Once the new arms become fully operational, the anticipated In-Service annual recurring Personnel, Operations and Maintenance (Vote 1) costs are estimated to be $1.0 million.

Tactical Command, Control and Communications System (TCCCS) Project

1. Overview

The TCCCS Project is designed to address the army's fundamental requirement for a secure, survivable and fully integrated tactical communication system. The system includes 220 equipment products, including 15,000 radios installed in approximately 6,500 vehicles. The system will be the primary means of communication in the forward battle area.

In September 1988, the Government granted approval-in-principle for the TCCCS Project to call for competitive bids from Canadian-based companies and on the understanding that a substantial portion of the work would be performed in Western Canada.

The Project was approved by Treasury Board in April 1991. A contract was awarded by the Department of Supply and Services on 18 April 1991 to the Prime Contractor - Computing Devices Canada (CDC), Ottawa, Ontario, valued at $1,281 million for the procurement of the main equipment. Amendments to the contract to incorporate additional work within the scope of the Project have raised the estimated value of the contract to $1,476 million.

2. Lead and Participating Departments

Lead Authority:	Department of National Defence
Service Department:	Department of Public Works and Government Services
Third Parties:	Industry Canada
	Atlantic Canada Opportunities Agency
	Western Economic Diversification Canada
	Federal Office of Regional Development (Quebec)
	Department of Foreign Affairs and International Trade

3. Prime and Major Sub-Contractors, Address

Prime Contractor	Computing Devices Canada 1020,68th Ave. NE Calgary, AB T2E 8P2
Major Sub-Contractors	ACTC Technologies Inc. 350- 6715,8th St. N.E. Calgary, AB T2E 7H7
	Canadian Marconi Company 600 Dr. Frederick Phillips Blvd. Ville Saint Laurent, P.Q. H4M 2S9
	Computer Sciences Canada, Inc. Suite 400, 1900 City Park Dr. Gloucester, Ont. K1J 1A3

Major Sub-Contractors	EDS Defence 1-3 Bartley Way Bartleywood Hook, Hampshire U.K. RG270XA Frontec Logistics Corp. 120-1243 McKnight Blvd. Calgary, Alberta T2E 5T2 Harris Corp. RF Communications Division 1680 University Ave. Rochester, N.Y. USA 14610-9983 Logican Technologies Inc. 150 Karl Clark Road Edmonton, Alberta T6N 1E2 Motorola 8201 E. McDowell Rd. P.O. Box 1417 Scottsdale, AZ USA 85252 Racal-Tacticom Ltd. 472 Basingstoke Rd. Reading, Birkshire U.K. RG20QF SED Systems Inc. 18 Innovation Blvd. P.O. Box 1464 Saskatoon, Sask. S7K 3P7 TRW 1 Federal Systems Park Dr. Fairfax, VA USA 22033

4. Major Milestones

System Design Review	Jun 1992
Start Implementation	Aug 1994
Complete Distribution	Sep 2000
Project Completion	Mar 2001

5. Achievements and Explanations of Variances

Achievements

The first deliveries from the Prime Contractor, Computing Devices Canada (CDC), commenced with the fielding of the light weight assault radio in Feb 96. In 1996 the contract was amended to reflect the restructuring and reduction in the Canadian Forces. CDC met all contract milestones during FY 95/96.

6. Industrial benefits

The contractor is committed to an Industrial Benefits package of direct industrial and regional benefits amounting to $639.6 million, with regional distribution and achievement as of 30 June 1996 is as follows:

Region	Commitment 1990 $ (millions)	Achieved 1990 $ (millions)
West	449.8	257.8
Ontario	85.0	83.9
Quebec	35.3	12.9
Atlantic	19.4	9.5
Undefined	50.1	10.2
	639.6	374.3

Indirect industrial and regional benefits, for a total of $667.5 million, include technology transfer valued at $211.5 million, future sales commitments of $339.8 million and an investment commitment of $116.2 million for small business, new facilities, training, marketing and R&D. The regional distribution as of 30 June 1996 is as follows:

Region	Commitment 1990 $ (millions)	Achieved 1990 $ (millions)
West	552.4	178.8
Ontario	20.4	50.3
Quebec	5.8	2.2
Atlantic	11.7	0.2
Undefined	77.2	0.2
	667.5	231.7

7. Summary of Costs

The non-recurring costs associated with the approved project are:

Figure 58: Cost and Expenditure Detail

(thousands of dollars)	Currently Estimated Total Cost	Forecast Expenditures To March 31 1997	**Estimates 1997-98**	Future Years Require-ments
TCCCS Project	1,899,489	1,176,005	**207,634**	515,850

The anticipated In-Service annual recurring Personnel Operations and Maintenance costs will be defined by a detailed Logistics Support Analysis conducted throughout the execution of the contract.

LYNX Replacement Project

1. Overview

In 1992, the Government approved the procurement of up to 229 light armoured reconnaissance vehicles and associated support for the Canadian Forces. The procurement strategy for the project was based on negotiating a suitable contract with the Diesel Division of General Motors (DDGM) of Canada, London, Ontario, taking into account the Government's industrial and regional benefits and small business policies.

2. Lead and Participating Departments

Lead Authority:	Department of National Defence
Service Department:	Public Works and Government Services Canada
Third Parties:	Industry Canada
	Atlantic Canada Opportunities Agency
	Western Economic Diversification Canada
	Federal Office of Regional Development (Quebec)

3. Prime and Major Sub-Contractor, Address

Prime: Diesel Division General Motors
1991 Oxford Rd
London Ontario
N5V 2Z7

Subs: Computing Devices Canada
3785 Richmond Road
Nepean, Ontario
K1G 3M9

Delco Systems Operation
6767 Hollister Avenue
Goleta California
93117-3000

4. Major Milestones

Chassis Contract Awarded	Mar 1993
Turret and Surveillance Equipment Amendment Awarded	Jan 1994
First Vehicle Delivery	Jan 1996
Last Vehicle Delivery	Nov 1997
Project Completion	Mar 1998

5. Achievements and Explanations of Variances

To date, the major production milestones have been achieved, with the first 9 vehicles delivered in Mar 96 and a total of 73 vehicles delivered as of the end Sep 96.

6. Industrial benefits

Diesel Division of General Motors has committed, as of the end of December 1995, $139.8M in direct Canadian content and $82.3M of indirect content.

Region	Committed	Achieved
Western Canada	$108.0M	$18.4M
Atlantic Region	$63.5M	$57.1M
Quebec Region	$50.8M	$36.7M

In addition, Diesel Division of General Motors has achieved $68.8M in commitments to Canadian Small business.

7. Summary of Costs

The non-recurring costs associated with the approved project are:

Figure 59: Cost and Expenditure Detail

(thousands of dollars)	Currently Estimated Total Cost	Forecast Expenditures To March 31 1997	**Estimates 1997-98**	Future Years Require-ments
LYNX Replacement Project	859,281	649,968	**150,166**	59,147

Once the LYNX Replacement Project is completed, the anticipated In-Service annual recurring Personnel, Operations and Maintenance costs are estimated to be $8.4 million.

Light Support Vehicle Wheeled (LSVW) Project

1. Overview

The objective of the Light Support Vehicle Wheeled (LSVW) project is to acquire a minimum of 2,879 vehicles and associated logistics support to replace the 5/4 ton militarized commercial trucks which were purchased in 1976. Authority was given for the procurement of an additional 128 vehicles which increased the quantity from 2,751 to 2,879 vehicles.

On 1 March 1992, following a competitive bid process, a contract was awarded to Western Star Trucks Inc. of Kelowna, British Columbia. Production of the vehicles commenced in February 1994 and was completed in March 1996.

2. Lead and Participating Departments

Lead Authority:	Department of National Defence
Service Department:	Public Works and Government Services Canada
Third Parties:	Industry Canada
	Atlantic Canada Opportunities Agency
	Western Economic Diversification Canada
	Federal Office of Regional Development (Quebec)

3. Prime and Major Sub-Contractors, Address

Prime contractor:	Western Star, Kelowna B. C.
Sub- contractor:	Iveco, Bolzano Italy
	DEW Engineering , Ottawa Ont.

4. Major Milestones

Award of Contracts	Mar 1992
Prototype Delivery	Sep 1992
First Full Production Delivery	Feb 1994
Last Delivery	Mar 1996
Project Completion	Mar 1998

5. Achievements and Explanations of Variances

The project completion has been delayed by one year and is now scheduled for March 1998. This one year extension is primarily as a result of delays in obtaining the initial provision of repair parts.

6. Industrial benefits

The industrial and regional benefits commitment of Western Star Trucks Inc. includes direct in-vehicle Canadian Content totalling approximately $103.5 million (1991 dollars) distributed as follows:

	$ (millions)
Atlantic Region	3.9
Quebec Region	6.4
Ontario Region	32.2
Western Region	61.0

Achievements: to March 31,1996, the achievements are as follows:

direct IRB's $127.4 million
Indirect IRB's $79.3 million
small business participation and development.

7. Summary of Costs

The non-recurring costs associated with the approved project are:

Figure 60: Cost and Expenditure Detail

(thousands of dollars)	Currently Estimated Total Cost	Forecast Expenditures To March 31 1997	**Estimates 1997-98**	Future Years Require-ments
LSVW Project	273,419	256,107	**17,312**	-----

Once the Light Support Vehicle Wheeled (LSVW) is fully operational, the total reduction in Personnel, Operations and Maintenance cost is estimated at $1.1 million.

ERYX Short Range Anti-Armour Weapon (Heavy) (SRAAW(H)) Project

1. Overview

The purpose of the Short Range Anti-Armour Weapon (Heavy) (SRAAW(H)) project is to replace the Carl Gustav rocket launcher as the primary short range anti-armour weapon of the Canadian Land Forces.

This project is the first Canada-France cooperation in defence equipment and is expected to serve as a model for future bilateral undertakings.

Effective project approval was granted by Treasury Board on 17 March 1993. An initial $87 million contract for the acquisition of Aerospatiale's ERYX SRAAW(H) was awarded in March 1993. As a result of follow on procurement of spares the contract is now valued at $94 million. In addition, a contract for $5.4 million was awarded to Aerospatiale to arrange for four Canadian companies to manufacture components of the ERYX SRAAW(H). Three of the four companies are now producing the required parts for incorporation within the weapon system.

2. Lead and Participating Departments

Lead Authority:	Department of National Defence
Service Department:	Public Works and Government Services Canada
Third Parties:	Industry Canada
	Atlantic Canada Opportunities Agency
	Western Economic Diversification Canada
	Federal Office of Regional Development (Quebec)
	Department of Foreign Affairs and International Trade

3. Prime and Major Sub-Contractors, Address

Prime contractor:

Aerospatiale Missiles
28 rue de la Redoute
92260 Fontenay-aux-Roses (France)

Sub-contractors:

Composite Atlantic (Lunenburg, Nova Scotia)	- Tripod
Canadian Marconi (Montreal, Quebec)	- Hybrid Microcircuits
Hughes Elcan (Midland, Ontario)	- Day Sight Module
Amptech Corporation (Calgary, Alberta)	- Plastic Components
Allied Signal (Montreal, Quebec)	- Thermal Imager
ADGA Systems (Ottawa, Ontario)	- Publications and Integrated LogisticSupport
Primetech Electronics (Montreal, Quebec)	- Classroom simulator
CGI (Ottawa, Ontario)	- Program Management and Contract Administration

4. Major Milestones

Effective Approval	Mar 1993
Contract Award	Mar 1993
Initial Delivery	Jan 1994
Project Completion	Dec 1998

5. Achievements and Explanations of Variances

All deliverables have been received without any delays from the prime contractor, Aerospatiale. The only major item left to be contracted is the ERYX Thermal Imager Sight (MIRABEL) and its Integrated Logistic Support. It is anticipated that a contract for the MIRABEL will be awarded to Aerospatiale early in the new year. The Integrated Logistic Support will be done by the co-producer of the MIRABEL, Allied Signal Aerospace Canada.

6. Industrial benefits

The contractor is committed to a package of direct and indirect industrial and regional benefits equivalent to the value of the main acquisition contract. A minimum of 70% of the main acquisition contract value will be in direct benefits while 30% will be in indirect benefits.

The Regional Benefits will be distributed as follows:

Region	Distribution
West	8%
Ontario	4%
Quebec	80%
Atlantic	8%

As of June 1996, 22% of Industrial Regional Benefits have been achieved.

7. Summary of Costs

The non-recurring costs associated with the approved project are:

Figure 61: Cost and Expenditure Detail

(thousands of dollars)	Currently Estimated Total Cost	Forecast Expenditures To March 31 1997	**Estimates 1997-98**	Future Years Require-ments
SRAAW(H) Project	179,269	133,235	**18,684**	27,350

Once the SRAAW(H) is fully operational, the anticipated In-Service annual recurring Personnel, Operations and Maintenance costs are estimated at $6.9 million.

Armoured Personnel Carrier (APC) Replacement Project

1. Overview

In December 1995, Treasury Board approved the first of four phases of the Armoured Personnel Carrier (APC) Replacement Project. Phase 1 consists of the purchase of 240 APCs from Diesel Division of General Motors (DDGM) of London, Ontario. The contract is under negotiation.

2. Lead and Participating Departments

Lead Authority:	Department of National Defence
Service Department:	Public Works and Government Services Canada
Third Parties:	Industry Canada
	Atlantic Canada Opportunities Agency
	Western Economic Diversification Canada
	Federal Office of Regional Development (Quebec)

3. Prime and Major Sub-Contractos, Address

Prime: Diesel Division General Motors
1991 Oxford Rd
London, Ontario
N5V 2Z7

Sub: Delco Systems Opeations
6767 Hollister Avenue
Goleta California
93117-3000

4. Major Milestones

Treasury Board Approval	Dec 1995
Phase 1 Contract Award	Dec 1996
First Vehicle Delivery	Jan 1998
Last Vehicle Delivery	Jun 2003

5. Achievements and Explanations of Variances

The Government Project Management Office is in the final stages of negotiating a contract which will see vehicle deliveries commence in Jan 1998. Contract award is expected by end of 1996-97.

6. Industrial benefits

As part of the contract negotiations for the APC, and associated logistics support, the Government will negotiate Industrial and Regional Benefit commitments.

7. Summary of Costs

The non-recurring costs associated with the approved project are:

Figure 62: Cost and Expenditure Detail

(thousands of dollars)	Currently Estimated Total Cost	Forecast Expenditures To March 31 1997	**Estimates 1997-98**	Future Years Require-ments
APC Replacement Project	811,022	14,760	**124,162**	672,100

Incremental annual recurring Personnel, Operations and Maintnenance costs for the APC Replacement Project are yet to be determined.

Canadian Forces Supply System Upgrade (CFSSU) Project

1. Overview

In November 1994, the Government gave Effective Project Approval for the development and implementation of an upgraded Canadian Forces Supply System which will meet the supply requirements of the Canadian Forces during all operational situations while effectively and economically managing the Department of National Defence inventory.

In January 1995, following a competitive contract definition phase, a contract was signed with SHL Systemhouse Inc., Ottawa, Ontario, for the development and installation of an upgraded Canadian Forces Supply System, based on commercial software packages.

2. Lead and Participating Departments

- Lead Authority: Department of National Defence
- Service Department: Public Works and Government Services Canada
- Third Parties: Industry Canada
  Atlantic Economic Opportunities Agency
  Western Economic Diversification Canada
  Federal Office of Regional Development (Quebec)

3. Prime and Major Sub-Contractors, Address

Prime:

SHL Systemhouse Inc. Suite 230, 2nd level, 200 Promenade du Portage, Hull, Quebec. J8X 4B7

Major Sub-Contractors:

Tecsult Eduplus Inc. 85 St. Catherine Street West, Montreal, Quebec. H2X 3P4
MacDonald Dettwiler and Associates Ltd, 3800 Commerce Parkway, Richmond, BC. V6V 2J3
Mincom Pty Ltd., P.O. Box 72, Stones Corner, Brisbane, Queensland, Australia 4120
Thomson-CSF Systems Canada, 49 Auriga Drive, Ottawa, Ontario. K2E 8A1

4. Major Milestones

- Contract Award — Jan 1995
- Initial Site Installation — Dec 1995
- Complete Installation of Build 1 (Warehouse Management Info System) — Summer 1997
- Start of Build 2 (Base/Unit Initial Operational Capability) — Jan 1998
- Completion of Build 2 — Dec 1998

• Completion of Build 3 (Full Operational Capability)	Nov 1999
• Project Completion	Summer 2000

5. Achievements and Explanation of Variances

Warehouse Management Information Systems (the initial sub-system of CFSSU) have been installed in Halifax and Edmonton. Installation at other sites has been delayed 6 months pending the development of a revised implementation roll-out methodology designed to reduce risk.

6. Industrial Benefits

The contractor has committed to achieve the following benefits:

	1996-97 $ millions
Direct Canadian Content	80
Indirect Benefits (non-project related work)	161
Total	**241**

Included in the above totals are regional commitments as follows:

Region	
Atlantic Region	45
Quebec Region	43
Ontario Region	62
Western Region	78
Unallocated	13

Small Business Development: Within the total industrial benefits commitment, the contractor is committed to provide $27 million worth of benefits to Small Business in Canada.

As of December 1995, $129.3 million of Industrial Regional Benefits had been claimed for achievement as compared to the related Project to-date commitment value of $65.6 million.

7. Summary of Costs

The non-recurring costs associated with the approved project are:

Figure 63: Cost and Expenditure Detail

(thousands of dollars)	Currently Estimated Total Cost	Forecast Expenditures To March 31 1997	**Estimates 1997-98**	Future Years Require-ments
CFSSU	288,020	122,781	**69,078**	96,161

When the upgraded Canadian Forces Supply System is fully operational, the anticipated in-service annual recurring Personnel, Operations and Maintenance (Vote 1) costs attributable to the Canadian Forces Supply System are estimated to be $7.8 million.

Leopard Thermal Sight (LTS) Project

1. Overview

On 19 September 1996, Treasury Board gave Effective Project Approval for a thermal sight for the Leopard tank. The thermal sight will be obtained by procuring surplus Leopard 1A5 cast turrets fitted with the EMES 18 thermal sight from Germany, refurbishing these turrets and exchanging them with the welded turrets currently on the Leopard C1. Refurbishment and exchange of turrets will be sole sourced to a German tank manufacturer while maximizing Canadian content. Surplus equipment will be disposed through the prime contractor.

2. Lead and Participating Departments

• Lead Authority:	Department of National Defence
• Service Department:	Public Works and Government Services Canada
• Third Parties:	Industry Canada
	Atlantic Canada Opportunities Agency
	Western Economic Diversification Canada
	Federal Office of Regional Development (Quebec)
	Foreign affairs & International Trade
	Indian & Northern Affairs Canada

3. Prime and Major Sub-Contractors, Address

• Prime Contractor:	Gesellschaft für logistischen Service mbH, Germany
• Sub-Contractors	Wegmann & Co GmbH, Germany
	Canadian sub-contractor(s) to be determined

4. Major Milestones

• Treasury Board Approval	Sep 1996
• Contract award for surplus turrents	Jan 1997
• Refurbishment contract	May 1997
• First Vehicle Delivery	Sep 1998
• Last Vehicle Delivery	Mar 2000

5. Achievements and Explanations of Variances

No achievements to report at this time

6. Industrial Benefits

As part of the contract negotiations for the LTS and associated logistics support, the Government will negotiate Industrial and Regional Benefit commitments.

7. Summary of Costs

The non-recurring costs associated with the LTS project are:

Figure 64: Cost and Expenditure Detail

(thousands of dollars)	Currently Estimated Total Cost	Forecast Expenditures to March 31 1997	**Estimates 1997-98**	Future Years' Require-ments
Leopard Thermal Sight project	145,439	35,000	**34,762**	75,677

There is no anticipated incremental annual recurring Personnel, Operations and Maintenance costs for the LTS project.

D. Additional Financial Information

1. MINISTRY REQUIREMENTS

Figure 65: Net Ministry Expenditures by Business Line/Activity

Financial Requirements 1997-98
(thousands of dollars)

				Spending Authorities	
					(Voted) (Appropriations)
	Gross Expenditures Total	**Revenue to the Vote**	**Total Ministry Main Estimates**	**Statutory Expenditures**	**Non Statutory Expenditures**
Business Lines/Activities					
Maritime Forces	2,058,234	(24,094)	2,034,140	----	2,034,140
Land Forces	2,860,574	(157,947)	2,702,627	----	2,702,627
Air Forces	2,541,782	(156,596)	2,385,186	----	2,385,186
Joint Operation and Civil Emergency Preparedness	342,086	(3,983)	338,103	----	338,103
Communications and Information Management	407,240	(3,106)	404,134	----	404,134
Support to the Personnel Function	854,213	(20,444)	833,769	19,175	814,594
Materiel, Infrastructure and Environment Support	767,604	(4,845)	762,759	----	762,759
Department/Forces Executive	474,663	(18,863)	455,800	704,332[1]	(248,532)[1]
Total Program	**10,306,396**	**(389,878)**	**9,916,518**	**723,507**	**9,193,011**
Total Ministry					
Revenue Credited to the Vote	**(389,878)**				
Other Revenues and Expenditures					
Revenue credited to the Consolidated Fund	(78,966)		(78,966)		
Estimated Cost of services by other Departments	845,230		845,230		
Net Ministry Expenditures	**10,682,782**		**10,682,782**		

(1) Contributions to Employee Benefit Plans and Minister's allowances are already included in Business Lines Gross Expenditures

Figure 66: Gross and Net Departmental Expenditures by Business Line/Activity

(thousands of dollars)

	Main Estimates 1996-97	Main Estimates 1997-98	Planned 1998-99	Planned 1999-00
Gross Expenditures by Business Lines/Activities				
Maritime Forces	2,163,634	2,058,234	1,868,994	1,899,069
Land Forces	3,195,510	2,860,574	2,842,735	2,826,067
Air Forces	2,739,342	2,541,782	2,428,506	2,701,473
Joint Operations and Civil Emergency Preparedness	343,775	342,086	318,754	311,728
Communications and Information Management	376,073	407,240	371,261	364,738
Support to the Personnel Function	681,076	854,213	780,144	787,789
Materiel, Infrastructure and Environment Support	973,130	767,604	646,587	653,955
Department/Forces Executive	490,379	474,663	454,858	456,807
Total Gross Expenditures	**10,962,919**	**10,306,396**	**9,711,839**	**10,001,626**
Less:				
Revenue credited to the Vote and Revenue credited to the Consolidated Revenue Fund by Business Lines/Activities				
Maritime Forces	(24,436)	(24,094)	(23,057)	(23,441)
Land Forces	(155,664)	(157,947)	(135,326)	(134,345)
Air Forces	(176,040)	(156,596)	(129,860)	(127,740)
Joint Operations and Civil Emergency Preparedness	(4,125)	(3,983)	(3,707)	(3,842)
Communications and Information Management	(3,278)	(3,106)	(2,922)	(2,984)
Support to the Personnel Function	(20,924)	(20,444)	(19,194)	(19,662)
Materiel, Infrastructure and Environment Support	(5,086)	(4,845)	(4,072)	(4,056)
Department/Forces Executive	(114,746)	(97,829)	(86,879)	(86,734)
	(504,299)	**(468,844)**	**(405,017)**	**(402,804)**

Figure 66: Gross and Net Departmental Expenditures by Business Line/Activity (continued)

(thousands of dollars)

	Main Estimates 1996-97	Main Estimates 1997-98	Planned 1998-99	Planned 1999-00
Total Net Expenditures by Business Lines/Activities				
Maritime Forces	2,139,198	2,034,140	1,845,937	1,875,628
Land Forces	3,039,846	2,702,627	2,707,409	2,691,722
Air Forces	2,563,302	2,385,186	2,298,646	2,573,733
Joint Operations and Civil Emergency Preparedness	339,650	338,103	315,047	307,886
Communication and Information Management	372,795	404,134	368,339	361,754
Support to the Personnel Function	660,152	833,769	760,950	768,127
Materiel, Infrastructure and Environment Support	968,044	762,759	642,515	649,899
Department/Forces Executive	375,633	376,834	367,979	370,073
Total Net Expenditures	**10,458,620**	**9,837,552**	**9,306,822**	**9,598,822**

2. REVENUES AND EXPENDITURES

Figure 67: Revenues Credited to the Vote by Business Line/Activity

(thousands of dollars)

	Actuals 1994-95	Actuals 1995-96	1996-97 Estimates	1997-98 Estimates	1998-99 Planned	1999-00 Planned
Maritime Forces	23,059	20,634	24,436	24,094	23,057	23,441
Land Forces	148,414	152,601	155,664	157,947	135,326	134,345
Air Forces	155,985	147,731	176,040	156,596	129,860	127,740
Joint Operations and Civil Emergency Preparedness	4,170	2,973	4,125	3,983	3,707	3,842
Communications and Information Management	3,480	2,881	3,278	3,106	2,922	2,984
Support to the Personnel Function	27,195	18,257	20,924	20,444	19,194	19,662
Materiel, Infrastructure and Environment Support	5,885	4,758	5,086	4,845	4,072	4,056
Department/Forces Executive	12,134	17,920	18,366	18,863	16,183	16,038
Total Credited to the vote	**380,322**	**367,755**	**407,919**	**389,878**	**334,321**	**332,108**

Figure 68: Details of Transfer Payments by Business Line/Activity (dollars)

	Actuals 1994-95	Actuals 1995-96	1996-97 Estimates	1997-98 Estimates
Grants by Business Lines/Activities				
Joint Operations and Civil Emergency Preparedness				
Research Fellowships - Emergency Planning	-----	-----	54,000	54,000
Support to the Personnel Function				
(S) Payments to dependents of certain members of the Royal Canadian Air Force killed while serving as instructors under the British Commonwealth air Training Plan	73,075	167,191	74,902	175,000
Department/Forces Executive				
Civil Pensions and Annuities:				
Mrs. Mary Whittington	200	200	200	200
Mrs. Elenor F. Nixon	1,047	803	1,048	-----
Mr. R. P. Thompson	12,179	12,280	12,483	12,845
Conference of Defence Associations	252,000	200,000	100,000	-----
Army Cadet League of Canada	205,000	205,000	205,000	205,000
Air Cadet League of Canada	205,000	205,000	205,000	205,000
Navy League of Canada	205,000	205,000	205,000	205,000
Royal Canadian Naval Association	8,540	6,830	3,415	-----
Naval Officers Association	23,120	18,500	9,250	-----
Canadian Airforce Association	30,830	24,670	12,335	-----
Royal Canadian Navy Benevolent Fund	10,285	10,285	10,285	10,285
Rifle Associations	100,000	75,000	-----	-----
Military and United Services Institutes	27,065	25,560	24,056	24,056
Security and Defence Forum [1]	1,712,085	1,658,138	1,700,000	1,700,000
Canadian Institute of Strategic Studies	99,750	86,500	89,250	89,250
Centre for Conflict Studies	67,500	63,750	60,000	60,000
Canadian Institute of International Affairs	45,000	42,500	40,000	40,000
City of Calgary	3,130,961	1,622,064	2,120,000	2,330,000
Atlantic Council of Canada	50,000	-----	-----	-----
International Institute of Strategic Studies	25,000	-----	-----	-----
Cornwallis Park Development Agency	-----	6,000,000	-----	-----
Institute of Environmental Monitoring and Research	-----	-----	-----	1,125,000
Province of New Brunswick	-----	-----	-----	1,000,000
Total Grants	**6,283,637**	**10,629,271**	**4,926,224**	**7,235,636**

[1] Formerly Called "Canadian Universities - Military Studies"

Figure 68: Details of Transfer Payments by Business Line/Activity (Continued)

	Actuals 1994-95	Actuals 1995-96	1996-97 Estimates	1997-98 Estimates
Contributions by Business Lines/Activities				
Joint Operations and Civil Emergency Preparedness				
Contributions to Provinces and Municipalities persuant to the Emergency Preparedness Act	-----	-----	4,776,110	4,584,000
Major Industrial Accident Coordination Committee	-----	-----	30,000	-----
Royal Society of Canada for the International Decade for Natural Disaster Reduction	-----	-----	45,000	45,000
Support to the Personnel Function				
Military Pensions, Pension Contributions and other benefits				
(S) Payments under Parts I-IV of the Defence Services Pension Continuation Act (R.S.C. D-3)	4,233,674	3,973,608	5,298,000	4,000,000
(S) Payments under the Supplementary Retirement Benefits Act (R.S.C. 43 - 2nd Supp.)	13,084,094	14,996,734	11,921,000	15,000,000
Associations of Canadian Community Colleges	-----	-----	-----	300,000
Department/Forces Executive				
NATO Military Budgets and Agencies	95,178,334	105,424,137	95,185,000	91,890,000
NATO Infrastructure (capital expenditures)	73,772,267	65,132,404	54,000,000	52,000,000
Mutual Aid	12,411,395	2,797,095	1,593,000	1,272,000
NATO Allied Command Rapid Reaction Corps Headquarters	122,332	52,268	158,000	158,000
Subtotal - NATO	**181,484,328**	**173,405,904**	**150,936,000**	**145,320,000**
Contributions to Provinces and Municipalities for Capital Assistance projects	3,203,686	6,691,390	5,072,800	5,072,800
Contributions to the International Maritime Satellite Organization	221,175	200,094	210,000	192,500
Contribution to the Civil Air Search and Rescue Association	795,009	907,832	1,011,426	1,097,020

Figure 68: Details of Transfer Payments by Business Line/Activity (continued)

	Actuals 1994-95	Actuals 1995-96	1996-97 Estimates	1997-98 Estimates
Civil Air Search and Rescue New Initiatives	-----	110,000	-----	-----
Military Training Assistance Program	381,714	1,173,537	3,400,000	2,150,000
Canadian International PeaceKeeping Centre	-----	2,015,101	2,000,000	500,000
Norflicks Productions	100,000	-----	-----	-----
Total Contributions	**203,503,680**	**203,474,200**	**184,700,336**	**178,261,320**
Total Grants and Contributions	**209,787,317**	**214,103,471**	**189,626,560**	**185,496,956**

Figure 69: Details of Financial Requirements by Object

(thousand of dollars)

	Actuals 1994-95	Actuals 1995-96	1996-97 Estimates	1997-98 Estimates	1998-99 Planned	1999-00 Planned
Personnel						
Civil salaries and wages	1,130,422	970,577	931,332	900,529	822,057	848,378
Contributions to employee benefit Plans	162,932	151,469	144,249	159,890	143,734	148,194
Civilian retirement leave and severance pay	182,918	215,698	121,836	100,391	38,161	13,987
Other civilian personnel costs	29,175	30,147	13,485	17,070	15,381	15,540
Pay of the forces	3,152,738	2,944,681	2,924,040	2,982,018	2,920,638	2,932,124
Military retirement leave and severance pay	490,161	195,605	43,750	84,008	82,384	81,285
Other military personnel costs	217,945	304,512	201,891	191,470	222,983	194,073
Contributions to military pension funds	617,898	578,953	588,657	544,393	535,921	538,104
	5,984,189	5,391,642	4,969,240	4,979,769	4,781,259	4,771,685
Goods and Services						
Travel	379,027	342,742	324,778	292,431	286,039	305,590
Other transportation and communications	135,103	125,024	174,771	108,432	106,062	113,311
Information	28,790	32,419	13,500	23,946	23,423	25,024
Education of dependents	8,012	3,189	5,026	1,311	1,282	1,370
Janitorial and base support	89,211	71,295	74,783	44,782	43,803	46,797
Other professional and special services	471,343	502,094	523,460	419,973	410,791	438,870
Contractual Research	-----	111,192	100,000	98,100	95,956	102,514
Rentals	133,357	134,957	69,107	110,259	107,849	115,220
Building and works repair	246,879	252,966	206,243	168,096	164,421	175,660
Equipment repair	569,194	531,279	524,489	537,496	525,747	561,678
Spares and accessories	400,457	384,559	402,975	356,425	348,632	372,461
Fuel and electricity	311,672	307,370	315,019	211,393	206,772	220,905
Food and Clothing	108,459	92,749	96,265	80,572	78,811	84,198
Other utilities, materials and supplies	256,805	253,186	244,332	202,600	198,171	211,717
Ammunition[1]	-----	252,436	213,654	213,600	208,931	223,212
Other subsidies and payments	36,332	32,761	31,454	153,714	153,120	154,938
	3,174,641	3,430,218	3,319,856	3,023,130	2,959,810	3,153,465
Total Operating	**9,158,830**	**8,821,860**	**8,289,096**	**8,002,899**	**7,741,069**	**7,925,150**

Figure 69: Details of Financial Requirements by Object (Continued)

(thousand of dollars)

	Actuals 1994-95	Actuals 1995-96	1996-97 Estimates	1997-98 Estimates	1998-99 Planned	1999-00 Planned
Capital						
Civil salaries and wages	17,721	18,182	17,641	15,047	12,907	7,853
Pay of the forces	34,102	30,394	33,266	29,990	22,226	15,137
Allowances and other benefits	250	471	14	15	6	19
Travel and transportation	23,773	16,390	16,122	14,305	13,564	9,218
Information	2	37	1	-----	-----	-----
Consultant Services	23,211	24,791	15,961	12,970	5,080	2,377
Contract administration	22,759	18,695	10,076	4,358	2,097	1,540
Other professional and special services	123,137	62,329	39,443	52,110	28,208	17,420
Rentals	238	495	293	161	35	31
Repair and Maintenance	24	162	-----	2,442	4,258	11,549
Utilities, materials and supplies	5,403	4,651	44	2,636	18,791	22,190
Construction and acquisitions of land, buildings and works	218,489	188,973	332,247	250,740	140,406	93,466
Construction and acquisitions of machinery and equipment	2,315,769	2,339,420	2,019,053	1,733,141	1,542,379	1,722,200
Custom duties and excise tax	536	608	36	85	43	-----
Total capital	2,785,414	2,705,598	2,484,197	2,118,000	1,790,000	1,903,000
Transfer payments	209,788	214,103	189,626	185,497	180,770	173,476
Total Program	**12,154,032**	**11,741,561**	**10,962,919**	**10,306,396**	**9,711,839**	**10,001,626**
Less: Receipts and revenues credited to the Vote	380,322	367,755	407,919	389,878	334,321	332,108
	11,773,710	**11,373,806**	**10,555,000**	**9,916,518**	**9,377,518**	**9,669,518**

[1] Ammunition was classified as a capital cost through 1994-95, and was transferred to the Operating Vote in 1995-96.

Emergency Preparedness Canada has returned to the Defence Services Program beginning in 1996-97. Figure 69 reflects this consolidation.

3. CONTINGENT LIABILITIES

List of Contigent Liabilities

As of March 31, 1996 contingent liabilities estimated at $5,192.9 million were outstanding against National Defence.

- $192.9 million relate to over 132 individual cases of pending or threatened litigation. Most of these claims are for injuries sustained by persons, or damaged sustained by their property, or loss of income or else claimed to result from National Defence actions.

- In addition, $5,000.0 million relate to a single claim. This significant claim is for NATO overflights since 1979, Goose Bay, Newfoundland.

While these individual cases are in various stages of litigation, it is not the policy of the Department to comment on their expected outcomes. They must however, be recognized as potential liabilities against the Crown and are therefore presented for information purposes only.

E. Emergency Preparedness Canada

1. INTRODUCTION

Emergency Preparedness Canada (EPC) is a civilian organization which supports the Minister in carrying out his mandate to "advance civil preparedness in Canada for emergencies of all types ... by facilitating and coordinating, among government institutions and in cooperation with provincial governments, foreign governments and international organizations, the development and implementation of civil emergency plans." The principal authorities for EPC's activities are the *Emergency Preparedness Act*, Chapter 11, S.C., 1988; the *Emergencies Act*, Chapter 29, S.C., 1988; *A Federal Policy for Emergencies*; and various Memoranda of Understanding with provincial and territorial governments and other countries.

The first principle of emergency preparedness in Canada is that emergencies/disasters should be dealt with locally whenever possible. The federal government intervenes only when asked to do so by provincial/territorial authorities, or when the emergency situation clearly lies within federal jurisdiction by virtue of its size, location or nature. However, since federal, provincial, territorial and municipal plans need to be compatible, planning is carried out in concert with the various levels of government. Such plans should also be compatible with those of the US states bordering Canada. Consensus-building and leading by example are the keys to making progress within such a multi-jurisdictional environment.

The second basic principle of emergency preparedness in Canada is the all-hazards approach. The causes of emergencies and disasters are diverse but the response capabilities required to cope with them are similar. Therefore, to the extent possible, emergency planning is built on these required common response capabilities.

2. OBJECTIVE

The program objective is to contribute to, and ensure, an adequate and reasonably uniform level of emergency preparedness throughout Canada.

3. MISSION

The mission of EPC is to safeguard lives and reduce damage to property by fostering better preparedness for emergencies in Canada.

4. PROGRAM ORGANIZATION FOR DELIVERY

EPC operates as a Branch of the Department of National Defence. The Branch is headed by an Executive Director who reports to the Deputy Chief of the Defence Staff.

To meet its objective and fulfil its mission, EPC delivers services in six key, inter-linked and mutually supportive service lines as follows: plans coordination, testing and evaluation; training and education; risk assessment and monitoring/warning/reporting of emergencies and, if necessary, coordination of the federal response to emergencies; public awareness and information; international

civil emergency preparedness and financial assistance through Grants and Contributions. The ultimate product is a state of emergency preparedness in Canada that will address, in part, Canadians' expectations with respect to their safety and security.

5. OPERATING CONTEXT AND KEY INITIATIVES

A number of external factors influence EPC's emergency preparedness activities. For example, the recent budget cuts stemming from the 1994 Defence White Paper and NDHQ staff reduction initiatives, combined with Program Review 1 and previously announced cuts, will see EPC's operating budget reduced by over 33% and its FTE strength reduced from 110 to 80 FTEs by fiscal 1998-99, thus limiting EPC's ability to advance federal program priorities. Downsizing, reorganization and fiscal restraint at other federal departments/agencies as well as at the provincial/territorial and municipal levels of government have severely limited the ability of all government stakeholders to meet their emergency planning responsibilities, and have placed new and greater pressures on EPC to exercise its legislated mandate. In addition, while the provinces share many interests and cooperate with the federal government whenever possible, their program priorities in any given year may not be entirely consistent with those of the federal government. This factor, coupled with uneven resource capabilities, hinders timely fulfilment of federal program priorities. Furthermore, reductions to Grants and Contributions (27.4% by 1997-98 relative to 1994-95) in general, and to the Joint Emergency Preparedness Program (JEPP) in particular, are keenly felt by the provinces and territories. While these reductions have not eliminated federal leverage with the provinces/territories, they have reduced federal influence on provincial/territorial emergency preparedness initiatives.

Various international factors impact on the emergency preparedness program in Canada. Current bilateral emergency preparedness relationships with the United States are conducted under the umbrella of the 1986 CA/US Agreement on Cooperation in Comprehensive Civil Emergency Planning and Management, and are overseen by the EPC co-chaired Consultative Group which meets once a year to discuss trans-border issues of mutual interest. The agreement was updated in 1996 to bring it into line with the current strategic context and governmental organizations.

The geo-political evolution of the former Warsaw Pact nations has virtually eliminated the threat of armed East-West conflict, allowing governments to pay even more attention to emergency planning measures designed to mitigate and respond to natural and human-made disasters. As a consequence of changes in the global strategic balance, EPC's responsibilities related to NATO have taken on a wider significance as that organization continues to forge closer ties with its former adversaries of Central and Eastern Europe (CEE) and the Former Soviet Union (FSU), while, at the same time, assisting them in their efforts to institute democratic reform. Canada, through EPC, has been in the forefront of providing such assistance in the field of civil emergency preparedness. In addition, the International Decade for Natural Disaster Reduction (IDNDR) sponsored by the United Nations (with active support by Canada), has been and continues to be both a catalyst for, and evidence of, an increasing awareness throughout the world of the need for global cooperation in emergency preparedness planning. As a result, civil emergency preparedness and response activities have been accorded an increasingly important and visible place on the political agenda of many industrialized and developing nations throughout the 1990s.

6. CHANGE MANAGEMENT ISSUES

To continue to meet its statutory responsibilities within an environment of substantially reduced human and financial resources, changes are necessary. EPC plans to cope with the resource constraints by seeking out further cost-sharing partnering alliances with the private and voluntary sectors, as well as with other federal departments/agencies and other levels of government, regarding joint publications, cost-shared initiatives and other cooperative ventures. A recently established Federal-Provincial-Territorial Communications Group will enable EPC to coordinate planning and foster joint initiatives among the jurisdictions, and ensure the timely delivery of consistent messages to all Canadians on the role of emergency preparedness. A national approach will also allow for better use of funds from each jurisdiction and give all partners a better exposure for their communications dollars. Access to, and quality of, emergency preparedness and response training will be enhanced through continuing the implementation of the Federal-Provincial-Territorial Training Strategy.

There will also be an increased reliance on informatics technology to deliver the emergency preparedness program. For example, information handling capabilities at the Government Emergency Operations Coordination Centre (GEOCC) will continue to be modernized through hardware/software upgrades. Internet access will continue to be expanded, including intranet for internal EPC usage. A system to facilitate the administration of the Disaster Financial Assistance Arrangements (DFAA) will also be developed. In addition, in recognition of Treasury Board's new Financial Information Strategy, EPC will implement, for internal management purposes, full accrual accounting and capitalization of assets in fiscal year 1997-98 and explore the development of a system for electronic authorization and authentication (EAA).

The foregoing strategies will enable EPC to strengthen its leadership role, improve program delivery, increase professionalism in emergency management and enhance client awareness of the role of emergency preparedness. This, in turn, will ensure that EPC continues to meet its legislated responsibilities in its six service lines and fulfil its mission to safeguard lives and reduce damage to property by fostering better preparedness for emergencies in Canada.

7. RESULTS EXPECTATION

Specific results expected in the six service lines over the 1997-1998 to 1999-2000 planning period include the following: In the area of Plans Coordination, Testing and Evaluation, development and conduct of exercise CANATEX 3 will result in enhanced national preparedness for nuclear emergencies and improved capabilities to respond. The development of a concept and strategy regarding heavy urban search and rescue (HUSAR) will help to further the establishment of a coordinated HUSAR capability which is able to respond effectively to emergency situations anywhere in Canada. The development of a National Support Planning Framework will result in a standard organizational and conceptual basis for federal plans for supporting the provinces/territories and the United States in major emergencies. Finalizing the development of EPC's Business Resumption Plan (BRP) and promoting business resumption planning in other federal departments/agencies will result in an enhanced awareness of the need for planning and better preparedness for emergencies. Consultations with First Nations, Indian and Northern Affairs Canada, and provinces/territories on various issues will result in the advancement of national emergency preparedness for First Nations achieving self-governing status.

In the Training and Education service line, full implementation of the Federal-Provincial-Territorial Training Strategy will enable 30,000 students to be trained annually, thereby increasing the level of emergency preparedness and response capability across Canada.

In the Risk Assessment and Monitoring/Warning/Reporting service line, the creation of the Natural Hazards Electronic Map and Assessment Tools Information System (NHEMATIS) will advance knowledge/technology, thereby resulting in better preparedness for emergencies. The establishment of an Emergency Operations Reserve corps will result in an enhanced emergency operations coordination capability by ensuring that sufficient support is available during emergencies. The monitoring and reporting of events such as the flooding in the Saguenay region of Quebec will ensure that federal departments/agencies and elected officials are provided with sufficient information on a timely basis to make informed decisions.

Within the Public Awareness and Information service line, promotion of programs such as SAFE GUARD communications and National Emergency Preparedness Week will result in improved public awareness of emergency and response activities in all levels of government, as well as in non-governmental organizations, the private sector and the public at large. The ongoing production of publications, media advisories, public service announcements, displays/exhibitions and responses to public or parliamentary enquiries will also result in increased public awareness of risks and the need to prepare for emergencies/disasters.

In the area of International Emergency Preparedness, activities conducted under the Canada/United States Agreement on Cooperation in Civil Emergency Planning and Management, as well as coordination of trans-border cooperation in exercises and other joint planning ventures, will ensure that emergency preparedness professionals in both countries are familiar with one another's approaches and experiences in the field of emergency management, and that policy issues of mutual concern are discussed and resolved. Coordination/participation in NATO Civil Emergency Planning activities, including the promotion of Partnership for Peace (PfP) objectives, ensures that more effective and democratic models and means of emergency preparedness are promoted in Central and Eastern Europe (CEE) and the former Soviet Union (FSU) nations.

Ongoing activities in the Grants and Contributions service line will result in the delivery of assistance in accordance with the provisions of established programs and enhance federal influence in the sphere of emergency preparedness and response.

8. SUMMARY OF FINANCIAL AND PERSONNEL REQUIREMENTS

Figure 70: Financial Requirements for 1997-98

(thousands of dollars)	**Estimates 1997-98**	Forecast 1996-97	Change
Emergency Preparedness Canada:			
Operating and Minor Capital	**8,997**	10,434	(1,437)
Transfer Payments	**4,600**	69,052	(64,452)
Total	**13,597**	79,486	(65,889)
Human Resources (FTE)	**83**	89	(6)

Explanation of Change: The financial requirements for 1997-98 are $65.889 million lower than the 1996-97 forecast due to:

	($000)
• Disaster Financial Assistance Arrangements (DFAA[1]) in 1996-97	(64,147)
• 5% Operating Budget Carry-Forward from FY 1995-96 to FY 1996-97	(515)
• 1994 Defence White Paper/NDHQ Staff Reductions, Program Review 1 and Other Budget Reductions	(1,242)
• Extension of Contribution Agreement to the Royal Society of Canada to 31 March 2000	15

[1] The DFAA requirements cannot be forecasted, they are not included in the Estimates and are therefore shown here as a reduction. DFAA payments are funded through Supplementary Estimates.

Explanation of 1996-97 Forecast: The 1996-97 forecast of $79.486 million, which is based on information to management as of November 21, 1996, is $64.662 million or 436.2% more than the funding of $14.824 million provided through EPC's 1996-97 Main Estimates. The difference reflects the following items:

	($000)
Disaster Financial Assistance Arrangements	64,147
5% Operating Budget Carry-Forward from FY 1995-96 to FY 1996-97	515

9. REPORT ON PERFORMANCE BY SERVICE LINE: 1993-94 - 1995-96

The ultimate result of EPC's activities is a state of emergency preparedness in Canada that will address, in part, Canadians' expectations with respect to their safety and security. EPC seeks to advance the state of emergency preparedness in Canada by delivering services in the following areas: plans coordination, testing and evaluation; training and education; risk assessment and monitoring/warning/reporting of emergencies and, if necessary, coordination of the federal response to emergencies; public awareness and information; international civil emergency preparedness; and financial assistance through Grants and Contributions. To enhance EPC's ability to meet its legislated responsibilities in an environment of severe fiscal restraint, EPC continues to strengthen its leadership role, improve program delivery, increase professionalism in emergency management and enhance client awareness of the role of emergency preparedness by seeking out further cost-sharing partnering alliances with the private and voluntary sectors, implementing new communications and training strategies, and increasing its reliance on informatics technology. Highlights of performance, by service line, over the fiscal 1993-94 through fiscal 1995-96 reporting period have been summarized as follows:

Plans Coordination, Testing and Evaluation: Planning coordination has been facilitated through annual meetings of senior federal-provincial-territorial officials responsible for emergency

preparedness, and less frequent meetings of the Ministers who are responsible for emergency preparedness. These meetings have provided high-level fora for discussion of policy, planning and operational matters of mutual concern. Major issues for consideration at the February, 1996 meeting included the establishment of a Federal-Provincial-Territorial Communications Coordination Group, the need for a heavy urban search and rescue capability, and progress in implementing the Federal-Provincial-Territorial Strategy for Training and Education in Emergency Preparedness and Response. As well, the Emergency Preparedness Advisory Committee (EPAC), which is a senior (Assistant Deputy Minister level) committee chaired by the Deputy Chief of the Defence Staff, has met as required to address policy matters, program priorities and crisis management issues in federal departments and agencies. For example, when an international nuclear emergency exercise identified weaknesses in the Federal Nuclear Emergency Plan (FNEP), the EPAC agreed that the required revisions to the FNEP would be addressed as a federal emergency preparedness program priority for interdepartmental coordination in 1995-96. Health Canada, as the lead department for the Plan, subsequently issued a contract for the revision of the Federal Nuclear Emergency Plan.

EPC also maintains a regional office in the capital city of each province to serve as the focal point of contact between the federal government and the emergency measures organizations of the provinces/territories. During the reporting period, these offices successfully coordinated federal assistance in their respective regions during emergencies and enhanced the state of emergency preparedness in Canada by facilitating the coordination of financial aid programs and various other federal/provincial/territorial initiatives, and maintaining contact with other stakeholders such as non-governmental organizations, volunteer agencies, the private sector, and American officials in bordering US states.

To advance the state of national preparedness for emergencies, Exercise CANATEX 2 was held in May, 1994 to test and evaluate the National Earthquake Support Plan and its interfaces with the British Columbia Earthquake Response Plan and the Alberta Support Plan. The final report was completed in October, 1994. Since that time, officials of EPC and representatives of 20 other federal departments and agencies have been working with officials from British Columbia and Alberta to revise the NESP based on lessons learned during CANATEX 2. The revised NESP has served as a prototype for the National Support Planning Framework, which is a generic approach to managing the federal effort in any major emergency. Work has also begun on the development of CANATEX 3 as a test, in April 1998, of the Federal Nuclear Emergency Plan and its interfaces with the plans of Ontario, the United States and the International Energy Agency.

Other activities over the reporting period included the update, in May, 1995 of *A Federal Policy for Emergencies*, which comprises a policy statement outlining the basic principles and objectives of emergency preparedness and a discussion of the emergency preparedness responsibilities assigned to individual departments and agencies, and the release in 1996 of the updated Government Emergency Book to provide more useful information and guidance to a wider readership on emergency actions to be taken in a crisis. Over the planning period, EPC has also been fostering the development of Business Resumption Plans in all agencies central to constitutional government. As soon as these agencies have completed their individual plans, EPC will develop an umbrella plan which will coordinate multi-plan implementation to ensure the continuity of constitutional government during an emergency.

Training and Education: Ministerial approval for implementation of the Federal-Provincial-Territorial Training Strategy was obtained in September, 1993. Under the new strategy, which is being phased in over five years and will be completed by the end of fiscal 1998-99, the provinces/territories will progressively assume more responsibility for basic and entry-level courses while EPC's Canadian Emergency Preparedness College (CEPC) will be delivering more advanced training and developing new training packages. This initiative has resulted in better training and improved access to training. At the start of the strategy approximately 4,000 students were receiving some form of training each year. By the end of Fiscal Year 1995-96, this number had escalated to over 12,000 students. Full implementation of the Strategy will ensure that the 30,000 Canadians who require emergency preparedness and response training every year will receive it at no extra cost to the federal government, thereby improving program delivery and increasing professionalism in emergency management.

In addition to the delivery of EPC-sponsored courses, and assistance to the provinces and territories in the design and conduct of basic and entry-level courses, the College hosted and/or sponsored special seminars, workshops and training sessions for other federal departments/agencies. Instructional staff from the College also assisted Indian and Northern Affairs Canada in the design and delivery of a number of Basic Emergency Preparedness courses for First Nations in Quebec.

EPC's regional offices were also involved in emergency preparedness training and education programs. The briefings, workshops, and seminars conducted by regional staff over the reporting period were an important means of raising the level of awareness of, and need for, emergency preparedness and response planning in their respective regions.

Risk Assessment and Monitoring/Warning/Reporting of Emergencies and Coordinating the Federal Response: Throughout the reporting period, the ability to receive and correctly interpret indicators of impending civil emergencies has been the key to an effective and timely response by the federal government. To maintain this capability, EPC operates the Government Emergency Operations Coordination Centre (GEOCC) which plays a significant role in monitoring and reporting on impending, developing and actual emergencies. The GEOCC functions around the clock and provides a central location for emergency government operations through which all operational communications can be channelled and from which senior departmental officials can coordinate support, analyze the situation and respond to changing emergency conditions. If necessary, any federal department or agency can assemble and provide a coordinated federal response to an emergency from the GEOCC.

With respect to Risk Assessment, a number of projects were undertaken over the planning period to advance knowledge/technology, thereby resulting in better preparedness for emergencies. For example, in 1993-94, EPC assisted with the assessment, review and cost-sharing of a background paper for use in the revision of the Federal Nuclear Emergency Plan. In 1994-95, EPC participated in a poster-map and digital database project to educate and inform the Canadian public and industry of the nature and impact of natural hazards to our society and environment. It was completed in 1995-96. Work on the Natural Hazards Electronic Map and Assessment Tools Information System (NHEMATIS) commenced in 1995-96; this is a four-year project comprising the development of an electronic natural hazards map and a series of risk assessment/search and query tools for distribution to emergency preparedness (EP) professionals. Under the umbrella of the UN's International Decade for Natural Disaster Reduction, work on the development of a

digitally-based electronic International Hazards Map for Canada, Mexico and the United States also commenced in 1995-96 to enhance EP awareness in the three countries. In addition, with the assistance of Simon Fraser University, EPC was established as a federal presence on Canadian computer networks which are affiliated with the world-wide Internet system. This has enhanced the quality and quantity of information available for Canadian disaster prevention, preparedness, response and recovery/rehabilitation activities.

Public Awareness and Information: A number of projects were undertaken to enhance client awareness of the role of emergency preparedness. In 1993-94, EPC received good media coverage with its public information program, particularly in newspapers and on radio. Publications included a family guide on emergency preparedness to mark the International Year of the Family. In 1994-95, EPC published a new guidebook for helping managers to evaluate their organization's level of emergency preparedness and supported the Canadian Centre for Management Development in the delivery of an effective training program for federal government managers regarding emergency and disaster management. In 1995-96, EPC sponsored the development of a national public recognition program called SAFE GUARD to promote partnership and joint communications among the private, voluntary and governmental organizations which make up the Canadian emergency preparedness community. The program was launched in the Fall of 1995, with three major initiatives: a national television-radio-print public service announcement campaign; several joint publication ventures; and the development on the Internet of SAFEGUARD NET which is a national repository for all publicly-available emergency preparedness information in Canada.

A key development during 1995-96 was the establishment of a Federal-Provincial-Territorial Communications Group to achieve closer cooperation, better coordination and more cost-effective use of resources among federal, provincial and territorial emergency preparedness organizations in the planning and implementation of public awareness programs. The central feature of a national public awareness strategy being developed by the Group will be National Emergency Preparedness Week to be held jointly each year, starting in 1997, under the auspices of EPC and the provincial and territorial emergency management organizations.

Throughout the reporting period, EPC also continued publication of its award-winning quarterly, the *Emergency Preparedness Digest* and pursued efforts to expand subscriptions and readership.

International Civil Emergency Preparedness: Canada/US cooperation throughout the reporting period has been conducted under the umbrella of an agreement, signed by EPC and the Federal Emergency Management Agency (FEMA) in 1986, to reduce impediments to cooperation between the two countries. Under this umbrella, there is an active bilateral program addressing a wide range of emergency preparedness issues at the national and regional levels. For example, in 1995-96 the annual meeting of the CA/US Consultative Group, co-chaired by the heads of EPC and FEMA, resulted in decisions to investigate the need for regulations for the transportation of mixed loads of hazardous materials; to form an ad hoc working group on disaster cooperation mechanisms; to circulate the Joint Radiological Emergency Response Plan to both countries for comment and endorsement; and to review the existing CA/US agreement.

EPC has also provided the Canadian delegate to the Senior Civil Emergency Planning Committee (SCEPC) which is the senior NATO Committee reporting directly to the Council on

emergency planning matters. Subordinate to the SCEPC are nine functional Planning Boards and Committees (PB&Cs), including the Civil Protection Committee which is chaired by Canada (EPC). Largely due to Canadian initiatives, dialogue with the newly-emerging democracies of Central and Eastern Europe (CEE) on civil emergency issues has been included in the Work Plan of the North Atlantic Cooperation Council (NACC) and in the Partnership for Peace (PfP) program.

Grants and Contributions: EPC administers four Contribution programs and one Grant program to encourage emergency preparedness and response activities, assist in the recovery from emergencies/disasters and enhance federal influence in the sphere of emergency preparedness and response. Through the cost-shared *Joint Emergency Preparedness Program* (JEPP), the federal government, in consultation and cooperation with provincial and territorial governments, contributes to projects which enhance the national emergency response capability. The federal contribution is negotiated in each case and the amount of funding provided depends upon the nature of the project, other projects under consideration and the amount of funds available. In 1993-94, the federal contribution exceeded $5.4 million; in 1994-95, the federal contribution exceeded $5.5 million, and in 1995-96, it exceeded $5.2 million.

Payments made under the *Disaster Financial Assistance Arrangements* (DFAA) assist the provincial and territorial governments in cases where the cost of dealing with a disaster would be greater than they could reasonably be expected to bear. At the request of the province/territory and in accordance with a formula based on population, federal payments are made to help restore public works to their pre-disaster condition and to facilitate the restoration of basic, essential, personal property of private citizens, farmsteads and small businesses.

In 1993-94, DFAA payments in excess of $11.9 million were made as follows: Alberta received an advance payment of $5,000,000 for damages caused by severe flooding in 1990; New Brunswick received an advance payment of $3,000,000 for flood damage incurred in 1993; Quebec received a final payment of $3,880,267 for a 1987 flood and British Columbia received a final payment of $54,716 for a flood that occurred in 1989. In 1994-95, payments in excess $10.5 million were dispersed as follows: British Columbia received a final payment of $1,955,578 for damages caused by severe flooding in 1990 and Manitoba received two advance payments totalling $8,600,000 for two separate floods in 1993. In 1995-96, payments in excess of $50.4 million were made as follows: British Columbia received a final payment in the amount of $3,343,629 for damages caused by severe flooding in November, 1990; the Yukon received a final payment in the amount of $318,222 for a 1991 flood and the Northwest Territories received a final payment in the amount of $236,790 for a 1989 flood; Quebec received a final payment in the amount of $45,310,664 as a result of the Oka Crisis and New Brunswick received an advance payment in the amount of $1,200,000 for flooding experienced in 1994.

Under the *Workers' Compensation for Volunteers who are Injured or Killed while Carrying Out Emergency Services Work* program, the federal government has entered into bilateral agreements with most provinces and territories, whereby the federal government reimburses the province/territory for 75% of the costs of compensation awards to registered volunteer emergency site workers who are injured or killed in the course of emergency service training or work. Compensation awards totalled $33,217 in 1993-94; $103,666 in 1994-95 and $87,648 in 1995-96.

In conjunction with several other departments, EPC has also contributed to the Royal Society of Canada to support their work with the Canadian National Committee with respect to the United Nation's International Decade for Natural Disaster Reduction. The Contribution Agreement associated with this initiative has been extended to 31 March 2000, ensuring that the total federal contribution remains at $45,000 annually until the end of the decade.

EPC's only Grant program is the *Stuart Nesbitt White Fellowship*. To encourage disaster research and emergency planning in Canada and to develop a number of professionals in the field, fellowships have been awarded annually to students to pursue post-graduate studies related to emergency preparedness. Funding for this program has been set at $54,000 annually.

10. PERFORMANCE INDICATORS AND FACTORS AFFECTING FUTURE PERFORMANCE

Partnering alliances and an increased reliance on technology have enabled EPC to continue to deliver its program in an environment of shrinking resources and, provided its current resource levels are maintained, EPC does not anticipate any serious problems in meeting its future program objectives. However, any further reductions to EPC's funding levels, as well as reductions to the budgets of other emergency preparedness organizations, will adversely impact on future performance and hamper EPC's progress in meeting its objectives. Given the long lead times inherent in much of EPC's work and its significant inter-relationship with the provincial and territorial governments, a long planning envelope is required to achieve progress in its endeavours to assure the safety and security of Canadians in times of emergency or disaster.

Although EPC has a mandate to stimulate, encourage and coordinate emergency planning at other federal departments/agencies and at other levels of government, organizations other than EPC are ultimately responsible for completed plans and emergency response operations. Consequently, measures of EPC's performance necessarily focus on the range and extent of its interactions, its development of various tools, exercises and training packages to assist the various stakeholders in the development of emergency plans in Canada and abroad, and feedback from the stakeholders. Perhaps the best measure of the state of preparedness in Canada is what happens when a major emergency occurs. The response to the massive flooding in the Saguenay region of Quebec in the summer of 1996 provides an indication of EPC's success in achieving an acceptable state of emergency preparedness in Canada.

F. The National Search and Rescue Program

Canada enjoys one of the most effective and successful search and rescue (SAR) programs in the world, which is a remarkable achievement considering its size, ocean areas of responsibility, challenging geography and inhospitable climate. This record of SAR achievement can be attributed to the unselfish efforts of highly skilled professional SAR practitioners and volunteer personnel in all jurisdictions, federal and provincial, and the dedicated air and marine resources assigned to SAR by the federal government.

The future of SAR in Canada, air, marine and ground (which includes land and inland waters), holds both challenges and restrictions. The realities of fiscal restraint will impact SAR, and be exacerbated by the requirement for "expected" SAR services to continue at their present high level and possibly increase. Clearly the challenges of the future will be to continue to provide the same high level of SAR services to those in distress, within the context of diminishing resources. In this regard, volunteer SAR providers will take on an increasingly important role, particularly in ground SAR activities within the non-federal jurisdictions, and more emphasis will be placed on increasing the availability of volunteers and improving volunteer training and qualification levels to meet the requirements of the job.

This chapter discusses the accomplishments in SAR for fiscal year 1995-96, and describes future objectives and plans to maintain or improve the National Search and Rescue Program in the face of public demand and fiscal restraint.

I. National Search and Rescue Program Plan

The National Search and Rescue Program (NSP) was created in 1986 in response to Cabinet Document 6-0078-86RD(01)(C). It was designated to be managed as a distinct program of government. Overall policy responsibility for SAR was vested in the Lead Minister for Search and Rescue (LMSAR) who would formulate SAR policy in consultation with involved Ministers. All federal government SAR activities are displayed separately in the Part III of the Estimates for each department.

The Minister of National Defence is the LMSAR with authority, responsibility and accountability for the coordination of the NSP. The National SAR Secretariat (NSS) provides direct independent support to LMSAR for the management and conduct of the program.

Since its inception, the NSS has worked in cooperation with the Interdepartmental Committee on Search and Rescue (ICSAR) to develop and manage the NSP. ICSAR is composed of senior representatives of those federal departments which have a responsibility to provide operational SAR response. ICSAR includes the NSS, Department of National Defence, Department of Fisheries and Oceans - Canadian Coast Guard, Canadian Heritage - Parks Canada, Environment Canada - Atmospheric Environment Service, Solicitor General - Royal Canadian Mounted Police and Transport Canada. Additionally representatives from the Treasury Board Secretariat and the Privy Council Office participate in ICSAR activities.

In addition to its federal responsibilities, the NSP as a truly national program also encompasses the efforts and activities of all non-federal government departments, agencies, and organizations, full-time or volunteer, which provide SAR services within their areas of jurisdiction. This scope of NSP involvement was enunciated in Cabinet Decision 425-82RD(C), approved by ICSAR in 1991, and reinforced by the Auditor General in his 1992 Report. As it evolves the NSP continues to be increasingly effective as a national program with the potential to contribute significantly to the efficiency and economy of SAR in Canada.

During the past year considerable progress was made to enhance the NSP: strides were taken to introduce and strengthen partnerships between federal and non-federal operational SAR agencies; the New SAR Initiatives Fund was extended to include provincially sponsored projects; 100 projects were funded through the New SAR Initiatives within the $8.1M allocation; SARVAC, the SAR Volunteers Association of Canada was created to coordinate the development and effectiveness of volunteer SAR activities nationally; four major ICSAR meetings were held plus a number of Coordination and Review sub-committee meetings; and, a set of principles for SAR cost recovery that are applicable as a guideline for any Department were developed by ICSAR. Additionally, the Department of National Defence (DND) prepared specifications and issued a request for proposal for new Canadian SAR helicopters, and the Department of Fisheries and Oceans (DFO)/Canadian Coast Guard (CCG) continued to merge and consolidate CCG vessels, including SAR vessels, into the DFO fleet to optimize service delivery.

II National Search and Rescue Program Plan

A. Summary of Program Plans and Priorities

The National Search and Rescue Program (NSP) encompasses the efforts and activities of all federal and non-federal government departments, agencies and organizations responsible for delivering search and rescue (SAR) services to persons who are lost or in distress. A mix of full-time paid professionals, SAR experts (at all levels of government) and highly skilled volunteer personnel are involved in air, marine and land SAR services in all areas of Canadian responsibility.

The priorities for the NSP for fiscal years 1997-2000 will be to continue to develop the effectiveness of the NSP. Emphasis will be placed on developing and strengthening the role of volunteers in SAR, including supporting the evolution of SARVAC activities: reducing or mitigating SAR incidents through increased emphasis on communications or prevention activities; and developing program performance indicators that provide managers with an indication of the effectiveness and relative economy of their SAR activities, individually and in the context of the NSP. Underlying all activities will be an effort to identify economies or cost containment, and to develop cost-effective solutions for SAR problems.

Federal involvement in the NSP includes the NSS, and federal departments with SAR responsibilities (Department of Canadian Heritage through Parks Canada, Environment Canada through the Atmospheric Environment Service , Department of Fisheries and Oceans through the Canadian Coast Guard, Department of National Defence and Transport Canada). Ontario and Quebec SAR activities are coordinated by the Ontario Provincial Police and Sûreté du Québec respectively.

Non-federal involvement in the NSP includes the participation of each province and territory, their respective police authorities and a broad base of trained volunteer organizations. The Royal Canadian Mounted Police (RCMP), while an arm of the Department of the Solicitor General, continues to coordinate the majority of ground and inland water SAR, and perform the SAR function as a provincial or municipal police force under contract.

The federal portion of the Program is provided by the organizations detailed below.

National Search and Rescue Secretariat

The National Search and Rescue Secretariat (NSS) coordinates the NSP at the federal level and strengthens its partnerships with the provinces and volunteers in an effort to augment the overall SAR capability. It represents and coordinates the Canadian component and policy input into the COSPAS-SARSAT program, a global satellite distress alerting system, and the International Committee on Alpine Rescue.

On behalf of the Lead Minister for Search and Rescue (LMSAR), the Secretariat manages the $8.1 million New SAR Initiatives Fund to augment SAR capability in Canada.

The NSS publishes and distributes a wide variety of informational and educational material, including a quarterly, bilingual search and rescue newsletter, SARSCENE; a Directory of Canadian SAR organizations, and brochures. The NSS organizes and hosts an annual 3-day SARSCENE workshop and trade show for SAR providers, agencies and industries. SARSCENE '97 will be held in Sault Ste. Marie, Ontario. The NSS Resource Centre contains a collection of printed and audio-visual SAR materials available to SAR providers, and others in the search and rescue community. The NSS encourages and supports the use of electronic media to distribute SAR information, and has established a site on the Internet.

In addition, the Secretariat monitors, audits and evaluates all aspects of the SAR program, in cooperation with the SAR delivery departments and agencies.

Department of Canadian Heritage - Parks Canada

The priorities for 1997-98 will be to continue to implement a comprehensive visitor risk management program for national parks, national marine conservation area and reserves, national historic sites and historic canals through the provision of staff training and the ongoing completion of public safety plans for business units; to adjust levels of service, contain costs and recover costs for some SAR services; and to increase visitors' awareness of their responsibilities for personal safety. Parks Canada will also be working with the RCMP and other partners to implement the recently developed Hug-a-Tree and Survive program.

Environment Canada - Atmospheric Environment Service

For 1997-98, Environment Canada's priorities will be to enhance its capacity to anticipate environmental hazards and probable future states of the atmosphere, hydrosphere, sea state and cryosphere (freezing) in order to provide Canadians with timely information on which decisions can be made to reduce risks; extend the time frames within which such risks are managed and link

present conditions to probable hazards and future states of the environment so individuals can make informed decisions about their activities on land, water and in the air.

Department of Fisheries and Oceans - Canadian Coast Guard

Future year emphasis will be placed on capital acquisitions, including the construction of a SAR Hovercraft and the replacement of lifeboats; continued work on the Global Maritime Search and Rescue Plan and Global Maritime Distress and Safety System; increased focus on training and program delivery; increased focus on multi-tasking and enhancing effectiveness; continued efforts to improve recreational boating safety through the Office of Boating Safety to fully establish client consultation mechanisms, including national and regional advisory councils and to improve coordination of communication efforts.

Department of National Defence

In 1997-98, the Department of National Defence (DND) will reduce the number of personnel involved in the management of SAR; assess modern technology alternatives to provide greater efficiency in the management and prosecution of SAR incidents; continue the acquisition process to find a suitable replacement for the Labrador helicopter fleet; and cooperate with other Canadian and international SAR organizations to improve SAR response and interoperability.

Transport Canada

During 1997-98, Transport Canada (TC) will develop policies, regulations, standards and recommended procedures aimed at reducing transportation-related SAR incidents in Canada, and in Canadian-controlled waters or airspace; promote the use of operational practices known to reduce risk in marine, aviation and surface transportation, and in recreational use of the marine, air and land environments; and cooperate with Canadian and international SAR delivery organizations to develop appropriate regulations for the carriage, maintenance and use of SAR alerting systems.

TC will no longer operate large elements of the transportation system, such as the Air Navigation System. Through a long-term program of divestiture, the department will shed its operational responsibilities, and focus on developing, promulgating, promoting and enforcing the regulations, standards, procedures and guidelines needed to control risk - and thus reduce SAR incidents - in Canadian marine, aviation and surface transportation modes.

B. Program Overview

National Search and Rescue Program Overview

The National SAR Secretariat shares its responsibilities for the management of SAR in Canada. The Lead Minister for Search and Rescue (LMSAR) has overall responsibility for the coordination of SAR nationally, a task which he does in concert with the Ministers of the federal SAR delivery departments. Representatives of the Ministers of these departments form the Interdepartmental Committee on Search and Rescue. Individual provincial and territorial Premiers and Commissioners are responsible for the effectiveness and efficiency of SAR in their areas of jurisdiction.

Department of Canadian Heritage - Parks Canada

Parks Canada's program objective is to commemorate, protect and present significant examples of natural and cultural heritage for the benefit, understanding and enjoyment of the people of Canada, while protecting the ecological and commemorative integrity for present and future generations. Parks Canada is responsible for the planning, coordination, accident prevention and delivery of services in 38 national parks, 4 national marine parks and reserves, 131 national historic sites and 7 historic canals. National parks and national marine parks encompass over 270,000 square kilometres in all regions of Canada.

Parks Canada assists the Canadian Coast Guard (CCG) search and rescue response in marine areas bordering national parks, and provides marine accident prevention programs in areas of water and vessel safety, beach patrol and navigation.

Environment Canada - Atmospheric Environment Service

Environment Canada (EC), through the Atmospheric Environment Service (AES), delivers meteorological, hydrological, sea-state and ice information and services for the enhanced prevention of marine, air and land search and rescue incidents and for search and rescue (SAR) mission support. These services come in a variety of products, from up-to-date weather and ice information to timely weather warnings. EC enables Canadians to protect themselves from the negative and even tragic consequences of significant environmental conditions, particularly severe weather, by providing accurate and timely forecasts and warnings of dangerous weather, sea-state, ice conditions and, in collaboration with the provinces, water levels.

To forecast the weather, it is essential to first know the present conditions and their recent evolution: this is the role of the Department's weather observing network, supplemented by observations from other countries and received via the Global Telecommunication System of the World Meteorological Office.

Department of Fisheries and Oceans - Canadian Coast Guard

The objectives of the Canadian Coast Guard (CCG) SAR program are: to save 100 percent of lives at risk; reduce the number and severity of SAR incidents; minimize loss of life, injury, property damage and risk to the environment; support and involve the Canadian Coast Guard Auxiliary (CCGA); maintain the highest professional standards; provide national leadership and effective SAR program management; provide international SAR leadership; maximize SAR system efficiency through innovation; promote volunteerism; increase awareness of the SAR program; assist in the development of the NSP; foster co-operative SAR agreements; and provide humanitarian and civil assistance where possible.

These objectives will help provide an effective SAR service for all those at risk in the marine environment in Canada.

The CCG, through the Office of Boating Safety, has lead responsibility for recreational boating safety through regulatory and non-regulatory prevention activities. The mission of the Office of Boating Safety is to promote safe boating in Canada by working in partnerships; educating and

informing; developing and enforcing regulations and standards; and providing a window of access to the Coast Guard for the boating community.

Department of National Defence

In June 1947, Cabinet authorized the Royal Canadian Air Force (RCAF) to establish facilities and equipment to provide air SAR services and coordinate air rescues. In 1951 Cabinet added the responsibility of marine SAR coordination to the RCAF role. Today, under the NSP, the Department of National Defence (DND) continues to be responsible for coordinating, in collaboration with CCG, the delivery of air and marine responses through three Rescue Coordination Centres (RCCs) located in Halifax, Nova Scotia; Trenton, Ontario; and Victoria, British Columbia, and two Marine Rescue Sub-Centres (MRSCs) in St John's, Newfoundland and Labrador, and Quebec City, Quebec. DND also delivers the primary air SAR resources for air and marine incidents; provides a significant level of secondary SAR assistance from its fleet of aircraft and naval vessels; supports the activities of the Civil Air Search and Rescue Association (CASARA), a volunteer organization; provides ground SAR teams for air incidents when aircrew and passengers are missing; assists civil SAR authorities when requested; contributes to the development of technical and operational standards for COSPAS-SARSAT; and is responsible for the acquisition and operation of the Canadian ground segment components and the Search and Rescue Satellite-Aided Tracking (SARSAT) Repeater.

Transport Canada

Now that the Canadian Coast Guard (CCG) has merged with the Department of Fisheries and Oceans (DFO), Transport Canada (TC) no longer provides direct SAR services. Instead, it develops policies, regulations, guidelines, standards and recommended procedures aimed at controlling risk in marine, air and surface transportation. These activities focus on preventing accidents and incidents that require a SAR response. Through newsletters, seminars and other means, the Department encourages the use of safe operating practices to reduce the need for SAR responses. In conjunction with the Department of National Defence (DND), Transport Canada funds the Civil Air Search and Rescue Association (CASARA), a volunteer group which augments DND search forces, and helps promote the use of safe operating practices throughout general aviation. TC coordinates with DND, the International Civil Aviation Organization and other international organizations to develop standards for aviation and marine emergency beacons, and establish regulations for their carriage, maintenance and use.

C. Details by Business Line

National Search and Rescue Secretariat

The key activity areas for the Secretariat are Federal Coordination; non-federal SAR Programs; Client Services; and Program Review.

The primary focus of Federal Coordination is the coordination of SAR issues across the federal departments with SAR responsibilities, as well as the preparation of planning documents for the Program. Other programs for which Federal Coordination is responsible include the international COSPAS-SARSAT satellite system for distress alerting, the International Committee on Alpine

Rescue, and the management of the New SAR Initiatives Fund for projects to augment Canadian SAR capability.

Non-federal SAR Programs focus on three major objectives: increasing the level of coordination in SAR between provinces and territories through the activities of the Provincial/Territorial Working Group on SAR; increasing the standardization in Ground Search and Rescue Volunteers Association; and seeking commercial and other partnerships to benefit SAR.

Client Services' main initiatives include organizing the annual SARSCENE search and rescue workshop and trade show, producing printed and audio-visual materials, newsletters, directories on SAR while generating alternate funding sources; and establishing national and international access to the Resource Centre collection of SAR reference materials.

Program Review undertakes the role of monitoring, auditing and evaluating all aspects of the SAR program, in cooperation with the federal delivery departments and agencies.

Department of Canadian Heritage - Parks Canada

Consistent with Parks Canada's Business Plan, its program activities are Heritage Protection and Presentation; National Awareness and Program Delivery Support; and Systems Development and Operational Policy. The key initiatives of Parks Canada's SAR program relate primarily to the first two activities. Parks Canada's business lines include ensuring that: appropriate and sufficient public safety services are provided; risk assessments and risk control measures are developed for implementation; accident prevention programs, plans and policies are implemented; and information and advice is provided to assist visitors to national parks, national marine conservation areas and reserves, national historic sites and historic canals.

Environment Canada - Atmospheric Environment Service

Examples of Environment Canada's prevention and support activities include observations of weather, the prediction of future states of the atmosphere, and the identification of hazardous and extreme situations provided around the clock, throughout the year; delivery of warnings by Atmospheric Environment Service offices across Canada through expert consultation services, automatic answering devices, Weatheradio, Weathercopy, NAVTEX, Telecopier, the Atmospheric Environment Service Meteorological Information System, as well as through cooperation with the media and other government departments and agencies. Forecasts and warnings are also available on Environment Canada's Green Lane on the Internet; education and public information services for media, emergency response agencies, key stakeholders and the public through the distribution of information, seminars and publications on meteorological hydrological sea-state and ice condition hazards; provision of expert advice on applications of meteorological, hydrological, sea-state and ice information in support of the development of codes for the design of aircraft, marine vessels, buildings, other structures and operating procedures; operates an integrated program of meteorological Research and Development to better understand atmospheric phenomena and develop more efficient and reliable techniques and technology, such as state-of-the-art numerical weather prediction models, procedures to use super-computers to their full capacity, and powerful workstations used to produce and deliver weather services; direct consultations with the Marine Rescue Sub-Centres (MRSCs) for the operations of the CANSARP Vector drift marine model; direct support to the aviation industry by the further development and operation of the CANERM volcanic ash dispersion model which is used to alert aviators of the movement, altitude and intensity of

hazardous volcanic ash plumes; and respond to some 50 million requests annually from the public for weather and other environmental information, including more than one million requests related to transportation.

Department of Fisheries and Oceans - Canadian Coast Guard

The Department of Fisheries and Oceans (DFO), through the Canadian Coast Guard (CCG), delivers primary marine SAR services for marine and air incidents in areas of federal responsibility, through specially equipped CCG vessels and hovercraft; provides secondary SAR services from its fleet of ships and other resources; collaborates with National Defence in coordinating the delivery of SAR responses by providing marine expertise to the Rescue Coordination Centres (RCCs) in Halifax, Nova Scotia; Trenton, Ontario; and Victoria, British Columbia; operates two Marine Rescue Sub-Centres (MRSCs) in St. John's, Newfoundland and Labrador; and Quebec City, Quebec; and administers the Canadian Coast Guard Auxiliary (CCGA), a volunteer organization.

CCG, through the Office of Boating Safety has lead responsibility for recreational boating safety through regulatory and non-regulatory prevention activities. The Office of Boating Safety conducts an extensive SAR prevention program, directly targeting those most commonly involved in SAR incidents. On this basis, target populations are identified and this program is carried out through collaborative efforts between the CCG and various volunteer groups. Funds are used to conduct safety demonstrations; to carry out courtesy examinations; to produce educational marine safety video tapes and advertisements; to provide direct contact through a toll-free telephone line for marine retailers; and to provide publications such as the Canadian Safe Boating Guide and the Small Fishing Vessel Safety Manual.

Department of National Defence

In July 1988, Canada ratified the International COSPAS (Soviet System for the Search of Vessels in Distress) and SARSAT (Search and Rescue Satellite-Aided Tracking) Program Agreement. This agreement between Canada, France, the United States of America and the Union of Soviet Socialist Republics (now Russia) provides the formal basis for continuing the COSPAS-SARSAT system for an initial 15 years, with the provision for automatic extensions of five year periods. Under the terms of the agreement, Canada is obligated to provide SAR Repeaters for the SARSAT space vehicles. These repeaters receive distress beacon signals and re-transmit information to the earth-based stations. To date, Canada has provided nine SAR Repeaters for installation on American satellites and has established the requisite ground segment equipment necessary to service the Canadian SAR area of responsibility. Preliminary work has started for the acquisition of more SAR Repeaters to continue Canada's commitment to the COSPAS-SARSAT Program. These SAR Repeaters will require redesign from the existing SAR Repeaters to accommodate technological, interface, launch profile and other required changes. A cost estimate for the redesign and acquisition of three SAR Repeaters and an engineering model is $47M.

Canadian Forces (CF) SAR personnel are involved in finding alternatives to the present COSPAS-SARSAT system to reduce the financial burden to DND and to identify better methods

of providing SAR alerting. DND personnel will continue to monitor evolving systems and technologies for possible SAR applications.

The CF recently ratified the North Atlantic Treaty Organization (NATO) Standardization Agreement on combat SAR. To comply with this agreement, the CF will develop a combat SAR capability for situations where airmen or personnel must be evacuated from a hostile environment in a Canadian area of responsibility. To achieve this capability, the CF will begin formulation of doctrine, training standards and procedures for appropriate CF personnel.

The Rescue Coordination Centres (RCCs) rely on specially equipped CF fixed-wing aircraft and helicopters to respond to SAR incidents. The Labrador helicopter is almost 30 years old and maintenance costs and supportability are affecting its ability to continue to support SAR operations. DND will continue to pursue the Canadian SAR helicopter capital acquisition program to replace the Labrador helicopters.

The CF have the responsibility for coordinating air and marine SAR operations through three RCCs and two Marine Rescue Sub-Centres (MRSCs). Various initiatives to automate the SAR coordination function at these sites have achieved limited success and have resulted in many stand-alone and outdated computer systems and software programs. The current SAR management system is inadequate and must be upgraded or replaced to improve SAR response and reduce SAR costs by providing accurate detection, timely assessment and efficient use of all available resources. An upgraded system will also provide an automated method of collecting data required at the local, regional and national level for SAR analysis and administration. The CF has established a Project Team which is coordinating the development of a suitable system.

The primary method of searching is through the use of spotters to visually locate the object of the search. New technologies have emerged that will provide greater efficiencies and effectiveness in airborne search, localization and identification of targets. These sensors will provide the capability to conduct searches during periods of poor visibility caused by darkness and adverse weather when visual searching would be ineffective. DND will continue to support research and development initiatives in SAR specifically in the areas of electro-optics and imaging.

Transport Canada

Transport Canada (TC) is in the midst of a far-reaching restructuring of its operations; a transition that will change, forever, the department's core roles. No longer burdened with day-to-day system operations, TC can now concentrate on the safety oversight needed to reduce the number of SAR incidents in Canada's areas of SAR responsibility. To achieve this, TC is establishing a multi-modal safety capability that will eventually permit the Department to assess risk across all modes, develop priorities and allocate resources to those areas with the greatest potential for disaster.

To support multi-modal risk management, TC is developing a unified, comprehensive transportation occurrence reporting and analysis system that will provide modal and multi-modal managers with timely, analysed occurrence information to permit prompt trend identification.

TC is continuing to develop and implement marine legislation, regulations and standards to ensure the safety of life and property on navigable waters, and for the protection of the marine

environment. The Department continues to emphasize the Port State Control Ship Inspection program which requires boarding foreign vessels entering Canadian waters to ensure compliance with various international maritime conventions. By international agreement, countries are expected to inspect 25 percent of all vessels entering their waters. Canada has long exceeded this goal, using risk assessment techniques to focus its efforts on those vessels likely to be sub-standard.

Canada's aviation regulations were recently re-written to focus more clearly on controlling aviation risk. This undertaking involved all members of the aviation community in a consultative risk management endeavour that is expected to reduce the number of aviation-related SAR incidents in Canadian-managed airspace.

TC is just beginning to develop systems to better establish the link between the Department's legislative and inspection work, and the safety of the aviation system. TC is working to develop statistically sound ways to compare the safety records of different countries, and is monitoring the development of systems to provide extensive international data on routine flight operations. Such data should provide analysts with early warning of emerging trends, enabling the department to take "before-the-fact" actions to prevent loss of lives or resources, and prevent SAR incidents.

III Departmental Performance

A. Summary of Departmental Performance

National Search and Rescue Secretariat

The National Search and Rescue Secretariat (NSS) plays an important function in coordinating the overall SAR policies and activities, through its daily interactions with the SAR community at all levels. The coordinating function of the Secretariat has heightened the profile and awareness of SAR issues and activities over the past 10 years, and has had an impact, throughout Canada and internationally, in improving communications, reducing tensions, minimizing duplication, encouraging partnerships, and enhancing SAR performance.

In fiscal year 1996-97, the New SAR Initiatives Fund allocated $10 million to 95 projects (39 continuing projects and 56 new projects). New SAR Initiatives funds were distributed among the following themes: research and development; prevention, including environmental data, education and training; response, including equipment purchase and evaluation; and volunteers. The Secretariat continued program participation as one of the member countries in COSPAS-SARSAT, the international SAR distress alerting satellite system, and in the International Committee for Alpine Rescue. Interdepartmental meetings were held at all levels on a regular basis.

Over the past year, the NSS played a pivotal role in the formation of the Provincial/Territorial Working Group on Search and Rescue, consisting of senior provincial and territorial SAR officials and representatives from the Royal Canadian Mounted Police (RCMP), to discuss and develop advice on ground SAR issues. Efforts will continue to formalize this group and integrate the participation in all provinces. The Secretariat promoted the formation of the Search and Rescue Volunteer Association of Canada (SARVAC), a national association to promote issues of concerns to the volunteer SAR community, such as standards and training.

The NSS hosted the fifth annual SARSCENE workshop and trade show for SAR providers. Over 600 people from all Canadian provinces and territories, as well as from 10 other countries, met in Dartmouth, Nova Scotia, for three days of presentations, demonstrations and 39 exhibits aimed at improving SAR delivery, safety and services; published and distributed the quarterly bilingual newsletter, SARSCENE, which has a circulation of 12,000; improved communications through an expanded, bilingual SAR Home Page on the Internet, and SAR videos "Sharing the Responsibility", "Operation Ground SAR" and "Hug-a-Tree and Survive" (in conjunction with the RCMP), and developed the Search and Rescue Research and Development Committee, as a focus for research on SAR.

The Secretariat, in cooperation with the SAR delivery departments and agencies, completed reviews of Volunteers, Effectiveness of the New SAR Initiatives Fund, and Prevention. A Strategic Needs Assessment, providing a framework for ground SAR, is in progress.

Department of Canadian Heritage - Parks Canada

Parks Canada staff responded to 1563 incidents in 1995-96. The distribution by region was: Atlantic (298); Quebec (33); Ontario (139); Prairies and Northwest Territories (100); Alberta (747); and Pacific and Yukon (246).

Training on Visitor Risk Management was delivered in two regions and a Visitor Risk Management Instructors course was developed and implemented. Parks Canada also revised its visitor risk management handbook; completed public safety plans for numerous parks in the program; consulted and initiated implementation of the revenue management and cost recovery initiative for the public safety program for businesses operating in national parks; and produced a Situation Analysis and Draft Self Reliance Communication Strategy.

Environment Canada - Atmospheric Environment Service

Where meteorological conditions are a factor and can be accurately forecasted, deaths and injuries to Canadians may be minimized or prevented, the gravity of SAR incidents may be reduced, and resources spent in having to respond to SAR incidents also reduced. Canadians are aware and warned, with enough time to react to meteorological, hydrological, sea-state and ice hazards, and know how to respond in order to prevent SAR incidents and minimize rescue mishaps. Vessels, aircraft, structures and operations are designed safely, based on climate, sea-state and ice information. An increase in the victims' survival time through the taking of appropriate precautions against meteorological, sea-state or ice hazards is another objective, as is the enhancement of the response team's safety awareness with respect to meteorological, sea-state or ice hazards. The communication of the latest information, forecasts and warnings, as well as research project results, to all interests, including other departments, agencies and organizations involved directly in SAR programs, is a key result area. The continued improvement of computer-generated model output, which will enable departments involved directly with the NSP to benefit from a knowledge of environmental conditions for safe and efficient operations would help reduce the response time to a SAR occurrence. The ongoing production of enabling tools to ensure Canadians are aware of environmental hazards in order to take precautionary actions to avoid SAR occurrences will contribute to the National Search and Rescue Prevention strategy. The network of volunteer weather observers will be further engaged across the country.

On average, Environment Canada (EC) annually produces approximately 200,000 marine forecasts, 5,000 marine warnings; 400,000 aviation forecasts, 5,000 warnings; 2,000 ice forecasts, 200 warnings; 500,000 forecasts for public interests, 9,000 warnings. Ice services are provided in partnership with the Department of Fisheries and Oceans (DFO), through the Canadian Coast Guard (CCG). EC collects and distributes weather observations every hour from over 300 surface stations and close to 400 autostations, every six hours from some 400 ships and 35 buoys, twice daily from some 30 upper-air stations, continuously from 19 weather radars (including three belonging to the Department of National Defence (DND)), 10 weather satellite receiving stations and from more than 5,000 volunteers who assist in early detection of severe weather.

Department of Fisheries and Oceans - Canadian Coast Guard

The federal SAR objective of the marine element of the National SAR Program is to prevent injury and loss of life through search and rescue alerting, responding and aiding activities which use public and private resources, including where possible, and directly related to, reasonable efforts to minimize damage to or loss of property; and by ensuring appropriate priority to marine safety and prevention measures focused on owners and operators most commonly involved in SAR incidents. More details of this objective can be found in the Canadian Coast Guard (CCG) National SAR Manual.

On 01 April 1995, the CCG merged with the Department of Fisheries and Oceans (DFO). The CCG was given administrative control over the former DFO fleet, and now manages a fleet that is almost double in size. A fleet review is nearing completion to determine the "right fleet" for the new CCG. A second objective was to reduce duplication and overlap of fleet resources and increase the overall multi-tasking capability of the remaining fleet.

Many meetings were held across the country involving all the departmental programs and ship operators to determine the best fleet merger and reduction scenarios regionally and nationally. Offshore SAR services are currently provided by a variety of large multi-tasked ships within the CCG fleet. Some of these ships are included in the reduction scenarios and the impact to SAR coverage is being examined.

Plans are being developed to train fleet personnel in the duties of other DFO programs to enhance their multi-capability. Further plans include modifying the remaining ships to make them more multi-program capable. Overall, this cross-training and equipment modification will allow more ships to do more work.

The Canadian Coast Guard operates a fleet of primary SAR vessels which operate in a patrol mode or from a station. A summer student employment program directed towards increased summer boating activity increases the number of primary vessels available for SAR response. Rescue operations are supplemented by vessels owned by volunteer Canadian Coast Guard Auxiliary units. These units are compensated for fuel and insurance costs incurred when they respond to a SAR incident, as well as for authorized training and travel costs. The CCG provides Marine Rescue Controllers to complement DND staff in the three Rescue Coordination Centres, and independently operates two Marine Rescue Sub-Centres in St. John's, Newfoundland and Labrador, and Quebec City, Quebec.

The CCG conducts an extensive SAR prevention and Boating Safety program directly targeting those most commonly involved in SAR incidents. On this basis, target populations are identified and this program is carried out through collaborative efforts between the CCG and various national volunteer groups. Funds are used to conduct safety demonstrations, to carry out courtesy examinations, to produce educational marine safety video tapes and advertisements, to provide direct contact through a boating safety toll-free telephone line (1-800-267-6687) and to provide publications such as the Canadian Safe Boating Guide and the Small Fishing Vessel Safety Manual.

During the past year, the number of marine SAR incidents were within statistical norms. On average, the CCG fleet responds to 40 percent and the Canadian Coast Guard Auxiliary responds to an additional 25 percent of all SAR taskings. A typical year involves 7,000 incidents of which 700 are distress. On average, 2000 people are saved each year and a further 20,000 people are assisted. The Canadian Coast Guard Auxiliary has 3,400 members and 1,300 vessels. Details can be found in the Canadian Coast Guard's Marine SAR Incidents, Annual Report.

The Offices of Boating Safety have been established nationally and across all Coast Guard regions. The Office of Boating Safety provides a single point of contact on recreational boating matters. The Office has brought together the responsibilities of the existing Search and Rescue Prevention Program and the regulatory and technical services regime applying to recreational vessels. In addition, under the Small Vessel Partnership project, extensive client consultations have been advanced on operator proficiency, an updated vessel licensing system and improved enforcement.

Some noteworthy initiatives advanced by the Office of Boating Safety include: actions to increase the wearing of personal flotation devices including expanding the range of approved colours, and the review and endorsement of the US stand for inflatable personal flotation devices in Canada; a successful 1996 pleasure craft safety campaign which received a strong user response. Specific local initiatives in support of fishing vessel safety continue to be priorities for Regions with large fishing vessel populations and associated high levels of search and rescue incidents involving these vessels; and actions to improve client focus and consultative mechanisms with users in a number of ways including the establishment of national and regional Recreational Boating Advisory Councils.

Department of National Defence

The Canadian SAR Helicopter Project has been approved, the Statement of Requirements has been issued to industry, and the project time lines forecast delivery of the first helicopter in 1999.

The Rescue Coordination Centre (RCC) Automation Project is in Phase I of its two phase program to develop a computer system for operations and management. The prototype is scheduled to be completed by 31 March 1997 and installed at the RCCs, Marine Rescue Sub-Centres (MRSCs) and the Canadian Coast Guard College by 31 March 1998.

A second ground processing unit at the Canadian Mission Control Centre (CMCC) Trenton, Ontario, has been installed. It is now possible to monitor both geostationary satellites that provide COSPAS-SARSAT alerting data for Canada's area of responsibility.

A study was conducted on the location of Civil Air Search And Rescue Association (CASARA) units and how these locations compare with the sites of previous SAR incidents. DND will work with the CASARA organization to encourage the establishment of the CASARA units in areas where incidents are more likely to occur. Another method of achieving more cost-effective support from non-dedicated SAR resources will be to provide CASARA training to commercial operators in the North. This will be trialed in Iqaluit, Northwest Territories.

The Canadian Forces (CF) operate the CMCC located in Trenton, Ontario, which processes distress beacon data from COSPAS-SARSAT satellites. The CMCC distributes this data to the RCCs and to provincial and territorial SAR response agencies. Due to better reliability of the computer equipment and the integration of some of the CMCC Operator functions into the duties of the RCC Controller, the number of personnel in this organization has been reduced by three.

Transport Canada

Transport Canada (TC) developed a multi-modal safety management model to provide national standards for use by its regional offices, which deliver services to clients across the country. The Department's SAR prevention activities are based on consistent national direction from the headquarters Safety and Security group which guides regional directors in the application of the Department's approved safety standards.

TC reviewed the qualification criteria for marine pilots, marine pilotage certificates and compulsory pilotage areas.

TC is developing a quality assurance program that will permit it to maintain adequate safety oversight of marine activities, while delegating some ship inspection activities to classification societies, and permitting some self-inspection by low-risk companies.

TC adopted regulations that require Nav Canada to have an internal safety management program, and which will permit TC to carry out safety inspections and audits of the new corporation to ensure its continuing compliance with regulations.

C. Details by Business Line

Environment Canada - Atmospheric Environment Canada

The primary business line is *"Safety from Environmental Hazards",* under which are two components*, "Weather and Environmental Predictions"* and *"Emergencies Prevention and Preparedness"*. This business line encompasses activities related to forecasting routine and severe weather and predictions of probable future states of the environment, and emergencies prevention, preparedness and response advice. It addresses issues related to public safety and to Canada's economic infrastructure (weather services and water data are essential to a wide range of economic

sectors). Through this business line, the department is responding to the challenges to change the time frame within which Environment Canada (EC) manages risks, and to link present conditions to probable future states and environmental hazards in ways which allow EC to manage risk more effectively.

The business line is largely concerned with efficient operations and quality service delivery of its products.

Department of Fisheries and Oceans - Canadian Coast Guard

Marine incidents are reported by the Department of National Defence.

Department of National Defence

The following figure provides statistics for 1995 relating to the level of activity and involvement of Department of National Defence (DND) and Civil Air Search And Rescue Association (CASARA) in the Program's response function:

Figure 71: Number of Search and Rescue Incidents by Region (1995)

	Halifax	Trenton	Victoria	Total
Air Incidents	117	385	219	721
Marine Incidents	1,970	2,203	1,391	5,564
Humanitarian Incidents	184	50	297	531
Civil Aid Incidents	41	243	0	284
Unknown	97	170	230	497
TOTAL INCIDENTS	2,409	3,051	2,137	7,597
Incidents where:				
National Defence Resources Utilized	107	115	337	559
CASARA Resources Utilized	1	3	43	47

Distress incidents where Canadian Mission Control Centre (CMCC) directly involved: 124
Number of lives saved: 69

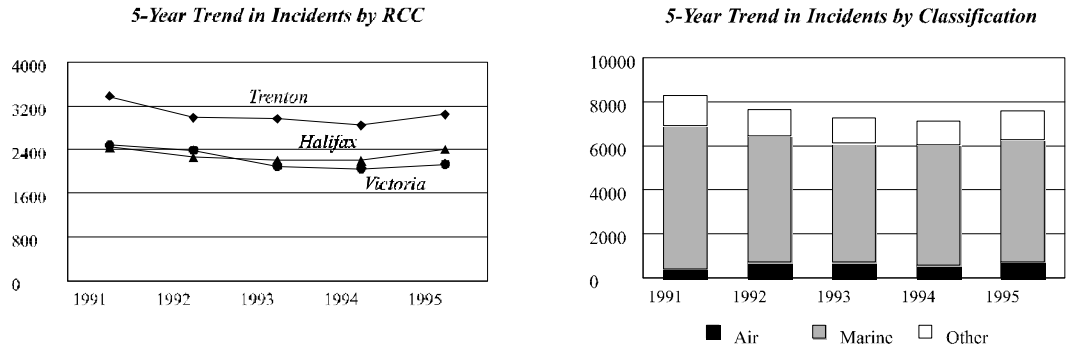
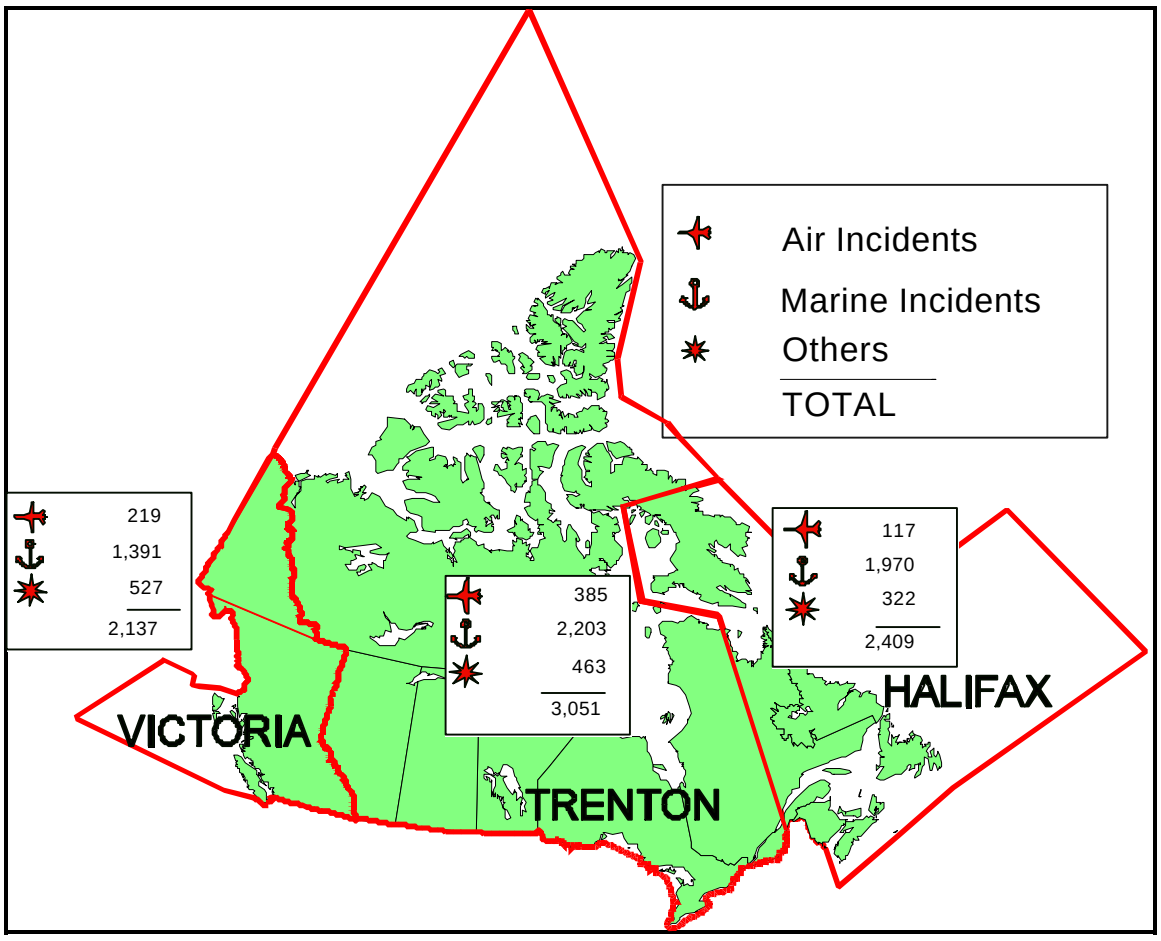


Figure 72: Details of Incidents



IV Supplementary Information

Figure 73: Details of Personnel Requirements by Departments (FTEs)

	Actuals 1994-95	Actuals 1995-96	1996-97 Estimates	1997-98 Estimates	1998-99 Planned	1999-00 Planned
National Search and Rescue Secretariat	20	20	15	15	15	15
Department of Canadian Heritage	----	----	67	67	67	67
Environment Canada	----	----	14	14	14	14
Department of Fisheries and Oceans	----	910	890	870	850	850
Department of National Defence	689	715	749	722	722	722
Transport Canada	----	----	----	----	----	----
Total	**709**	**1,645**	**1,735**	**1,688**	**1,668**	**1,668**

National Search and Rescue Secretariat

Figure 74: Costs ($000) for National Search and Rescue Secretariat

	Actuals 1994-95	Actuals 1995-96	1996-97 Estimates	1997-98 Estimates	1998-99 Planned	1999-00 Planned
Operating	1,414	1,868	1,726	1,726	1,726	1,726
Capital	7,854	7,963	10,646	7,895	7,895	7,895
Grants & Contributions	221	200	210	525	525	525
Total	**9,489**	**10,031**	**12,582**	**10,146**	**10,146**	**10,146**

Department of Canadian Heritage - Parks Canada

Figure 75: Costs ($000) for Canadian Heritage

	Actuals 1994-95	Actuals 1995-96	1996-97 Estimates	1997-98 Estimates	1998-99 Planned	1999-00 Planned
Operating	----	4,238	4,291	4,262	4,262	4,262
Capital	----	719	670	667	667	667
Grants & Contributions	----	----	----	----	----	----
Total	**----**	**4,957**	**4,961**	**4,929**	**4,929**	**4,929**

Environment Canada - Atmospheric Environment Service

Figure 76: Costs ($000) for Environment Canada

	Actuals 1994-95	Actuals 1995-96	1996-97 Estimates	1997-98 Estimates	1998-99 Planned	1999-00 Planned
Operating	----	866	830	830	830	830
Capital	----	72	70	70	70	70
Grants & Contributions	----	85	85	85	85	85
Total	**----**	**1,023**	**985**	**985**	**985**	**985**

Department of Fisheries and Oceans - Canadian Coast Guard

Figure 77: Costs ($000) for Fisheries and Oceans

	Actuals 1994-95	Actuals 1995-96	1996-97 Estimates	1997-98 Estimates	1998-99 Planned	1999-00 Planned
Operating	----	115,591	122,006	120,506	119,006	----
Capital	----	1,396	1,713	1,694	1,694	----
Grants & Contributions	----	46,215	11,193	16,865	24,077	----
Total	**----**	**163,202**	**134,912**	**139,065**	**144,777**	**----**

Department of National Defence

The Canadian Forces have reduced the number of flying hours required for aircrew to maintain currency. This policy has resulted in a reduction in the Department of National Defence search and rescue budget for FY 1996-97 from $125,952K to $113,552K.

Figure 78: Costs ($000) for National Defence

	Actuals 1994-95	Actuals 1995-96	1996-97 Estimates	1997-98 Estimates	1998-99 Planned	1999-00 Planned
Operating	98,712	87,210	98,275	100,326	102,584	104,766
Capital	394	5,252	14,266	6,791	1,652	1,800
Grants & Contributions	795	908	1,011	1,040	1,071	1,103
Total	**99,901**	**93,370**	**113,552**	**108,157**	**105,307**	**107,669**

Note: 1. The PYs and amounts shown above are exclusive of NSS and New SAR Initiatives.

2. Capital figures include the Search and Rescue Satellite Project for all years and the Canadian Search and Rescue Helicopter Project for 1996-97 only.

Transport Canada

Most of the Department's Marine and Aviation regulatory and safety promotion activities are undertaken to reduce risk in Canadian marine and aviation operations, and thus reduce the need for search and rescue intervention. However, because Transport Canada no longer provides direct search and rescue services, its search and rescue budget for 1997-98 and future years has been dramatically reduced from previous levels.

Figure 79: Costs ($000) for Transport Canada

	Actuals 1994-95	Actuals 1995-96	1996-97 Estimates	1997-98 Estimates	1998-99 Planned	1999-00 Planned
Operating*	----	----	875	875	875	875
Capital	----	----	----	----	----	----
Grants & Contributions	----	----	----	----	----	----
Total	**----**	**----**	**875**	**875**	**875**	**875**

* Note: Total includes $400,000 annually for CASARA training expenses.

The above costs reflect Transport Canada's support for the Civil Air Search and Rescue Association (CASARA). They include one Full-Time Equivalent (FTE) in each regional office, one FTE in headquarters, and $400,000 as Transport Canada's share of CASARA's training expenses.

G. The Communications Security Establishment and the National Cryptologic Program

1. AGENCY OVERVIEW AND MANDATE

The Communications Security Establishment (CSE) is an agency of the Department of National Defence (DND). CSE was established in 1946 and became part of DND in 1975. As Canada's national cryptologic agency, CSE forms part of the intelligence and security infrastructure supporting the Government of Canada. In this capacity, CSE accomplishes its mission through two distinct but related cryptologic program components: signals intelligence (SIGINT) and information technology security (ITS).

Signals Intelligence is the collection and study of, and the production of intelligence reports from, foreign radio, radar and other electronic emissions. Signals intelligence provides unique and timely information on the intentions, capabilities and activities of foreign states, organizations or persons. This intelligence is used by policy makers to resolve issues relating to the defence of Canada, or the conduct of its foreign affairs and trade. CSE receives assistance in the conduct of SIGINT activities from the Canadian Forces Supplementary Radio System which operates from a number of stations in Canada.

The Information Technology Security program's mission is to deliver solutions which help the federal government achieve an appropriate level of security for its telecommunications and automated information systems. CSE helps to protect the government's sensitive information assets and the privacy of citizens. In addition, the ITS program, through its association with industry, contributes to the development of a national ITS capability which provides employment at home and export opportunities abroad. To fulfill its mandate, this program has five specific objectives:

- to furnish advice, guidance and services to the government on the planning, acquisition, installation, and procedures for use of secure communications systems;
- to supply cryptographic keying material, devices and documentation;
- to conduct research, development and evaluations on the security aspects of automated information and communications systems, with a view to advising clients on the security of these systems and their application in government;
- to advise and guide Canadian industry in developing secure communications and EDP systems for government requirements; and
- to provide advice, guidance and services for the protection of the security and privacy interests of Canadians in the transaction of electronic commerce.

2. ACCOUNTABILITY

The Minister of National Defence is answerable to Parliament for all CSE's activities. The Minister approves capital spending for CSE and major spending recommendations made to Treasury Board. The Minister also approves CSE's key policy initiatives and is responsible for CSE issues in Cabinet.

Two Deputy Ministers, the Security and Intelligence Coordinator in the Privy Council Office (PCO) and the Deputy Minister of National Defence, are responsible for ensuring that the Minister is fully informed of CSE's activities. The Security and Intelligence Coordinator is accountable for CSE's policy and operations, and the Deputy Minister of National Defence is accountable for administrative matters affecting CSE.

CSE responds to foreign intelligence priorities approved by Ministers. As well, CSE responds to specific departmental requests or event-driven intelligence needs of the government.

3. RESOURCES AND FINANCIAL TABLES

The following table outlines CSE's resource profile over a three-year period.

Figure 80: CSE's Resource Profile

(thousands of $)	Actual FY 95/96	FTE 95/96	Current Forecast FY 96/97	FTE 96/97	Estimated FY 97/98	FTE 97/98
Salary [1] & Personnel	60,533	911	57,680	870	59,192	892
Operations & Maintenance	23,230		20,637		19,745	
Total Operating Requirement	83,763		78,317		78,937	
Capital	40,089		38,832		36,764	
Total Requirement	**123,852**	**911**	**117,149**	**870**	**115,701**	**892**

[1] Includes employee statutory benefits.

H. Reserve Force

1. ROLE

The 1994 Defence White Paper defined the primary role of the Reserve Force as augmentation, sustainment and support of deployed forces. In addition, the Reserve Force enhances the capability of the Regular Force and supports it in ongoing peacetime tasks and activities.

2. DESCRIPTION

The Reserve Force is a component of the Canadian Forces and consists of officers and non-commissioned members who are enrolled for other than continuing full-time military service. The sub-components of the Reserve Force are:

- the Primary Reserve;
- the Supplementary Reserve;
- the Cadet Instructors' Cadre; and
- the Canadian Rangers.

The elements of the Primary Reserve are the Naval Reserve, Militia, Air Reserve, and Communication Reserve. In addition, 266 members of the Reserve Force are assigned specialized tasks directly with a Command or National Defence Headquarters rather than in a Reserve unit. The planning level of the Reserve Force for 1997-98 is in the range of 26,700 to 32,400 personnel.

The members of the Supplementary Reserve are not required to perform duty or training except when on active service. They provide a pool of personnel with previous military service who could be recalled in an emergency. Civilian specialists are also enrolled when there is a defined need.

The Cadet Instructors' Cadre consists of officers who have undertaken to perform such military duty and training as may be required of them, but whose primary duty is the supervision, administration and training of Sea, Army and Air Cadets. The Cadet Instructors' Cadre is the Reserve component of the Canadian Cadet Organization through which the Canadian Cadet program is delivered. Financial requirements for the Cadet Instructors' Cadre are included in the Canadian Cadet Program requirements. Further information on the Canadian Cadet Program and the Canadian Cadet Organization can be found in the Supplementary information at page 4-129.

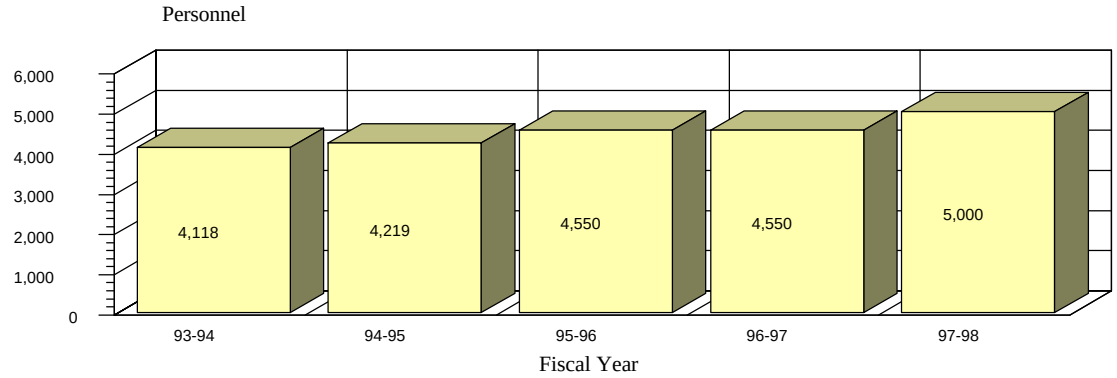
The Canadian Rangers is a separate sub-component of the Reserve Force. It consists of unpaid volunteers who hold themselves in readiness for service but who are not required to undergo annual training. Rangers must be in good health and must be able to live effectively off the land. The role of the Canadian Rangers is to provide a military presence in sparsely settled, northern, coastal and isolated areas of Canada which cannot conveniently or economically be covered by other elements of the Canadian Forces.

THE PRIMARY RESERVE

Naval Reserve

The Naval Reserve consists of 24 divisions located across Canada with its headquarters in Quebec City, Quebec, and is under command of the Commander, Maritime Command. The Naval Reserve planning level authorized for 1997-98 is 4,000 to 5000 personnel. The primary role of the Naval Reserve is Maritime Coastal Defence and the provision of crews for the 12 Maritime Coastal Defence Vessels (MCDVs) currently under construction. In addition, they are responsible for Harbour Defence , Naval Control of Shipping (NCS) and augmentation of the fleet.

Figure 81: Naval Reserve Personnel Planning Level



Training for the Maritime Coastal Defence task includes coastal surveillance and patrol, and mine countermeasures activities such as route survey (ocean floor mapping), mechanical mine sweeping and seabed object inspections. Many of the vessels used for the coastal defence task are 40 years old and are being replaced by the 12 MCDVs. The new vessel has a multi-role capability in coastal surveillance and defence including a limited mine countermeasures capability.

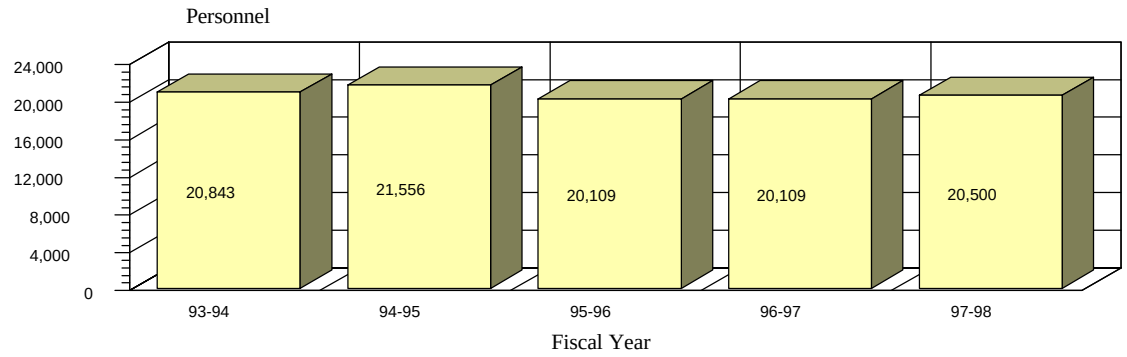
The Harbour Defence task provides for the defence of ports and anchorages and their immediate approaches in times of crisis. It includes provisions for port safety and security, harbour patrols and interdepartmental operations. The harbour defence organization consists of four units, two per coast. Each team is supported by a diving inspection team. Rigid hull inflatable boats are used to conduct the harbour control activities.

The Naval Control of Shipping task provides a contingency capability to place merchant shipping under Government control and, if necessary, naval protection. The NCS organization consists of four regional teams, two per coast.

Militia (Army Reserve)

The Militia structure, aligned under the Land Force Area concept, is organized into 14 Militia Districts with a planning level of 18,500 to 20,500 personnel. There are a total of 133 Reserve units and 14 District Headquarters under the command of the Commander, Land Force Command.

Figure 82: Militia Personnel Planning Level

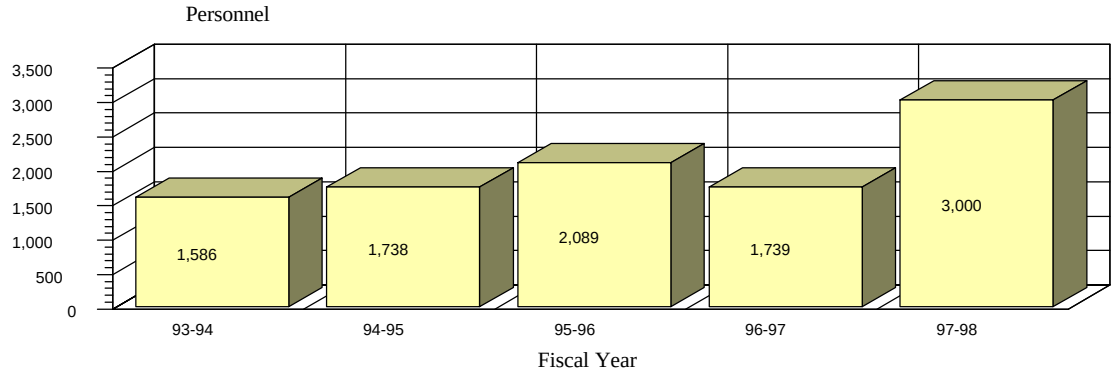


The Militia is charged with both war and peacetime missions. In war, units, sub-units or individuals provide augmentation to the Regular Force component, a base for mobilization and trained reinforcements. In peace time, augmentation to Land Forces supports periodic operational deployments; troops and support are provided for peacekeeping and aid to the civil power operations; and support is provided to national development projects including ceremonial representation for events such as Remembrance Day.

Air Reserve

The role of the Air Reserve is to enhance the national emergency capability of the Air Forces and to support the Regular component in ongoing peacetime tasks. The Air Reserve planning level for 1997-98 is 3,000 to 5,000 personnel comprised of two wings of three squadrons each, three independent squadrons and twenty-one Air Reserve Augmentation Flights. The Air Reserve is commanded by the Commander, Air Command.

Figure 83: Air Reserve Personnel Planning Level



With the exception of Air Traffic Controller, Air Weapons Controller, Flight Engineer and the associated technicians, all other air environment trades are available to reservists. Most of the pilots are former Regular Force pilots as the pilot training program is not conducive to a part-time reservist, although there are exceptions. The Air Reserve recruiting policy targets occupationally qualified personnel, this primarily directs recruitment at former members of the Regular Force. The second priority is to attract civilian candidates whose qualifications equate to those of the required military trades. This approach limits the training requirements to the development of basic recruit skills.

Most Air Command Wings, Squadrons and Flights have or will soon be consolidated as units comprised of both Regular Force and Reserve Force personnel. The cost to operate these establishments varies only by the employment patterns of its members. The Air Reserve component of these units keeps the cost affordable, while the mix of Regulars and Reserves allows the optimization of readiness and sustainment levels needed to fulfil the Air Command mandate.

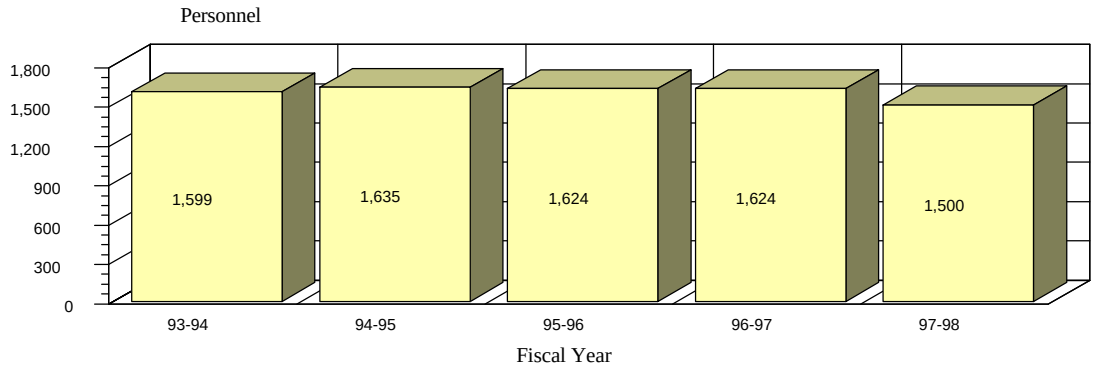
Many air reservists have assisted in recent UN operations, providing relief to Regular Force support personnel, and air and ground crews.

Communications Reserve

Communications Reserve, under command of Assistant Deputy Minister for Defence Information Services (ADM (DIS)) consists of twenty-three units across Canada with a planning level of 1,000 to 1,500 personnel. The role of the Communications Reserve is to provide combat capable augmentees to meet tactical and strategic command, control and information systems missions; to provide communication services. The Communications Reserve provides both individual and small formed detachments to augment the Regular Force.

Communications reservists have made a significant contribution to command and control information systems missions over the past three decades. There are more than 100 Communication reservists employed on full-time service in support of Defence Services Organization missions performing such functions as communication centre operators, technicians and linemen.

Figure 84: Communications Reserve Personnel Planning Level



THE CANADIAN RANGERS

Operational control of the Rangers is delegated to the Commander Canadian Forces Northern Area and the Commander Land Force Command who has further delegated control to the Commanders of the appropriate areas. The Rangers are organized into 130 patrols located across British Columbia, Yukon Territory, the Northwest Territories, Alberta, Manitoba, Ontario, Quebec and Newfoundland. The Rangers perform their tasks without pay, providing a military presence in remote areas in support of sovereignty. The appropriate rate of Reserve pay is paid for local training exercises, ground search and rescue and participation in other CF exercises as guides, advisors or survival instructors.

3. RESOURCE SUMMARY

The Reserve Force provides funding to other activities in addition to the support of the Reserve elements. This includes the Ceremonial Guard, the Canadian Forces Small Arms Competition, and the Compagnie Franche de la Marine. It should also be noted that the Reserve Force pay structure, pay levels and benefits are very different from that of the Regular Force. The Reserve Force member earns approximately 65 percent of their Regular Force counterpart and there is no pension plan or severance package in place, for either full or part-time reservists.

The methodology used in the costing of the Reserve is an ongoing concern due to the difficulty in assembling accurate information. For example, costs attributed to capital projects will vary from year to year once the percentage of use of the equipment or infrastructure between the Regular Force and the Reserve can be accurately provided.

Primary Reserve Full Cost Estimate

The Primary Reserve accounts for approximately 9.6% of the total Defence Services Program. Figure 85 displays the expenditures in four categories, namely: direct, indirect, attributed and capital. This change in reporting from previous years is intended to provide greater clarity on the make up of the total costs of the Primary Reserve.

Direct operating expenditures include funds specifically budgeted for the Primary Reserve such as pay, travel, and goods and services which are locally procured.

Indirect operating expenditures reflect the Primary Reserve share of departmental resources which are controlled centrally. Included are ammunition, equipment operating costs, clothing and the cost of maintaining facilities such as armouries.

Attributed expenditures are departmental overhead costs which are allocated, for reporting purposes, to all activities including the PrimaryReserves. In reality, these costs do not vary directly as a function of activity and would largely be incurred whether the Primary Reserve existed or not.

Capital expenditures are shown for the year in which payments have been made and do not reflect an amortization of cost over the life of the asset. As such, the capital expenditures can vary significantly from one year to the next, depending on priorities established within the capital equipment plan.

Figure 85: Total Primary Reserve Estimated Expenditures

(thousands of dollars)

Type of Expenditure	1995-96 Actual	1996-97 Estimates	1997-98 Estimates
Reserve Pay	211,530	233,828	225,546
Regular Support Staff [1]	97,965	93,994	101,535
Reserve Operating Budgets	27,824	25,707	25,904
Subtotal Direct	337,319	353,529	352,985
Ammunition [2]	39,075	51,301	44,548
Equipment usage [3]	57,545	58,058	57,191
Clothing [4]	17,496	15,475	18,443
Facility operating [5]	28,269	26,445	29,536
Subtotal Indirect	142,385	151,279	149,718
Base Support	104,595	105,401	98,203
Training[6]	4,476	4,480	4,408
Subtotal Attributed	109,071	109,881	102,611
Subtotal Primary Reserve Operating	**588,775**	**614,689**	**605,314**
Dedicated Capital [7]	45,628	68,012	39,988
Shared Capital [8]	329,822	214,793	307,818
Subtotal Capital	**375,450**	**282,805**	**347,806**
Total Primary Reserve Costs	**964,225**	**897,494**	**953,120**

[1] Support staff personnel costs are based upon regular force and civilian personnel working at headquarters and in Primary Reserve units in support of Primary Reservists.

[2] Ammunition costs represent the approximate value of land and common user ammunition that Commands allocate to the Primary Reserve.

[3] Equipment usage costs include aircraft, ship, vehicle, and weapons operating costs as well as other miscellaneous resource usage.

[4] Clothing cost represents the estimated expenditure for this item based on the number of Reservists and regular force support.

[5] Facility operating costs are derived from an allocation of a supporting base's total contracted facility operating costs and rental to Primary Reserve units, based on square meters.

[6] Training cost includes the salaries of Regular Force instructors.

[7] Dedicated Capital represents the annual cash flows for capital projects such as armoury construction, which are for the sole use of the Primary Reserve.

[8] Shared capital costs include the annual cash flows for capital projects which benefit both Reserve and Regular Forces. A portion of the annual capital expenditure is allocated based on estimated long term usage by Reservists.

Figure 86: Naval Reserve Estimated Expenditures

(thousands of dollars)

Type of Expenditure	1997-98 Estimates	1996-97 Estimates	1995-96 Actual
Direct:			
Reserve Personnel	34,889	39,425	38,440
Support Staff Pers	12,906	11,402	12,374
Reserve Operating	5,288	4,854	4,122
Total Direct (1)	53,083	55,681	54,936
Indirect:			
Ammunition	153	198	194
Equipment Usage	11,525	13,458	10,479
Clothing	2,596	2,164	2,472
Facility Operating	3,645	3,612	3,496
Total Indirect (2)	17,919	19,432	16,641
Attributed:			
Base Support	14,233	15,916	15,478
Training	1,137	1,221	1,221
Total attributed (3)	15,370	17,137	16,699
Total Operating (1+2+3)	**86,372**	**92,250**	**88,276**
Capital:			
Dedicted Capital	16,762	7,966	7,607
Shared Capital	101,237	90,691	108,023
Subtotal Capital	**117,999**	**98,657**	**115,630**
Total Naval Reserve	**204,371**	**190,907**	**203,906**

Figure 87: Militia Estimated Expenditures

(thousands of dollars) Type of Expenditure	1997-98 Estimates	1996-97 Estimates	1995-96 Actual
Direct:			
Reserve Personnel	125,739	144,637	129,713
Support Staff Personnel	63,382	66,117	63,174
Reserve Operating	13,834	16,744	18,016
Total Direct (1)	202,955	227,498	210,903
Indirect:			
Ammunition	43,975	50,592	38,381
Equipment Usage	28,593	26,932	27,612
Clothing	13,628	11,375	12,964
Facility	23,724	20,694	22,709
Total Indirect (2)	109,920	109,593	101,666
Attributed:			
Base Support	66,126	71,007	70,428
Training	3,050	3,122	3,116
Total attributed (3)	69,176	74,129	73,544
Total Operating (1+2+3)	**382,051**	**411,220**	**386,113**
Capital:			
Dedicted Capital	21,145	58,309	36,314
Shared Capital	173,814	85,399	179,199
Subtotal Capital	**194,959**	**143,708**	**215,513**
Total Militia	**577,010**	**554,928**	**601,626**

Figure 88: Air Reserve Estimated Expenditures

(thousands of dollars)

Type of Expenditure	1997-98 Estimates	1996-97 Estimates	1995-96 Actual
Direct:			
Reserve Personnel	23,801	19,987	19,569
Support Staff Personnel	20,297	11,328	17,796
Reserve Operating	1,704	927	1,023
Total Direct (1)	45,802	32,242	38,388
Indirect:			
Ammunition	231	235	230
Equipment Usage	14,654	15,728	17,228
Clothing	1,075	976	1,028
Facility	1,207	1,196	1,152
Total Indirect (2)	17,167	18,135	19,638
Attributed:			
Base Support	13,177	8,980	9,443
Training	214	117	120
Total attributed (3)	13,391	9,097	9,563
Total Operating (1+2+3)	**76,360**	**59,474**	**67,589**
Capital:			
Dedicted Capital	1,310	1,094	883
Shared Capital	32,736	38,679	42,515
Subtotal Capital	**34,046**	**39,773**	**43,398**
Total Air Reserve	**110,406**	**99,247**	**110,987**

Figure 89: Communications Reserve Estimated Expenditures

(thousands of dollars)

Type of Expenditure	1997-98 Estimates	1996-97 Estimates	1995-96 Actual
Direct:			
Reserve Personnel	13,849	15,850	17,107
Support Staff Personnel	4,924	5,147	4,597
Reserve Operating	2,010	1,573	1,446
Total Direct (1)	20,783	22,570	23,150
Indirect:			
Ammunition	189	276	270
Equipment Usage	2,419	1,940	2,226
Clothing	1,144	960	1,032
Facility	960	943	912
Total Indirect (2)	4,712	4,119	4,440
Attributed:			
Base Support	3,942	5,737	5,519
Training	----	2	----
Total attributed (3)	3,942	5,739	5,519
Total Operating (1+2+3)	**29,437**	**32,428**	**33,109**
Capital:			
Dedicted Capital	771	643	824
Shared Capital	31	23	85
Subtotal Capital	**802**	**666**	**909**
Total Communications Reserve	**30,239**	**33,094**	**34,018**

Figure 90: Headquarters Reserve Estimated Expenditures

(thousands of dollars) Type of Expenditure	1997-98 Estimates	1996-97 Estimates	1995-96 Actual
Direct:			
Reserve Personnel	27,268	13,929	6,701
Support Staff Personnel	26	----	24
Reserve Operating	3,068	1,609	3,217
Total Direct (1)	**30,362**	**15,538**	**9,942**
Attributed:			
Base Support	724	3,761	3,727
Training	7	18	19
Total attributed (2)	**731**	**3,779**	**3,746**
Total NDHQ Reserve (1+2)	**31,093**	**19,317**	**13,688**

Cadet Instructors' Cadre Costs

The financial resources allocated to the Cadet Instructors' Cadre account for a portion of the funds dedicated to the Canadian Cadets Program and a fraction of the financial resources to the Reserve Force. These funds are allocated to Commands and Groups explicitly for their implementation of the Cadet Program; that is, for items such as wages and travel expenses. Additional information on the total cost to DND of the Canadian Cadet Program is available at Figure 91, page 4-131.

Canadian Rangers Costs

The Canadian Rangers accounts for approximately $5 million, a minute portion of the financial resources for the Reserve Force.

J. The Canadian Cadet Programme

1. OBJECTIVE

The objective of the Canadian Cadet programme is to develop in Canadian youth the attributes of good citizenship and leadership, promote their physical fitness, and stimulate their interest in the sea, land and air activities of the Canadian Forces.

2. MANDATE

The Canadian Forces, in accordance with Section 46 of the *National Defence Act,* will control and supervise the Canadian Cadet Organizations (Royal Canadian Sea Cadets, Royal Canadian Army Cadets and Royal Canadian Air Cadets) in the implementation of the Cadet programme. In carrying out this responsibility, the Canadian Forces shall take into account the known policies and objectives of the Cadet Leagues and local sponsors, and shall cooperate with them to the fullest extent possible.

3. MANAGEMENT PRINCIPLE/KEY INITIATIVES

While respecting the mandate and capabilities of all partners, the management structure and practices will be based on service, empowerment, innovation and accountability. To this end the Canadian Cadet Organizations will:

- promote consultation communication, participation and innovation as the foundation of our leadership and human resource management practices;
- delegate increased authority and permit greater managerial flexibility at all levels, balanced by attendant accountability for results and the manner in which they are achieved;
- encourage innovative decision-making and accept increased risk management, guided by the values of good citizenship and the military ethos;
- foster continuous improvement in results and efficiency, and promote a service orientation in accomplishing the tasks;
- adopt accountability-oriented planning and resource management which link objectives and activities with resources, make costs visible, and identify results achieved; and
- foster more cost-effective and competitive activities by confirming the value-added practices, exploring service delivery options, considering commercial standards, and giving users of internal services increased choice and responsibility.

4. VISION/RESULTS EXPECTATIONS

The Canadian Forces working with the other stakeholders embrace the following:

- a results-oriented and cost-effective Canadian Cadet Organization (CCO) which makes optimum use of entrusted resources to achieve programme aims;

- a dynamic, innovative CCO committed to excellence, continuous improvement and mutual respect; and

- a culture which is responsive to change and restraint, reflects the values of Canadian Society and meets the needs of the CCO.

5. CHANGE MANAGEMENT ISSUES

In November of 1995 the Armed Forces Council (AFC) agreed, that there would be a fundamental change in the way the CCO/CIC carried out business. It resulted the re-allocation of direct financial resources previously given to Bases/Group Principals, to Regional Commanders, with NDHQ exercising overall budgetary control. This resulted in the Regional Cadet Officers (RCO) shifting from Responsibility Centre Management to Fee for Services. Also, no increase or decreases to the Corporate Account can be actioned without the concurrence of the VCDS.

The AFC also agreed that programme development and policy would rest with the Chief of Reserves and Cadets, in consultation with the functional Commanders, and that Regional implementation of the Cadet programme would rest with the Regional Commanders.

6. ORGANIZATION FOR DELIVERY

The Canadian Cadet Organization is the only federally sponsored national youth training programme for 12-18 year-olds. The programme is conducted in partnership with the Navy League, Army Cadet League, and Air Cadet League, which provide local sponsors for each corps of squadron, while DND provides Regular Force and Primary Reserve support as well as the Cadet Instructors Cadre, who are members of the Reserve force, charged with the supervision, administration and training of the cadets.

There are approximately 55,000 Canadian youth in the Cadet programme who benefit from the training given or organized by some 1,100 cadet corps or squadrons, 610 cadet bands, 28 summer camps, and various gliding, sailing and land training schools and centres located across the country.

7. RESOURCE SUMMARY

The funding allocations to the Canadian Cadet programme amount to $101 million or 1% of the total Defence Services Program. Figure 91 summarizes the allocations for the financial requirements of National Defence in the pursuit of its mandate.

Figure 91: National Defence Cadet Program Expenditures

(thousands of dollars)	**Estimates 1997-98**	Estimates 1996-97
Personnel		
Cadets - Pay	42,851	42,637
Civilian Support Wages	8,386	9,093
Operating	48,549	46,433
Total Operating	99,786	98,163
Grants	615	615
Capital	655	655
Total Costs	101,056	99,433

8. PERFORMANCE REPORTING

Prior to 1996-97 the CCO was not included as separate entity in the Part III of Estimates, but only alluded to in the Reserve Forces Supplementary Information chapter.

Based on recommendations from the Chief Review Services (NDHQ Program Evaluation, the DND/CF Cadet Program) for the recognition of cadet activities and support requirements into the key departmental strategic and/or planning documents, the incorporation of cadet activity levels into the Part III Estimates was established during 1996-97.

The following performance measures are being/continue to be developed for the CCO/CIC as a baseline for future planning processes:

- CCO/CIC continue as a Corporate Account with a special profile to PCB;
- achieve a steady-state of 60,000 cadets;
- the business planning process be further refined and that national and regional plans be coordinated by the VCDS into the national CCO/CIC Business Plan;
- review processes and support to make use of Alternative Service Delivery when and where practical;
- coordinate and/or provide administrative and logistical support to the Sea, Army and Air Cadets and the Cadet Instructors Cadre in accordance with established training priorities and plans;
- continue to develop more meaningful policies for the CCO/CIC within departmental guidelines;
- continue to develop a healthy and constructive partnership with the Navy League, Army Cadet League and Air Cadet League benefiting the CCO.

K. Peacekeeping and Related Operations

Peacekeeping has long been a major part of Canada's defence and security policy, and its importance has been reaffirmed most recently by the Special Joint Committee on Canada's Defence Policy and in the 1994 Defence White Paper. Canada's geography and history dictate that our interests lie with the promotion of a stable international environment. Canada's lack of territorial ambition, our strong support for the United Nations and the professionalism of our armed forces also make us good candidates for peacekeeping in the eyes of the international community.

While the end of the Cold War dramatically reduced the threat to world peace, it has resulted in an upsurge of new forms of turbulence and disorder. These have been generated by: assertions of militant nationalism; brutal ethnic, religious or cultural strife; poverty; famine; and the abuse of human rights. Conflict has often been fuelled by the availability of large quantities of modern weaponry. As a consequence, the UN has been called upon to intervene in a multitude of localized or regional conflicts with roles and objectives far broader than those which applied to more traditional peacekeeping operations.

1. OBJECTIVE

To contribute to international peace and security, by participating in selected UN and other peacekeeping operations.

2. DESCRIPTION

Peacekeeping is a generic term which describes a wide range of peace support operations ranging from observer missions and humanitarian assistance to post conflict peace building efforts such as mine-clearance. Canada has been at the forefront, both diplomatically and militarily, of efforts to improve the effectiveness, efficiency and economy of UN peacekeeping operations.

As the mandates for peacekeeping missions have evolved, so too have the type and range of military activities in which Canadian Forces personnel are involved. In the case of the former Yugoslavia, the troops deployed are part of a multinational force, led by NATO, which is designed to implement the peace accord reached between the warring factions in the so called Dayton agreement. In Haiti, Canadian troops are engaged in a UN mission to assist in the preservation of a secure and stable environment in Haiti. In Cambodia, the members of the Canadian Forces are involved in humanitarian demining operations. In the central African country of Zaire a new conflict between rebel militia and government forces which is now displacing hundreds of thousands of Rwandan refugees from their camps along the eastern border of Zaire, threatens a new humanitarian disaster as both refugees and aid workers are fleeing in the face of renewed hostilities.

There are currently 13 UN peacekeeping missions. In addition, other international or multilateral bodies are engaged in missions which support peace and stability, e.g., the Multinational Force and Observers in the Sinai and the NATO Implementation Force in the former Yugoslavia. International turbulence is likely to continue and, while it is not possible to predict in any coherent way the number and duration of new peace support operations, it is unlikely that the demand will be reduced in the near future.

Canada's participation in international peace support operations is expected to range between 2,000 and 2500 personnel during 1997 and 1998.

3. ACCOUNTING FOR COST

The following figure provides the details on the full and incremental costs of peacekeeping and related operations. The full cost includes civilian and military salaries, allowances and benefits; special equipment purchases; the cost of moving and sustaining personnel and equipment; equipment depreciation; and special training costs.

Incremental cost is derived by excluding certain cost components - such as salaries, equipment depreciation and some equipment operating costs - which would have been incurred in the course of normal training and domestic operations. As such, the incremental cost is the additional cost to DND of undertaking the operation.

The Government of Canada is reimbursed, to a certain extent, by the UN for personnel costs (a monthly sum per person authorized by the UN), some preparation costs, transportation to and from the mission area, depreciation on contingent equipment, and death and disability payments.

Figure 92: Cost of Peacekeeping and Related Operations by Operation (in million dollars)
(in million dollars)

United Nations Operations (Unless otherwise indicated)	FORECAST 1996-97			ESTIMATE 1997-98		
	Full Cost	Inc. Cost	Estimated UN Revenue	Full Cost	Inc. Cost	Estimated UN Revenue
Croatia (UNCRO - CANBAT I))	2.2	2.2	10.0			12.0
Bosnia-Hercegovina (UNPROFOR - CANBAT II)	6.1	6.1	10.0			12.0
Croatia (UNPF - CANLOGBAT and others)	2.1	2.1				
Sarajevo Airlift (UNHCR)	0.2	0.2				
Adriatic (OP SHARP GUARD)	17.0	2.8				
Balkans (OP ALLIANCE-IFOR)	112.0	36.4		3.6	3.6	
Bosnia (OP PALLADIUM)	113.0	26.4		168.3	58.8	
Cambodia (CMAC)	0.5	0.2		0.5	0.2	
Nagorno Karabakh (OSCE)	0.4	0.1				
India/Pakistan (UNMOGIP)	0.1	0.0		0.1	0.0	
Golan Heights (UNDOF)	24.2	3.9	4.3	24.2	3.9	
Sinai (MFO)	3.0	0.9	0.4	2.7	0.9	
Middle East (UNTSO)	1.4	0.6		1.4	0.6	
Iraq (UNSCOM)	0.5	0.2		0.5	0.2	
Kuwait (UNIKOM)	0.6	0.2		0.5	0.2	
Cyprus (UNFICYP)	0.0	0.0		0.0	0.0	
Persian Gulf (MIF)	2.0	2.0				
Arabian Gulf (OP PREVENTION)	15.1	0.5		26.4	2.1	
Rwanda (UNAMIR II)	0.6	0.6	1.0			
Rwanda (OP ASSURANCE)	40.5	14.5				
Haiti (UNMIH II)	4.0	2.0				
Haiti (OP STANDARD)	52.0	20.0	1.0	0.0	0.0	0.0
Haiti (OP STABLE I)	45.0	12.0	5.0	3.0	3.0	3.0
Haiti (OP STABLE II)	52.0	13.0	3.0	26.0	6.0	5.0
Haiti (OP STABLE III)			0.0	26.0	10.0	1.0
Totals	494.5	146.9	34.7	283.2	89.5	33.0

4. RESOURCE JUSTIFICATION

Each operation is authorized by the UN or by agreement with the implicated parties. Mandates and tasks are assigned and Canada participates in various ways and deploys forces and equipment as required. The following overview reports on these specifics:

IFOR - Operation PALLADIUM: This operation is the Canadian contribution to the NATO-led Peace Implementation Force in Bosnia-Herzegovina. The Canadian Contingent of just over 1000 personnel provides a infantry battalion group and the theatre-level engineer company. This mission is planned to terminate in December 1997.

United Nations Mission in Haiti (UNSMIH) - Operation STABLE: the mandate of this Canadian led mission is to maintain a secure and stable environment in Haiti. The Canadian contingent of approximately 750 personnel includes the mission headquarters, most elements of an infantry battalion group, helicopter support, a construction engineer troop, a military police platoon, a military information support team and a national support element.

Multi-national Force Headquarters in Entebbe:As response to international concern over the plight of Rwandan refugees in Eastern Zaire, on the direction of the Canadian Government following consultations with an international steering group, and under the authority of the United Nations Security Council Resolution 1080/96, the Canadian Forces deployed and established a Multi-national Force Headquarters (MNF HQ) in Entebbe and later in Kampala, Uganda in November 1996. The Canadian led MNF HQ carried out reconnaissance and assessed the requirement for a multinational force which would provide humanitarian assistance to refugees in the Great Lakes Region of Central Africa. In addition, the Canadian operation, called Operation ASSURANCE provided a airlift for relief supplies as requested by Non-Governmental aid Organizations (NGOs) in the region. In mid-December 1996 the MNF Commander, Canadian Lieutenant-General Maurice Baril, recommended to the UN that given that large numbers of refugees had returned to Rwanda over the previous 4 weeks, and a secure environment existed for NGOs to conduct relief operations, there was no longer a requirement for a military presence in Central Africa. As a result of the UN's acceptance of Lt-Gen. Baril's recommendations the Canadian contigent, which consisted of 340 CF personnel deployed in Central Africa and 32 CF personnel deployed in Stuttgart, Germany, the rear headquarters, redeployed to Canada in late December 1996. The mission was closed 31 December and all CF personnel were repatriated by 3 January 1997.

United Nations Disengagement Observer Force (UNDOF) - Operation DANACA: The mandate of UNDOF in the Golan Heights is to supervise the cease-fire between Israel and Syria; to supervise redeployment of Israeli and Syrian forces; and to establish an area of separation in accordance with the Disengagement Agreement. Canada provides second line logistics support to UNDOF, primarily supply, transport and maintenance, as well as providing communications detachments to all UNDOF units. There are five Reservists serving as part of the Canadian Contingent of 186 personnel.

United Nations Peacekeeping Force in Cyprus (UNFICYP) - Operation SNOWGOOSE: The mandate of UNFICYP is to maintain the cease-fire and status quo and the restoration of normal conditions. Canada has two Canadian Forces personnel serving with UNFICYP headquarters.

Multinational Force and Observers (MFO) - Operation CALUMET: A non-UN mission, the mandate of the MFO in the Sinai is to supervise the provisions of the Peace Treaty between Israel and Egypt in accordance with the Camp David Accord. Tasks include operating a series of observation posts and command posts and verifying the adherence of the parties to the Treaty. The Canadian contribution is the provision of 28 specialist personnel to the Force headquarters staff.

United Nations Truce Supervision Organization (UNTSO): The mandate of UNTSO is to observe and maintain the cease-fire ordered by the UN Security Council and to assist the parties in supervising the application and observance of the General Armistice Agreement concluded separately between Israel, Egypt, Lebanon, Jordan and Syria. Tasks include the

monitoring, supervision and observation of the cease-fire agreements, and providing observers on the Golan Heights, in South Lebanon, and in the Sinai. Canadian military Observers serve in duty stations in Damascus, Tiberias, the Golan Heights, Lebanon and Jerusalem. There are 12 Canadian Forces personnel in UNTSO.

United Nations Iraq-Kuwait Observation Mission (UNIKOM) - Operation RECORD: The mandate of UNIKOM is to monitor the Khor Abdullah waterway (between Iraq and Kuwait) and the demilitarized zone (which follows the internationally recognized boundary set in 1963); to deter violations of the boundary; and to observe any hostile action mounted from one state to another. Canadian participation is limited to the provision of four Canadian Forces personnel as United Nations Military Observers (UNMOs) and headquarters staff.

United Nations Special Commission (UNSCOM) - Operation FORUM: The mandate of UNSCOM is the inspection and destruction of Iraq's ballistic missiles as well as its chemical, biological and nuclear facilities. Up to 12 Canadian Forces specialists are authorized to participate in UNSCOM.

United Nations Military Observer Group in India and Pakistan (UNMOGIP): The mandate of UNMOGIP is to supervise, in the States of Jammu and Kashmir, the cease-fire between India and Pakistan. Canada used to provide a Canadian Forces CC-130 Hercules aircraft twice a year for the rotation of the UN Headquarters between Srinagar, India and Rawalpindi, Pakistan. Early in 1996, the requirement for this rotation flight was suspended by the United Nations Chief Military Observer for this mission until further notice.

United Nations Development Programme (UNDP) Support to the Cambodian Mine Action Centre (CMAC): The mandate of this programme is to provide technical specialists to CMAC to assist in the conduct of mine awareness programmes, mine clearance training and the planning of mine clearance operations under the auspices of the UNDP. Canada's contribution to this Technical Advisory Group is currently seven Canadian Forces personnel including one Lieutenant-Colonel who serves as Chief Technical Advisor to CMAC.

United Nations Mission of Observers in Prevlaka (UNMOP): The mandate of themission is to monitor the situation in Prevlaka at the southern tip of Croatia borderingthe former republic of Yugoslavia. The mandate was valid until mid-January 1997. There was one CF officer serving as a military observer in UNMOP.

Organization on Security and Co-operation in Europe (OSCE): Under the auspices of the OSCE, the parties of the Dayton Accord have concluded an agreement on confidenceand security - building measures for the implementation of regional stabilization measures on arms control. Canada is providing arms control inspectors.

United Nations Mission in Bosnia-Herzegovina (UNMIBH): This mission is designated to maintain a diplomatic presence, to coordinate UNHCR humanitarian activities and to create and monitor an International Police Force designated to implement various aspects of the Dayton Peace Accord. Canada contributes a senior staff officer in the office of the UN coordinator for BH.

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