National Defence / Défense nationale

Chief Review Services / Chef - Service d'examen

CRS / CS Ex

CRS Evaluation: Perspectives on Vanguard/ MCF Readiness and Sustainment

October 2004

1258-137 (CRS)



Canada

NOTIFICATION TO READER:

THE CONTENT OF THIS EVALUATION REPORT PRE-DATES THE CURRENT DEFENCE POLICY STATEMENT AND ASSOCIATED CHANGES BROUGHT BY CANADIAN FORCES TRANSFORMATION.

The evidence gathered, and the conclusions expressed in this evaluation report were based on circumstances in 2004 and earlier. Since that time, a new Defence Policy Statement and the Chief of the Defence Staff's vision for the Canadian Forces have brought major changes. Notwithstanding that certain of the evaluation recommendations will have some relevance to new force constructs and the broader readiness management framework, the Vanguard and Main Contingency Force concepts are now obsolete.

This notification was added to the report in November 2005.

SYNOPSIS

This report presents the results of an evaluation of challenges and opportunities regarding the readiness and sustainment of the Canadian Forces. The evaluation was performed at the request of DND/CF leadership.

In the simplest terms, readiness refers to the capacity of the CF to provide a timely and effective response relative to circumstances and commitments – the latter being predefined by policy, plans and agreements. Readiness has an operational component, which refers to the capacity of existing forces to respond, and a structural component, which refers principally to force organization and methods and the availability of modern weapon systems. Sustainment pertains to the CF's ability to maintain operational tempo for as long as necessary to achieve military objectives.

The evaluation addresses the workability of current constructs and approaches to achieving readiness and sustainment. It does so in the context of critical changes which have affected security and defence – changes which have become most evident since the events of September 11th, 2001. In so doing, the evaluation recognizes the resourcefulness and performance of the CF, as well as the hard choices that are being made by the CF leadership in terms of setting capital investment priorities and seeking to appropriately limit operational commitments and tempo. At the same time, the successes and reputation of the CF continue to bolster demand for its presence and contributions. In this context, the evaluation suggests that there are serious shortfalls which are becoming increasingly significant and manifest. Further, it is suggested that current constructs do not suitably highlight the nature of de facto trade-offs being made between the operational readiness of existing forces, and the investments (structural) which must be made to modernize/equip and transform the CF for the years to come.

The evaluation was originally intended to examine Vanguard and Main Contingency Force (MCF) readiness and sustainment. Ultimately, the study moves beyond these concepts, as they simply define points on a graduated/tiered continuum of readiness. In the future, whether the CF chooses to retain the terms MCF and Vanguard to refer to its high readiness main contingency forces and to the lead elements, respectively, is a moot point. It is suggested that the CF will require some elements to be at a high readiness state, while others will be at either reduced or normal readiness.

Largely under the impetus of the US military transformation and war against terrorism, high readiness has become the new military paradigm. All of our NATO/ABCA allies have chosen to increase the state of readiness of their respective military forces. As illustrated by the new NATO Response Force Concept, high readiness demands that military forces be combat ready and quickly deployable either to deter a potential crisis or be able to thwart it swiftly. High readiness also demands that the forces be sustainable, and that interoperability with the US military can be an important advantage. Consequently, our allies have adopted some form of tiered readiness as their new force model, with units/formations placed at either reduced, normal or high readiness states.

It is with the aforementioned in mind that this evaluation was undertaken and, more importantly, recommendations presented with the intention of improving operational readiness and sustainability for the CF and DND.

This evaluation concludes that, at this juncture in time, the CF is extremely hard-pressed to accomplish most of the high-readiness combat tasks outlined in the Defence Plan. No individual service has the resources to effectively balance operational and structural readiness (long-term force structure) demands.

Overall, the CF is in a very difficult situation regarding the sufficiency of funding for the capital program to allow for the modernization and transformation of the existing force structure to ensure the downstream readiness to meet defined commitments. This in no way discounts the critical importance of work to ensure that scarce capital funding is allocated to the highest strategic priorities. It does suggest that important requirements will remain unfunded.

Simultaneously, operational readiness is now at a severe low point such that no single service can currently generate and sustain their White Paper Main Contingency Force commitments within designated/agreed timeframes. The resourcefulness and ingenuity of CF leadership and personnel have done much to deal with these circumstances, but there is little argument that they are well overtaxed.

The net result of the above has been a reduction in operational/combat readiness across the CF. Key indicators of this include shortfalls respecting the following: combat training at the formation/squadron level; numbers of trained personnel; quantities of spare parts, certain ammunition types and operational stocks; as well as, equipment maintenance (backlogs). All of this is further compounded by equipment purchases and mid-life refits, which are only partially funded. In short, operational readiness is at a critical low and structural readiness is under extreme, if not untenable, pressure.

The evaluation team looked at the DND/CF through the high-readiness and sustainment lens. Among the key recommendations are those which focus on: the review and measurement of readiness; re-orientation of the National Procurement Program; improved definition of roles in support of readiness; improved tracking of personnel returning from deployments; adjustment of personnel policies affecting deployed members; and, development of a fuller understanding of the capabilities of the CF Medical Service to support readiness. To implement these recommendations is beyond the capacity of any single OPI, and will demand a concerted corporate effort.

The challenge will remain to maintain a reasonable pace of transformation. However, a focus on the basic/current commitments made by Canada, and ensuring corresponding readiness and sustainment of current forces will not only better highlight the costs of necessary transformation, but can be argued to be a prerequisite to transformation. The tension between short-term operational readiness and longer-term structural readiness, and the implications for the practicability of transformation, emphasize the importance of the integrated review of Canada's foreign and defence policies.

In view of the breadth of the evaluation, management feedback on the reported conclusions and recommendations has been generally positive. The majority of the recommendations have been accepted and, in a number of cases, action is now underway. In certain other instances, there is indication that the recommendations warrant further study. The recommendations and responses are summarized on pages V to IX.

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RESULTS IN BRIEF

INTRODUCTION

Following the September 2001 attacks on the United States, there is a more focused understanding of the nature of changing threats to Canada and to our allies. This occurs in a world that has shifted away from a Cold War posture, characterized by relative predictability and lengthy pre-conflict lead times. The new reality witnesses threats posed by intra-state and internecine conflict, often mixed with demonstrated asymmetric threats posed by international terrorism and organized crime. A key attribute of the government and, potentially, military response to domestic and international crises is timeliness – timeliness which will often require speed of action and, thus, high readiness. In fact, this new high-readiness paradigm provides an important perspective in achieving an effective alignment of current resources and tasks to ensure that the DND/CF is able to respond appropriately to these new imperatives.

This evaluation presents an independent assessment of many operational and strategic areas across the CF and DND. However, to give context, many of the issues discussed have arisen as a result of, or have been influenced by, a number of converging factors that have emerged over the past decade. These have included: the end of the Cold War; reduced defence funding and personnel; significant re-engineering within the DND/CF; the devolution of fiscal responsibilities; problems which occurred in Somalia; Alternate Service Delivery initiatives; and, increased operational and personnel tempos through the l990s. These are directly pertinent to, and have impacted upon, the circumstances discussed by this evaluation. It is recognized that decisions made during this turbulent period, and the attendant risks assumed by senior leaders and managers, were made in earnest to preserve a viable, multi-purpose, combat capable force in being. Concerted efforts have been made to conform to the expectations of government policy, pending an ultimate reconciliation of tasks and resources.

During the conduct of this evaluation, consideration was given to the ongoing DND/CF work to ensure successful operations through a sustaining agenda, while endeavouring to fill concurrently the need for transformation. This latter agenda is necessary to achieve capability enhancements to ensure the CF continues to provide a relevant contribution to domestic and international commitments. The recommendations offered by this report, are intended to enhance the capability of the DND/CF in the fulfillment of high-readiness tasks reflected in the l994 White Paper (WP) and in the Defence Plan. These recommendations are principally targeted at re-orientation of management efforts and the realignment of certain spending priorities.

BACKGROUND

High-readiness elements of all three services have been variously committed to international missions over the course of the past several years. This has ranged from land and air forces in the Balkans, to sea and air forces in Iraq in l991, to land and sea forces in Somalia, to sea, air and land forces in East Timor and throughout South West Asia in the ongoing War on Terror. These commitments have had implications for operational and personnel tempo and have direct consequence regarding the future capabilities of the CF to respond to urgent domestic and international situations.

Senior military leadership requested this evaluation of readiness and sustainability. To ensure a timely and manageable evaluation product, the scope of the evaluation has been limited to the readiness and sustainability of high-readiness units and formations. As part of this study, the Chief of the Maritime Staff (CMS) and the Chief of the Land Staff (CLS) requested particular attention be paid to their respective Op APOLLO deployments, while the Chief of the Air Staff (CAS) asked the evaluation team to consider the overall CF-18 fleet readiness following the post-September 11 NORAD deployments in support of national aerospace security (Op NOBLE EAGLE). Ops APOLLO and NOBLE EAGLE were key tests of DND/CF readiness and sustainability.

It is with the aforementioned in mind that this evaluation was undertaken, and more importantly, recommendations presented with the intention of improving operational readiness and sustainability for the CF and DND.

OVERALL ASSESSMENT

This evaluation concludes that, at this juncture in time, the CF is extremely hard-pressed to accomplish most of the high-readiness combat tasks outlined in the Defence Plan. No individual service has the necessary resources to effectively balance operational and structural readiness (long-term force structure) demands.

Overall, the CF is in a very difficult situation, whereby funding for the capital program is insufficient for the modernization and transformation of the existing force structure to ensure the future structural readiness required to meet defined NORAD, NATO and UN commitments. This in no way discounts the critical importance of work to ensure that scarce capital funding is allocated to the highest strategic priorities. It does suggest that key requirements will remain unfunded.

Simultaneously, operational readiness is now at a severe low point such that no single service can currently generate and sustain their White Paper Main Contingency Force commitments within designated/agreed timeframes. The resourcefulness and ingenuity of CF leadership and personnel have done much to deal with these circumstances, but there is little argument that they are well overtaxed.

The operational tempo of the past decade has expended the "readiness capital" of the three services, the Navy in particular. The Army is over-stretched – lack of personnel and spare parts, as well as having to pay for ongoing operations at the expense of capital investment in the future force structure, is jeopardizing the overall Army transformation program. There has also been a substantial decline in the operational readiness of the Air Force due to prolonged NORAD deployments as well as recent operational and personnel tempo associated with Op APOLLO commitments.

The net result has been a marked reduction in operational/combat readiness across the CF. Key indicators of this include evident shortcomings respecting the following: the amount of combat training at the formation/squadron level; numbers of trained personnel; quantities of spare parts,

certain ammunition types, operational stocks; and attention to maintenance (backlogs). All of this is compounded by required equipment mid-life refits, which are only partially funded. In short, operational readiness is at a critical low and the future does not bode well as structural readiness is declining.

PRINCIPAL OBSERVATIONS/ISSUES

Defence Readiness

Discrepancies have been noted in the readiness timelines outlined in the Defence Plan (DP) and the Defence Planning Questionnaire (DPQ). The most apparent example pertains to readiness timelines for the provision of Naval Task Groups. In the short term, there is a need to reconcile the DP/DPQ commitments and timelines with existing resources. If high readiness is to be realized within realistic resource limits, tiered (graduated) readiness of combat forces becomes a necessity.

Based on our review of DP assigned high readiness combat tasks, and analysis of the Op APOLLO files and After Action Reports, the Navy is the only service that has met both its Vanguard and MCF high-readiness tasks. Using the evaluation criteria outlined on page 4/39 of this evaluation, it is apparent from a similar study of Op APOLLO and Op NOBLE EAGLE files and reports, and following extensive interviews with leaders and service providers from the strategic through to the tactical levels, that the Army and the Air Force currently lack the capacity to concurrently generate and sustain all assigned high-readiness tasks. There is little expectation that the Army can generate its Main Contingency Force (MCF) Brigade Group in … …… and the Air Force cannot generate its CF-18 MCF commitment with its current resources, and will continue to be unable to do so even after the CF-18 upgrade program is completed.

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Complementary to the readiness of troops, equipment and other resources, there is a need to ensure that the CF has assured sources of air and sealift to meet high-readiness timelines.

Finally, there is no effective readiness monitoring of high-readiness units and formations which would better enable senior leaders and managers to make short-notice, well-informed decisions at the strategic level.

Sustainment

National procurement management at the corporate level does not have a focus on readiness and sustainment. Part of this issue involves the need for a clear articulation of the Materiel Group's responsibilities and accountabilities for high readiness. The three services, by themselves, lack the necessary resources to properly constitute and maintain necessary operational and logistics stocks. This has exacerbated a systemic lack of spare parts and goods that impairs virtually all aspects of operations, maintenance and training. The trade-offs between, and resource shortfalls respecting, operational and structural readiness demands are not made sufficiently visible as National Procurement (NP) struggles to address a mix of the two. Shortfalls have impinged directly on the capability of the DND/CF to deploy and sustain high-readiness units and formations.

Prior work by CRS has also expressed concern that NP resources do not consistently go to highest and best use.

Personnel Support

Personnel readiness requires improvements in human resource information systems, policies and medical support. As a result of our examination, we have concluded that there is no DND/CF database that specifically keeps track of both Regular Force and Reserve personnel who have been deployed on international operations. There is therefore no adequate means to determine the details of any subsequent post-operational reintegration efforts and to follow-up activities that may have been required. The CF also needs to review the policies required to generate, train, employ, and then reintegrate Reservists associated with high-readiness units and formations.

We are also concerned that ADM(HR-Mil) cannot fulfill all the medical tasks assigned in the Defence Plan for all high-readiness tasks. This concern is illustrated by the fact that the Canadian Forces Health Services Group (CFHSG) can provide only one Advanced Surgical Centre (ASC) from within current resources. This one ASC, while capable of supporting the Army Light Infantry Battalion operational tasking, is insufficient to support more than one battle group. It has been stated by senior CF medical officials that there are insufficient resources to support the Army MCF task. As it was beyond the scope of this evaluation, to fully explore this important area, there remains a requirement for an evaluation of the CFHSG capability to provide medical support to deployed operations.

PRINCIPAL RECOMMENDATIONS

It is important to emphasize that the evaluation team looked at the DND/CF through the high-readiness and sustainment lens, and therefore the findings reflect the capability of the DND/CF to mount, deploy and sustain high-readiness units and formation military operations. The proposed recommendations deal with ways to improve the execution of these functions.

Readiness Review Process: In general terms, it is proposed that the CF adopt a process similar to the US Joint Quarterly Readiness Review Process, which is oriented towards an ongoing evaluation of the readiness of current forces. The focus is on near-term operational readiness issues, not on long-term structural readiness. This would be a refinement to capability-based planning, not a replacement. This refinement would reinforce the current DND/CF Strategy Map (Performance Measurement) by adding a necessary operational overtone to the Departmental performance measurement framework. **(OPI: DCDS/VCDS)**

Reorientation of National Procurement: In order to capitalize on the benefits of the Readiness Review Process, it is proposed that the management of the National Procurement Program be re-oriented toward the operational readiness and sustainment of the high-readiness units and formations. A first priority for NP funding would be to achieve the readiness and sustainment levels required to meet Canada's defence commitments, whether it is a Naval Task Group, a Brigade Group, or a squadron of CF-18s.

Making operational readiness the priority for NP would help to focus attention on reconstituting National Operational Stocks of spares and ammunition required for force generation and sustainability, thus ensuring availability of items when needed. It would also make funding available for addressing Immediate Operational Requirements, which are inevitable. Finally, to make operational readiness and sustainment the focus of the DND/CF horizon one management also means that operational readiness would become the focus of the Sustaining Agenda as outlined in the Defence Planning and Management structure. **(OPI: VCDS/ADM(Mat))**

DEFENCE READINESS

1. Re-align the readiness timelines between the Defence Plan and the NATO Defence Planning Questionnaire, and, to the extent practicable, better ensure that the commitments in both documents correspond more closely to existing capabilities. **(OPI: ADM(Pol)/VCDS)**

2. Amend the Defence Tasks to reflect specific and prioritized tasks with response and sustainment requirements. **(OPI: VCDS)**

3. Develop a readiness monitoring process similar to the US Joint Quarterly Readiness Review Process. **(OPI: DCDS/VCDS)**

4. Redefine "Days of Supply", revise the Scales of Issue, and adopt standardized Tables of Organization and Equipment with associated Task Force Movement Tables for high readiness units and formations that will meet common allied and commercial loading and shipping criteria. **(OPI: ADM(Mat)/DCDS/ECS)**

5. Examine the feasibility of developing a graduated readiness Expeditionary Force structure for the CF-18 fighter community. **(OPI: CAS)**

6. Put in place the necessary arrangements for strategic lift to ensure the deployment and sustainment of Canadian forces in a timely fashion corresponding to the Defence Plan readiness timelines. **(OPI: ADM(Mat)/ADM(Pol))**

7. Working with DFA, establish the necessary framework for future deployment and sustainment of CF elements in key countries around the world, to include the necessary SOFAs and MOUs. **(OPI: ADM(Pol)/DCDS)**

SUSTAINMENT

8. Make the readiness and sustainment of high-readiness units/formations an overall CF/DND effort by ensuring that as a first priority, National Procurement funding be applied to readiness and sustainment, including the regeneration of national operational and logistics stocks. **(OPI: VCDS/ADM(Mat))**

9. Clearly articulate ADM(Mat)'s shared responsibility and accountability for CF readiness and sustainment with DCDS and the ECS. **(OPI: VCDS/ADM(Mat))**

10. Implement the Joint Support Group to deliver theatre activation, establishment of the theatre logistics base, support to reception, staging and onward integration/ movement, including integration of medical support, and theatre base closure. **(OPI: DCDS/ADM(Mat))**

11. Develop a common tracking system, compatible with US systems, to monitor equipment status and stock availability and movement throughout the supply chain, from Canada to and within the various theatres of operations. **(OPI: ADM(Mat))**

PERSONNEL SUPPORT

12. Direct the creation of a CF national database to keep track of both Regular Force and Reserve personnel, who have been deployed on international operations, to allow proper follow-up during and after the reintegration process. **(OPI: ADM(HR-Mil))**

13. Review personnel policies related to deployed operations including Home Leave Travel Assistance, passports, and Reserves screening/contracting practices. **(OPI: ADM(HR-Mil))**

14. Seek an independent evaluation of the ability of the Canadian Forces Health Services Group to support deployed operations be undertaken. **(OPI: ADM(HR-Mil))**

MANAGEMENT ACTION PLAN

Ser.	CRS Recommendation	OPI	Management Action	Status
1	Re-align the readiness timelines between the Defence Plan and the NATO Defence Planning Questionnaire, and, to the extent practicable, better ensure that the commitments in both documents correspond more closely to existing capabilities.	ADM(Pol) VCDS	OPI agreement.	
2	Amend the Defence Tasks to reflect specific and prioritized tasks with response and sustainment requirements.	VCDS	OPI agreement.	
3	Develop a readiness monitoring process similar to the US Joint Quarterly Readiness Review Process.	DCDS VCDS	DCDS partial agreement. Adoption of this concept would necessitate further study.	
4	Redefine "Days of Supply", revise the Scales of Issue, and adopt standardized Tables of Organization and Equipment with associated Task Force Movement Tables for high readiness units and formations that will meet common allied and commercial loading and shipping criteria.	ADM(Mat) DCDS ECS	OPI agreement. Strong endorsement from DCDS and ADM(Mat).	Days of Supply by summer 2005. Scales of issue, underway. TO&E, underway.
5	Examine the feasibility of developing a graduated readiness Expeditionary Force structure for the CF-18 fighter community.	CAS	OPI agreement. The Air Force recognizes the requirement to adopt an Expeditionary Force Structure for the CF18 community. CAS and 1 CAD/CANR staffs are working to develop an Air Expeditionary Force structure.	Underway.

Ser.	CRS Recommendation	OPI	Management Action	Status
6	Put in place the necessary arrangements for strategic lift to ensure the deployment and sustainment of Canadian forces in a timely fashion corresponding to the Defence Plan readiness timelines.	VCDS ADM(Mat) ADM(Pol)	OPI agreement. Defence Plan Change Initiatives C12-957 and C12-959 with VCDS as OPI are to evaluate the means to enhance strategic air and sea lift. ADM(Mat) detailed plans will be developed after this change initiative examines the options against the requirements.	Underway.
7	Working with DFA, establish the necessary framework for future deployment and sustainment of CF elements in key countries around the world, to include the necessary SOFAs and MOUs.	ADM(Pol) DCDS	OPI agreement.	Underway.
8	Make the readiness and sustainment of high-readiness units/formations an overall CF/DND effort by ensuring that as a first priority, National Procurement funding be applied to readiness and sustainment, including the regeneration of national operational and logistics stocks.	VCDS ADM(Mat)	OPI agreement with some reservations. Recommendation will require additional study.	
9	Clearly articulate ADM(Mat)'s shared responsibility and accountability for CF readiness and sustainment with DCDS and the ECS.	VCDS ADM(Mat)	OPI agreement.	
10	Implement the Joint Support Group to deliver theatre activation, establishment of the theatre logistics base, support to reception, staging and onward integration/movement, including integration of medical support, and theatre base closure.	DCDS ADM(Mat)	OPI agreement.	JSG initial operational capability- May 2004. Full Operational Capability- April 2015.

Ser.	CRS Recommendation	OPI	Management Action	Status
11	Develop a common tracking system, compatible with US systems, to monitor equipment status and stock availability and movement throughout the supply chain, from Canada to and within the various theatres of operations.	ADM(Mat)	OPI agreement. ADM(Mat) will develop a tracking system that will be compatible with NATO and US military requirements.	Currently monitoring In Transit Visibility (ITV/RFID) initiatives for compatibility with U.S./ NATO systems. Expect to achieve basic compatibility with NATO early 2005. Work on compatibility with U.S. system is ongoing.
12	Direct the creation of a CF national database to keep track of both Regular Force and Reserve personnel, who have been deployed on international operations, to allow proper follow-up during and after the reintegration process.	ADM(HR-Mil)	OPI agreement.	Screening & Reintegration policy to be promulgated July 2004. New two-tier screening system 1 November 2004 for both Reg and Res F.
13	Review personnel policies related to deployed operations including Home Leave Travel Assistance, passports, and Reserves screening/contracting practices.	ADM(HR-Mil)	OPI agreement.	Revised Reg & Res Force screening commences 1 November 2004.
14	Request an independent evaluation of the ability of the Canadian Forces Health Services Group to support deployed operations be undertaken.	ADM(HR-Mil)	OPI agreement. CRS Evaluation commenced April 2004.	Draft to OPI's May 2005.

BACKGROUND

1. This evaluation presents an independent view of many operational and strategic areas across the Canadian Forces (CF) and the Department of National Defence (DND). However, to give context, it must be noted that many of the issues discussed in this report arose as a result of a number of converging factors that have emerged over the last decade. This included: the end of the Cold War; significant cutbacks in defence budgets and personnel; the re-engineering of the DND/CF; the devolution of fiscal responsibilities; Somalia; Alternate Service Delivery initiatives; and, increased operational and personnel tempos through the 1990s. These had a direct impact on the situations detailed in this evaluation. It is recognized that the decisions made during this turbulent period, and the attendant risks assumed by senior leaders and managers, were made with the best intentions in mind in order to preserve a viable, multi-purpose, combat capable force in-being until stabilization of tasks and resources could be reached.

2. The mission of the DND/CF has remained unchanged over the past decade – to defend Canada and Canadian interests abroad while contributing to international peace and security. To carry out this mission, Canada needs and benefits from combat-capable maritime, land and air forces able to respond, at short notice, to fulfill a broad range of missions and tasks.

3. Many of the currently defined/directed high-readiness tasks for CF units and formations have their origins in Cold War NATO scenarios where CF personnel and equipment strengths were significantly higher. There is also another series of operational commitments to the United Nations derived from an early 1990s view of what role that organization could and would play on the world stage in the post-Cold War era.

4. During the past dozen years, Canada has required that the CF be capable of responding quickly to crises. The Country has committed high-readiness elements of all three services that have ranged from land and air forces in the Balkans, sea and air forces in Iraq, sea and land forces in Somalia, to sea, air and land forces in East Timor, and throughout South West Asia in the ongoing War on Terror. These continuing commitments have impacted significantly on operational and personnel tempo (OPTEMPO/PERSTEMPO), which may threaten the future capacity of the CF to respond to urgent domestic and international situations.

5. It is also recognized that following the attacks on the United States in September 2001, there is a now a more clearly understood view of the change in the threats to Canada and to our friends and allies. This is reflected in the shift away from a traditional Cold War long pre-conflict lead-time stance, to that of response to continuous intra-state and internecine warfare, and the deadly asymmetric threats of international terrorism and organized crime. This new state of affairs has called for Western democratic countries to increase the operational readiness of their respective armed forces, and also to accommodate the attendant sustainment demands made as a result of increased operational and personnel tempos. As a result of this shift, the continuous tension between structural readiness and the short lead-time operational readiness required by today's strategic context has worsened. In consideration of a significant increase in operational deployments, the DND/CF senior leadership requested an evaluation of readiness and sustainment.

6. The scope of this evaluation was limited to the readiness and sustainment of high readiness combat tasked units and formations. It is in this context that this evaluation was undertaken, observations made, and more importantly, recommendations provided to improve the operational readiness and sustainment capability of the DND/CF. These recommendations also independently reinforce many of the findings presented by CRS in the Audit of Materiel Support to Canadian Forces Deployed Operations, dated September 2002.

7. As part of this study, Chief of the Maritime Staff (CMS) and Chief of the Land Staff (CLS) requested particular attention be paid to their respective Op APOLLO deployments. The Chief of the Air Staff (CAS) asked the evaluation team to study the impact and the effects of post-September 11 NORAD deployments (Op NOBLE EAGLE) on overall CF-18 fleet readiness. Op APOLLO[1] and Op NOBLE EAGLE[2] were de facto tests of DND/CF actual readiness and sustainability.

8. To accomplish this evaluation given the scope noted above, four principal objectives were set[3]:

- **Objective 1:** To confirm that the general tasks assigned to the CF Vanguard/Main Contingency Force and other High Readiness Units and organizations are appropriate in terms of structure, timelines and standards.

- **Objective 2:** To confirm how the Deputy Chief of Defence Staff (DCDS) and the Environment Chiefs of Staff (ECS) generate the forces necessary to meet the readiness levels.

- **Objective 3:** To confirm how the ECS, Assistant Deputy Minister (Materiel) (ADM(Mat)) and others meet the sustainability requirements.

- **Objective 4:** To examine the continued validity of the current Vanguard/Main Contingency Force/High Readiness unit construct, with a goal of providing insights into future concepts.

[1] Op APOLLO refers to Canada participation to the War on Terror from October 2001 to August 2003.
[2] Op NOBLE EAGLE refers to NORAD operations from September 2001 to the present.
[3] 1258-137 (CRS) CRS Notification Letter 6 January 2003 (Attached as Annex A).

METHODOLOGY

GENERAL

9. To achieve the stated aim, the team examined policy documents, international agreements, threat assessments, doctrine publications, performed extensive file reviews of Op APOLLO, including a 100 per cent review of DCDS Op APOLLO files from mission commencement to March 2003, which included post operations reports, commanders and staff visit reports and lessons learned, as well as other relevant information. The team also held discussions and formal interviews with relevant parties from the tactical through strategic levels within the DND/CF. As part of the extensive document searches, benchmarking information was gathered regarding mounting, deployment and sustainment activities of the US, UK and Australia.

10. Within National Defence Headquarters (NDHQ), the Evaluation Team consulted with representatives from the Joint staff, the three Environments, the Policy Group, the Military Personnel Group, and the scientific community, amongst others. Outside of Ottawa, the team conducted visits to maritime, land and air units and formations in Halifax, Edmonton, Kingston, Petawawa, Winnipeg and Bagotville. This included visits to Maritime Forces Atlantic (MARLANT), Land Forces Western Area (LFWA), Land Forces Doctrine and Training System (LFDTS) Kingston, 2 Canadian Mechanized Brigade Group (2CMBG) Petawawa, 1 Canadian Air Division (1 CAD) Winnipeg, and 3 Wing Bagotville, plus other selected operational formations, ships and units.

Evaluation Criteria

11. Direction for readiness and sustainment exists in the annual DND/CF Defence Plan, and in NATO and NORAD documents whereby formations and elements of the CF and DND are directed to be prepared for, and to sustain for a given period, a number of high readiness combat tasks. In most cases, specific unit-sized groups or formations are identified and readiness timings are provided accompanied by sustainment direction for those tasks. The table below lists the principal CF high readiness combat tasks and sustainment requirements on which this evaluation concentrated[4]:

[4] Department of National Defence, Defence Plan On-Line 2003-3004, Ottawa 2003. Details in Annex B.

MAIN CF HIGH-READINESS COMBAT TASKS			
	Task	**Notice to Move**	**Sustainment**
Navy	Naval Task Group of four ships	……	…… ……
Army	Light Infantry Battle Group	……	……..
	Medium Battle Group (Vanguard)	……	……..
	Brigade Group (including Vanguard or up to three Battle Groups)	……	…….. ……
Air Force	NORAD Tasks – CF-18 (1)	……	……..
	… x CF-18 Vanguard (2)	……	……..
	… x CF-18 added for MCF	……	…….. ……..
Note 1: Numbers are classified. **Note 2**: …….. ……			

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12. Given the direction for readiness and sustainment provided in the DP and other directive documents, the team was able to apply operational capability criteria listed below to evaluate the relevant CF high-readiness combat tasks as undertaken in Op APOLLO and Op NOBLE EAGLE. These criteria also provided the benchmark against which current operational capabilities can be measured. Finally, these benchmark criteria provide a suitable vehicle to allow for discussion of options and alternatives for future tasks and capabilities. Operational capability can be defined as the potential to achieve military objectives.[5] The key components of operational capability are:

- Equipment. The possession of an appropriate range and scaling of suitable, reliable, and maintainable equipment.
- Manpower. The provision of sufficient manpower, appropriately trained both tactically and technically, as individuals and as teams/crews.
- Collective Performance. The proven ability to apply current doctrine in the full range of combined and joint operations, including an effective command structure.
- Deployability. The ability to deploy the force element to the desired area of operations within the stated readiness timelines, and the extent that it is able to operate on arrival.
- Sustainability. The possession of an appropriate holding of combat supplies and equipment support spares, and the ability to deploy them to an area of operations, and move them within that area of operations. It also includes the generation (or regeneration) of sufficient manpower and materiel to sustain the operation for as long as required.

[5] UK Director of Operational Capability, 10 September 2001.

PRINCIPAL ISSUES

DEFENCE READINESS

General

13. Defence Readiness can be defined as "having a military capability to apply when it is needed, where it is needed and for how long as it is needed"[6]. This section of the report will look at the readiness discrepancies between the defence tasks contained in the Defence Plan (DP) and NATO Defence Planning Questionnaire (DPQ) and the current resources allocated to the three Environments. Issues related to the diplomatic framework for international missions, readiness monitoring, tiered readiness, and deployability will also be examined in this section.

Defence Tasks and Resources

Navy

14. The Navy's principal Defence Plan directed high-readiness combat tasks, outlined in Annex B, consist of the provision of a single ship for the NATO Standing Naval Forces Atlantic (STANAVFORLANT) mission on NATO 1 Notice to Move (NTM), a single frigate for the Vanguard Task at …….. NTM, plus a Naval Task Group consisting of a DDH Tribal Class command and control/air defence destroyer, two City Class frigates (one being the Vanguard ship), and an Auxiliary Oiler Replenishment (AOR) ship on either ……. NTM – the discrepancy in this timing will be discussed shortly.

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15. The Navy is the only service that has met both its Vanguard and MCF high-readiness tasks. This was demonstrated in Op APOLLO, when the Naval Task Group, composed of two frigates, a destroyer and an AOR, sailed …… after receipt of their Warning Order. The Navy was able to surge a third frigate during peak operations in the Gulf when HMCS Vancouver sailed earlier than scheduled with the US carrier battle group with which it had been training.

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16. Notwithstanding, and as mentioned earlier, there are discrepancies regarding readiness timelines between the Defence Plan and the Defence Planning Questionnaire. As illustrated in the chart below, there is a significant variance in the readiness timelines for the provision of the CMS Main Contingency Force task (Naval Task Group 1 (NTG 1)) listed in the Defence Plan versus those appearing in DPQ 2002. The Defence Task listed in DP 2003/04 calls for ……. Notice To Move for the NTG 1, whereas the DPQ 2002 demands a NTM that is less than half of the DP timings[7].

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[6] Alan Hinge, "Australian Defence Preparedness," Australian Defence Studies Centre, Canberra, 2000, p. 4.
[7] Exact figures are classified.

17. The Navy has imposed a ……. NTM, exclusive of embarkation leave. This …… NTM, plus embarkation leave, plus time required for equipment transferral and logistics preparation, allows the Navy to meet NATO timelines. This high-readiness posture has allowed Canada, over the last fifteen years, to repeatedly dispatch naval resources as the first element of a Canadian military response to an international crisis. Although, the readiness timelines for NTG 2 listed in the DP do, in fact, match those in DPQ 2002, the Navy maintains the NTG 2 at … …… NTM, which is a significantly shorter readiness level than that demanded in DP and DPQ. AIA Section 15(1) International Affairs and Defence

DP Task	DP Assigned Readiness Level	Actual Readiness Level	Difference
One frigate for STANAVFORLANT	……	…….	None
One frigate as a Vanguard Element	…….	……	-11 days
Naval Task Group 1	……	……	-80 days
Naval Task Group 2	……..	……	-120 days
* DP/DPQ Timings. NATO timelines are classified but are significantly less than DP timings. CMS readiness levels more closely reflect NATO timelines. To keep this evaluation unclassified, DPQ timings, although referred to, will not be presented in this report.			

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18. The Navy has also outpaced 12 Wing's capability to generate CH-124 Sea King helicopter air detachments (HELAIRDETs) in sufficient numbers. There is definitely a PERSTEMPO issue; and the screening of both pilots and technicians before they come on board ship is an added issue. These air crews often lack environmental training such as damage control, firefighting and first aid.

19. The provision of a Naval Task Group is the core combat capability provided by the Navy. However, the ability of the Navy to generate a NTG in the future will become a challenge for several reasons. Besides current personnel shortages, both the AOR and the DDH will shortly reach the end of their useful lives. Furthermore, the frigate is reaching its mid-life refit point and will require substantial funding with the FELEX frigate rebuild program, and associated command and control and self-protection fitment programs requiring in excess of $2.2 billion.[8]

Army

20. The Army's principal high-readiness combat tasks are outlined at Annex B, but in summary, consist of the provision of a light infantry battle group (currently designated as the Immediate Reaction Force (Land) (IRF(L)), and a medium battle group (based on either an infantry or armoured unit), both at ……. notice to move. In addition, the Army is tasked with preparing for the provision of a brigade group or three battle groups on …… notice to move. The chart below illustrates the difference between DP assigned Readiness levels and Actual Readiness levels, demonstrated through either actual performance figures in the case of Op AIA Section 15(1) International Affairs and Defence

[8] DND/CF Strategic Capability Investment Program, December 2003.

APOLLO, or timeline estimates prepared by senior operational and logistics staffs within CLS and ADM(Mat) for those tasks. These estimates are based on current contract schedules, known delivery timings, and include time required to acquire sufficient quantities of operational materiel to effect a readiness for deployment of the tasked unit or formation.

DP Task	DP/DPQ Assigned Readiness Level	Actual Readiness Level	Difference
IRF(L) Light Infantry Battalion	…… NTM	…… (Op APOLLO)	+24 days
Vanguard of the MCF Mechanized Inf/Armd Battle Group	…… NTM (NATO)/…… NTM (UN)	Unknown but more complex mounting phase than the IRF(L) task. Would take longer than DP/DPQ timelines*	Unknown* (Army currently states that the "Vanguard" has been deployed for the Bosnia Task)
Remainder of MCF Brigade Group or three Battle Groups	…… NTM	……..	+30 to 60 days
* Based on existing contract schedules and known delivery times. Variations in timing will depend on theatre of operations and needed special equipment and ammunition natures.			

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21. During the course of this evaluation, interviews with senior logistics officials and operational commanders, and file reviews of Op APOLLO deployment preparations, have shown that before 11 September, the IRF(L) was not resourced to perform its prescribed role. Although, in theory, the IRF(L) unit was supposed to be at …… notice to move, it was never manned, equipped and trained to achieve that timeline.

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22. Prior to Op APOLLO, the IRF(L) unit was declared operationally ready (OPRED) when, actually, insufficient supplies had been assembled to meet the prescribed readiness and sustainment timelines. For Op APOLLO, the required sea containers and other stores were not ready. It took an extra 45 days to assemble the necessary supplies.

23. Equipment and personnel shortfalls have led to circumstances whereby the Army was moved to adopt their ATOF system for force generation of high-readiness units. Within this system which features high-demand items such as specialist vehicles and ammunition being cycled through a designated high readiness formation in a set rotation schedule, the Army is now capable of generating and sustaining two battle-group-sized high-readiness units. These units are currently tasked to be available for NATO and UN high-readiness missions. The Army has indicated in their 2003 Strategic Operational Resource Distribution Plan, that the Bosnia deployment represents their Vanguard commitment, although the present composition of that unit is much less than what the combat capable Vanguard organization Table of Organization and Equipment (TO&E) calls for in the Defence Plan. In addition, the deployment in Bosnia is not being funded by DCDS, but has become an Army baseline task. This situation lessens the Army's capacity to generate the Vanguard/MCF high-readiness commitments by dedicating resources for force employment instead of force generation.

24. In our view, the Army cannot generate the MCF Brigade Group in ……. due to a lack of personnel, equipment, and spares. To do so in …… would not be logistically feasible considering the current limited holdings of operational stocks (OPSTOCKS). Based on the existing contracts for spare parts and services, it has been estimated by senior logistics staffs in both CLS and ADM(Mat) that it would take between …… to allow for the purchase of essential OPSTOCKS such as spares, ammunition, plus other theatre-specific major equipment. Within the Army Training and Operations Framework (ATOF) cycle, when a brigade group is designated as the high-readiness formation (the MCF), it is necessary to divert significant resources from the two remaining brigades.[9] These resources, which must be moved from brigade to brigade, include a number of Class A and B vehicles. There are insufficient Light Armoured Vehicle (LAV) Mobile Repair Team vehicles, wheeled LAV recovery vehicles, re-fuelling vehicles, and refrigeration equipment for food services vehicles available in the CF inventory for all three Army brigades to each retain enough vehicles to allow for high readiness requirements. As a result, these resources are moved to each high-readiness brigade in turn.

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25. The Army lacks sufficient numbers of infantry and Combat Service Support (CSS) specialists such as Electrical and Mechanical Engineers (EME), Supply, Traffic, and Postal technicians at various rank and experience levels. In FY 2003/04, the Army Trained Effective Strength (TES) figures indicate that there will be a shortfall of 1327 personnel in the infantry and CSS trades. This figure will rise to 1832 personnel by FY 2005/2006.[10] In addition, leaders and supervisors across the operational spectrum in the Army have noted that there are deficiencies in occupational qualifications of soldiers serving in operational units. For instance, many QL3 tradesmen do not fully contribute until such time as the individual reaches the Journeyman level, QL5, that can take four to six years. Many of the QL3 support tradesman also arrive at their units, following their basic trades training, with inadequate general military skills training. This includes a general lack of "soldier skills" including weapons handling, navigation and fieldcraft.

26. To bring a given unit up to its full establishment, and to maintain it at high readiness, the Army needs to deplete other similar units. Unlike the Navy and the Air Force, the Army continues to distinguish between "peace"' and "war" establishments through the use of "restricted positions". For an Infantry Battalion, this amounts to a difference of over 200 people. As an example, to generate 3 PPCLI Battle Group for Op APOLLO, personnel from 17 other units were required to bring the battle group up to its proper manning establishment. This method of "topping up" a high-readiness unit complicates personnel management, increases personnel turbulence, and makes it extremely difficult to generate a high-readiness Brigade Group out of a single brigade as currently established.

27. Until 2003, training at the Brigade Group level had not occurred since 1996. As a consequence, the Brigade Training Event 3.0, held in May 2003, indicated that there had been deterioration in tactical skills at that level. The Army still maintains the goal of being able to generate and sustain a Brigade Group of between 2,000 and 6,000 troops. However, to achieve this goal would demand training at the formation level on an annual basis. At this point in time,

[9] A/CLS presentation to DRMC, 26 October 2003.
[10] CLS presentation to CDS, May 2003; A/CLS presentation to DRMC, 26 October 2003.

senior land force formation commanders have advised that the Army can only conduct combat operations up to the battle group level. Further training at the Brigade Group level will be required to achieve high readiness at the formation level.

28. Despite doubts expressed over the relevance of an MCF Brigade Group contribution, the recent development of the NATO Response Force (NRF) Concept and the ongoing US Army reorganization, which is driving NATO reforms, indicate that the "Brigade Unit of Action" structure, which is similar to a Canadian Brigade Group, will be the basic building block at the formation level for alliance high readiness tasks. Within NATO, like-minded countries such as the Netherlands, Belgium and Norway are restructuring their formally "static" Cold War formations into an expeditionary posture, with the brigade/brigade group concept being adopted as part of the NRF as the focal point for their land force deployable capability. These developments within NATO, and with other allies such as Australia, show that a Canadian Brigade Group task remains a relevant contribution to any alliance or coalition of like-minded nations. The Army, however, faces a number of challenges in order to generate a Brigade Group.

29. The differences between the preparation for Op APOLLO in 2001 and Op ATHENA in 2003 were marked. The introduction of the Army Training and Operations Framework cycle culminating in the Brigade Training Event, allowed 2 CMBG to obtain the required resources, personnel, and support to properly prepare for their assigned high-readiness tasks in Bosnia and Afghanistan.

30. In summary, the current Army resources do not allow the fulfillment of all DP/DPQ combat commitments within agreed timelines.

Air Force

31. The Air Force's principal high-readiness combat tasks for the fighter community, outlined in Annex B and the following chart, consist of the provision of CF-18 fighter aircraft for NORAD and Air Sovereignty operations in Canada on ……. notice to move, plus a …. fighter Vanguard on …….. notice to move for international operations. There is also an additional …. fighter aircraft commitment to complete the Main Contingency Force task on ……. notice to move.

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DP Task	DP/DPQ Assigned Readiness Level	Actual Readiness Level	Difference
NORAD/ASA	……	Same	None
Vanguard of … CF-18 (1)	……..	Unknown but not within …….. (2)	Unknown but not currently sustainable beyond ROTO 0
MCF of … additional CF-18	……..	Unachievable	Unachievable

Note 1: ……

Note 2: This estimate is based on the fact that Pack-Up kits and operational stocks have not been identified or assembled to meet these timelines. Lack of spares and operational stocks would be the principal cause of failure to meet agreed timelines. (See para 37.)

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32. Current tactical fighter squadrons (TFS) are established for 17 trained pilots, down from 23 in the 1990's, for a total of 34 pilots at the Wing level. In reality, however, 3 Wing, which is currently mandated to generate the Vanguard and perform the NORAD tasks, has a total of 25 trained pilots. Of these 25 pilots, four are exchange pilots who do not participate in the NORAD role.

33. Interviews with senior Air Force operational and maintenance staffs, and a study of available historical maintenance data, indicate that the four tactical fighter squadrons can each generate and sustain an average of only six aircraft apiece for a total of 24 aircraft[11]. In June 2003, 3 Wing had approximately 20 serviceable aircraft available daily. Despite this higher than average availability rate, the number of aircraft that could be sustained was much lower. Only a …. aircraft Vanguard could have been sustained due to the need to cater for pilot to aircraft ratios and pilot rotations. For example, each aircraft deployed on a NORAD task on a 24/7 basis requires three pilots.

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34. The Air Force has about 68 operationally qualified CF-18 pilots. This includes the 21 pilot instructors at the Operational Training Unit (OTU). …… …… …… …….. is therefore not achievable if the Air Force has to fulfill both NORAD and NATO commitments simultaneously. Due to personnel shortfalls, the Air Force is unable to provide and sustain a … plane Vanguard with its current ongoing NORAD commitments. At this point in time, this is not an equipment issue but a personnel issue.

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35. Since September 11, the CF-18 NORAD commitments have remained at a high readiness level. Concentrating on the NORAD mission has resulted in an overall reduction in combat skills. Proper training for multi-role operations can't happen when aircraft are on alert or flying NORAD missions. As a result of maintaining a high-readiness posture for domestic requirements, with both Wings dedicating resources to the NORAD commitments for a

[11] 3010-7 (Project Transform) 21 February 2003.

previously unforeseen period of time, there has been a consequent loss of flying hours dedicated to multi-purpose combat training. This has resulted in the CF-18 pilots in the operational squadrons losing their combat skills currency. Flying hours, which had previously been dedicated to combat training, are now being used for the less-demanding NORAD missions. The present number of trained CF-18 pilots is below critical mass to force generate for multiple high readiness tasks.

36. By 2006, the CF-18 community will not be able to undertake the current NORAD commitments and simultaneously generate the Vanguard requirement of …. aircraft, let alone the MCF task. In 2006, the Air Force will have 80 modernized CF-18s, which will translate into having a total of approximately 35-40 operational aircraft available on any given day. Historical CF-18 maintenance data has shown that 30 per cent of the total fighter fleet is routinely in second or third line maintenance facilities and are therefore unavailable for duty as summarized in the chart below. This will leave about 56 aircraft available for all tasks. Four aircraft will be in AETE, and 15 will be deployed with the OTU for a total of 19. Of these 19, five aircraft will be in second and third line maintenance facilities and have therefore been accounted for in the above total of 56 aircraft. This leaves a total of 42 aircraft available for NORAD, the Vanguard and the MCF commitments. In addition, again based on historical data, 30 per cent of these 42 aircraft will be unserviceable and will be undergoing first line maintenance. Given that the NORAD commitment demands assured availability of aircraft, there are not enough aircraft remaining to fulfill both the Vanguard and the MCF tasks.[12]

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Task/Location	Status	Numbers/Tasked	Difference/Gap
Second or Third Line Maintenance	Unavailable for operations (Historical data indicate 30% of the fleet unavailable at any given time in 2nd and 3rd Line maintenance facilities)	24 out of service	56 remaining
AETE/OTU	Engineering and Trg Established for 4+15=19 aircraft	14 (19 minus the 30% in 2nd and 3rd Line maint facilities that have been accounted for in the column above)	42 remaining
NORAD/ASA	Domestic and North American security maintained at full capacity	…… …… ……..	…… ……
Vanguard	NATO/International	……..	…….
MCF	NATO/International	……	Unachievable
Note 1: ……..……..……..……..……..……..…… ……..……..……..…….			

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[12] 3010-7 (Project Transform) 21 February 2003, Annex D.

37. Prior to 11 September 2001, the basic planning assumption was that the full NORAD/Air Sovereignty operation and the deployment of the Vanguard would not occur simultaneously. Since September 11, that assumption has been invalidated. As noted above, it has been determined that the Air Force does not have sufficient resources to generate and sustain all of their DP assigned CF-18 high readiness tasks. In the best case, only the NORAD and the Vanguard commitments might be met, assuming enough pilots are available. The Air Force will not be able to generate and sustain more than …. aircraft for international operations. To generate an MCF of ... aircraft is not achievable.

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38. In summary, given current levels of resources and recent OPTEMPO within the Air Force, force employment levels are up and force generation output is down. Overall skill levels are deteriorating. Over-commitments, maintenance backlogs, lack of spares and insufficiently trained personnel all impact negatively on aircraft serviceability and availability and thus affect training. The current CF-18 Tactical Fighter Squadron structure is not robust. There are insufficient numbers of trained and experienced pilots in the current establishment to provide a force generation capability that meets the required readiness and sustainment levels. There is a need for more specific direction to the Air Force in their Defence Plan tasks to reconcile resources with tasks.

39. In conclusion, discrepancies have been noted in the readiness timelines between the DP and the DPQ. High Readiness demands a corporate effort; with the current resource allocations, the achievement of the assigned tasks is beyond the capacity of any of the individual ECSs. Responsibilities for support to high-readiness commitments between the ECSs, the DCDS and ADM(Mat) need to be clarified. There is a requirement for a clearly articulated sharing of responsibilities.

> Recommendation: Re-align the readiness timelines between the Defence Plan and the NATO Defence Planning Questionnaire, and ensure that the commitments in both documents correspond more closely to existing capabilities. (OPI: ADM(Pol)/VCDS)

Diplomatic Framework for Future Missions

40. The lack of diplomatic clearances in the Persian Gulf area has been a major limiting factor in the deployment and sustainment of Canadian troops. In particular, for Op APOLLO, the lack of diplomatic clearances and memoranda of understanding (MOUs) severely limited the provision of national support in theatre, including sustainment flights.

41. The strategic reconnaissance for the army commitment to Op APOLLO did not address issues such as where Canada should employ its forces and what they would be tasked to do. In our view the composition and rank level of the strategic reconnaissance group was not clearly appropriate (led by a Lieutenant-Colonel) to initiate diplomatic contacts with Kuwait or other Middle-Eastern countries in order to secure Status Of Forces Agreements (SOFAs) and Memoranda of Understanding. The strategic reconnaissance group went instead to Kandahar, which, in the end, conflicted with the tactical reconnaissance. Lack of timely diplomatic

clearances was a limiting factor on the deployment and sustainment of CF troops into the Op APOLLO theatre of operations for the first six months. Other nations include diplomats and general officers in their strategic reconnaissance party, and only dispatch these parties after initial contact has been established at the most senior levels.

42. As a result, CF personnel could not obtain the appropriate visas in a timely manner, spare parts were delayed in customs, deployments were impeded by the lack of flight clearances, and the dispatch of hazardous cargo and ammunition was delayed. To avoid these difficulties in future operations, the necessary diplomatic framework, including SOFAs and MOUs should be negotiated with key countries.

> Recommendation: Working with the Department of Foreign Affairs (DFA), establish the necessary framework for future deployment and sustainment of CF elements in key countries around the world, to include the necessary SOFAs and MOUs. (OPI: ADM(Pol)/DCDS)

Readiness Monitoring

43. There is no effective readiness monitoring process in place at the strategic level in the DND/CF. The readiness and sustainment status of high-readiness units and formations is not yet readily available to the principal CF force employer, the DCDS. At the present time, if senior leaders and managers wish to know the readiness status of any element of the CF/DND, NDHQ staffs must initiate extensive consultations with environmental and support staffs to gather the relevant information.

44. For example, on September 11, the National Defence Command Centre placed the IRF(L) on ……. notice to move. This was unrealistic given that, at the time, the battalion had a company in the Rocky Mountains, a company in Austria on a peacekeeping exercise, and the unit CO and the Ops Officer were in Norway. On 4 October 01, the unit received a CLS Warning Order to bring the IRF(L) ……... NTM by 31 October 01. At that point the unit was not ready for international operations, due to the fact that insufficient supplies and spare parts had been assembled.

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45. The US, which encountered similar problems, has developed a comprehensive readiness monitoring process that evaluates their current forces readiness (see Annex D). While the CF is structured differently from the US military, it is the review team assessment that the principles underpinning the US Joint Readiness Review Process would have equal applicability in the Canadian context. There is a need for the CF to develop a process that will provide similar results to enable decision-making at the senior level.

> Recommendation: Develop a readiness monitoring process similar to the US Joint Quarterly Readiness Review Process. (OPI: DCDS/VCDS)

Tiered Readiness

46. Tiered readiness demands that each unit/formation be given a responsibility and the commensurate resources to provide a certain capability or capabilities at an assigned level of proficiency, at a specific notice to move, and capable of being sustained for a given period of time. In the wake of September 11, in both the US and NATO, tiered readiness has become the new force model with units/formations placed at either reduced, normal or high readiness states.

Navy

47. In our judgment, the Navy never lost sight of operational readiness as its primary focus. Only through the maintenance of a tiered readiness posture was the Navy capable of meeting their high-readiness commitments. Even so, these high readiness commitments were achieved with very narrow margins to spare. The Navy has experimented with a tiered readiness system consisting of having ships at high readiness, normal readiness, or extended (reduced) readiness. This has enabled the Navy to maintain an overall high level of operational readiness.

48. It currently takes nine months for a ship to reach high-readiness status. Once high readiness has been achieved, this certification can remain valid up to 18 months for an FFH City Class frigate, if required. The DDH/AORs can be maintained at HR for slightly longer periods but this entails conducting recertification procedures. Extended readiness was intended to allow more readiness management flexibility. However, it is questionable whether extended readiness can generate significant savings due to the extra costs incurred to bring a ship back to a higher readiness state. HMCS HURON, which was in extended readiness, illustrates this situation, whereby the Navy was initially forced to do a "safe to float" docking in 2003 as a safety precaution, which costs considerably less than conducting a standard refit. However, maintenance and configuration control management processes fell so far behind schedules that a decision was made in the fall of 2003 to retire HMCS HURON from service.

49. Naval high-readiness measurement depends on the completion of a series of Combat Readiness Requirements (CRRs). Due to a reduction in ship sailing days, there has been a decline in the completion of required CRRs to the point where across the fleet, benchmark readiness targets are now not being met. The Op APOLLO requirements further drained the fleet's resources. OPTEMPO has seriously affected the multi-ship combat training required to generate a combat ready Naval Task Group. As a result of Op APOLLO, overall fleet combat readiness is declining.

50. In addition, following a review of personnel figures provided by the CMS N1 and senior personnel specialists at MARLANT HQ, it has been noted that a lack of personnel is becoming a serious issue affecting combat readiness. There is no assured availability of all technical and combat operational MOCs. As of June 2003, the Navy was short of over 100 MARS officers, principally junior officers. As an example, there was at least one ship sailing with zero out of five Lieutenant(Navy)s ((Lt(N)'s). The Navy is also short of key Lt(N)'s in staff positions. Personnel shortages exist in technical Navy trades such as Naval Electrical Technician, Tactical Acoustic Sensor Operator, and Naval Weapons Technician. There are shortages of over 700

technical personnel, principally in the junior ranks. As an example of the impact of these personnel shortfalls, the Navy had to request 117 waivers of the 12-month no deployment policy between two international deployments for HMCS CHARLOTTETOWN for Op APOLLO ROTO 0 in 2001 and one hundred and four waivers for the crew of HMCS IROQUOIS during ROTO 3.

Army

51. The Army Training and Operations Framework cycle is a recently adopted tiered readiness structure that allows one third of the field force (a brigade) to be kept at high readiness, while the remaining two-thirds are either training or reconstituting. The differences between the preparation for Op APOLLO in 2001, underway before the ATOF cycle had started, and Op ATHENA in 2003 are marked. The introduction of the ATOF cycle culminating in the Brigade Training Event in 2003 allowed 2 CMBG to obtain the required resources, personnel and support to prepare for their assigned high readiness tasks in Bosnia and Afghanistan. This tiered readiness structure has allowed the Army to apply its limited resources to prepare two Battle Groups and a Brigade Headquarters for use in high readiness contingency operations.

52. There remain, however, problems due to a lack of extant Tables of Organization and Equipment for Army high readiness units. The Op APOLLO deployment revealed that high readiness is incompatible with the absence of an approved manned, equipped, trained and resourced organization. The timely development of the High Readiness units' TO&E remains an issue.[13] ……………..……………..……………..……………..……………..……………..……………..
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[13] 3350-165/A27 Comd CA JTFSWA Op Apollo Rotation Zero-Post Deployment Report(PDR) 23 April 2002; 3350-165/A27 Comd CA JTFSWA Mission closeout/ lessons learned 29 August 2003.
[14] 3350-1/OP APOLLO (G3) 1CMBG Post Operation Report – Op APOLLO and the Army Post Operation Report, Version 2001, amended April 2002.

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53. Senior military planners and logisticians have noted that the lack of a standardized TO&E for High Readiness units and formations and the failure to promptly finalize the TO&E for Op APOLLO had a cascading impact on other critical issues such as manning, training, scaling of parts, support equipment, ammunition scales and flow of forces into theatre (Task Force Movement Tables). In addition, lacking up to date Scales of Issue and an agreed to definition of Days of Supply further complicated the planning phase. Within the limits determined by DCDS, the evaluation team agrees with the Army view that the task force commander should have the authority to tailor the final TO&E once the reconnaissance phase is completed.[15] This is especially true for the first rotation (ROTO 0).

54. Many of the problems associated with Op APOLLO warning and mounting phases were not repeated during the preparation for Op ATHENA. The inclusion of an operational level input (area commander and brigade commander) for Op ATHENA during the strategic reconnaissance and subsequent TO&E development alleviated many of the Op APOLLO difficulties.

[15] OP APOLLO Army Post Operation Report, Version 2001, amended April 2002.

55. Although the Army has moved to a tiered readiness structure, there is still a requirement for the development of TO&Es for high readiness units and formations. Within this tiered readiness structure, having standardized TO&Es, which can be easily tailored, would facilitate the planning and the mounting phases of an operation to meet high readiness timelines. As well, there is a requirement to redefine and revise Scales of Issue and "Days of Supply" for high readiness units and formations. A similar set of recommendations was made by CRS in the Audit of Materiel Support to Canadian Forces Deployed Operations dated September 2002.

> Recommendation: Redefine "Days of Supply", revise the Scales of Issue, and adopt standardized Tables of Organization and Equipment with associated Task Force Movement Tables for high readiness units and formations that will meet common allied and commercial loading and shipping criteria. (OPI: ADM(Mat)/DCDS/ECS)

Air Force

56. With the exception of 1 Wing, the Air Force has no graduated readiness framework to support an Expeditionary Force structure. Within the CF-18 community, the current approach is to train all operational CF-18 pilots for all fighter roles as multi-skilled pilots. However, a recent workload study done for 3 Wing revealed that this approach is not feasible, as a pilot would require more training days per year than is physically possible.[16]

57. Due to geographical limitations, the CF-18 NORAD mission can only be performed with the combined resources of the two fighter Wings. As the Air Force is presently structured, the CF-18 Vanguard mission requires one Wing to provide ROTO 0 and the other Wing to provide ROTO 1. Consequently, NORAD and Vanguard tasks are assigned to both CF-18 Wings. Within the Wing tasked with providing the Vanguard ROTO 0, however, no differentiation is made between preparing for either NORAD or the Vanguard task. Each of the two Tactical Fighter Squadrons (TFS) prepare for both tasks. This lack of task differentiation precludes a single squadron from focusing resources and training on either of the two high readiness tasks. With NORAD being the Priority One task, the Vanguard task will always be relegated to a lower priority. Consequently, the Wing assigned with the ROTO 0 Vanguard task receives no higher priority in manning and resource allocations.

58. Currently, the Air Force has two fighter Wings of two operational squadrons each. Within each Wing, the two TFS share the current NORAD tasks, leaving the Vanguard as the residual task. Training for an expeditionary task is always given a second priority depending on availability of resources. The introduction of a graduated readiness structure would mean that in each Wing, one TFS would be dedicated to NORAD, while the other TFS would be training for either ROTO 0 or ROTO 1 of the Vanguard task. This would allow a re-allocation of personnel, Yearly Flying Rates (YFR), and maintenance effort in relation to the highest readiness priorities. For instance, this would allow transferral of YFR from the less demanding NORAD role to the expeditionary task. Notwithstanding, the ongoing Air Force Support Capability initiative has the potential to support a tiered readiness structure.[17]

[16] Draft DGOR 3 Wing Workload Model, 2003.
[17] Air Force Support Capability (AFSC) Brief to the NDHQ Stakeholders 20 May 2003.

59. All Air Force communities are experiencing a reduction in pilot and technical skills as a result of the high operational tempo. The Air Force has problems with recruiting, training (production and absorption) and to a lesser extent retention of both pilots and technicians. Although the current Actual Manning Levels for TFS are at or near 100 per cent of authorized strength, trainees represent about 35 per cent of this strength. In fact, the total Available Effective Strength of CF-18 pilots, aircraft maintainers and armourers is approximately 44 per cent.[18]

60. Pilot production for FY 2003/04 cannot be absorbed. In FY 2002/03 the Air Force was able to absorb the 82 new pilots coming out of the NATO Flying Training Centre (NFTC) program, but will not be able to absorb the 93 new pilots trained in FY 2003/04. For instance in the case of 3 Wing, even if the Wing had their authorized 34 pilots, there would not be enough funding for the YFRs to train all pilots at the prescribed 180 hours per pilot per year. In addition, the OTU now takes up to 13 months to produce a basic CF-18 pilot. The net result is that it now takes up to twice the time required to fully train a pilot than it took in the 1990's.[19]

61. The Air Force has a number of technical skill sets that vary by fleet and are unique to that fleet. As the expertise is very compartmented by fleet, technicians cannot easily transfer from fleet to fleet. Similar to the pilot problems, there is also the MOC 500 absorption issue for unskilled technicians. The situation is compounded by the current OPTEMPO as experienced supervisors are deployed on a continual basis. These supervisors are therefore not available to train the unskilled technicians. The aircraft upgrade programmes will further exacerbate the overall situation. The most qualified technicians have to be sent off first to learn the new systems, who then must come back to teach the new TQ3's and other trainees. It will therefore require a longer period to train the junior technicians.

62. The impact of increased recruiting will not be felt for a number of years. It takes three years before a person is qualified on a specific airframe; then that individual has to complete an On Job Training (OJT) period of 18-24 months. Although the person has finished TQ3 training, he/she is not qualified to perform most tasks without close supervision. Consequently, the person is not truly productive even though the "system" says the position is filled with a "trained, effective" person. For most fleets, a technician must be a two-year Corporal (approximately six years of service) to be considered fully employable.

63. Individual readiness within the Air Force is an issue. Since the withdrawal of the Air Force from Germany in the early 1990's, there has been a marked reduction in general military readiness skills. The Air Force is challenged by a shift in paradigm from operating from a Canadian Main Operating Bases (MOB) to an expeditionary force capability.[20]

[18] 3010-7 (Project Transform) 21 February 2003.
[19] Ibid.
[20] 3000-1 (SO Trg & Rdns) Contingency Capability Readiness at Wings – "A pressing requirement to return to basic military fundamentals." 18 September 2001.

64. Air Force senior staffs at the operational and tactical levels have noted that the Air Force's DAG process does not support a high readiness posture. Only those members who are perceived as deployable are currently screened for international operations. Consequently, contrary to regulations, not every individual is screened for overseas employment, thereby putting a higher PERSTEMPO burden on those already deemed fit for service overseas. Medical screening is an additional issue. The Wing medical staffs barely cope with the day-to-day garrison requirements, let alone the extra demands imposed by the DAG process.

65. Given the primacy of the ongoing NORAD operation and the added demands put on the fighter community, the previous planning assumption that the NORAD commitment would not preclude the Air Force from dispatching the Vanguard/MCF simultaneously has been invalidated. Consequently, as long as the Air Force is tasked with a provision of a Vanguard task, to be executed concurrently with NORAD, and considering its limited resources and the readiness issues noted above, the Air Force needs to adopt a graduated readiness structure. The implementation of an Expeditionary Force structure in the CF-18 community would recognize, as the Navy and the Army have, that with limited existing resources, not every individual, unit and formation can be trained to a high readiness level.

> Recommendation: Examine the feasibility of developing a graduated readiness Expeditionary Force structure for the CF-18 fighter community. (OPI: CAS)

Deployability

66. During the mounting phase of the land component of Op APOLLO, the lack of assured lift resulted in having lift availability dictating initial force structure.[21] During Op APOLLO, the 3 PPCLI Battle Group spent approximately four months on various short notices to move when there was no strategic lift arranged. US airlift was essential. However, lack of familiarity and knowledge of US procedures resulted in the battle group arriving in the theatre of operations not tactically configured for their combat mission.[22] For instance, the equipment of the follow-on rifle company arrived in Kandahar before the equipment of the Vanguard company.[23]

67. During the deployment phase of the land operation, although movement tables were submitted, the CF movements staff did not always know what was being shipped, where it was, or when it would arrive. The first two weeks in theatre were spent waiting for the arrival of essential combat equipment, including radios, thus precluding the unit from being operational.

68. The CF's capacity to deploy troops and equipment on short notice to meet their high readiness timelines is currently totally dependent on the use of contracted or allied air and sealift. The CF must therefore be able to generate Tables of Organization & Equipment and Task Force Movement Tables quickly and accurately that meet allied and commercial movement criteria, something that is not done at present. The CF Movement System is not geared to execute a major move with the US Air Force.

[21] 3350-165/A27 Op APOLLO-Consolidated Assessment Report 18 October 2001.
[22] Appendix 1 to Annex D to 3350-134-1 Comd JTFSWA Op APOLLO Rotation Zero Report – J4 Move 19 April 2002.
[23] 3350-1/OP APOLLO (G3) 1CMBG Post Operation Report – Op APOLLO.

69. Assured strategic airlift is also an issue for the Canadian Air Force. Lacking assured strategic lift, the Air Force has used tactical aircraft in a strategic role, thereby increasing wear and tear on airplanes that are not designed for this purpose. In addition, neither the CC-130 (Hercules), nor the CC-150 (Airbus) can transport outsized cargo. With ……. NTM, all mission personnel, equipment, and spares have to be airlifted to meet the required timings. The Air Force, like the other services, depends on either US strategic lift or commercial assets.

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70. Lack of assured strategic sea and airlift caused problems during Op APOLLO. In view of that experience, the rationale for current readiness timings is questionable without assured strategic lift resources.[24] In order to meet the Army and the Air Force's …… readiness timelines, deployability and sustainability require the timely movement of personnel, material and stores, which can only be accomplished by having assured air and sealift. There is a need for earmarked/chartered strategic maritime and airlift capacity that will be available when required for deployment, employment, and redeployment.

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Recommendation: Put in place the necessary arrangements for strategic lift to ensure the deployment and sustainment of Canadian troops in a timely fashion corresponding to the Defence Plan readiness timelines. (OPI: ADM(Mat)/ADM(Pol))

SUSTAINMENT

71. Sustainability refers to the ability to maintain operational tempo for as long as necessary to achieve military objectives. The following section will examine some of the key issues related to sustainment that surfaced during the course of this evaluation, namely operational inventory management, the National Support Element, the Immediate Operational Requirements (IOR) process, and most importantly National Procurement.

Operational Inventory management

72. In the course of this evaluation, problems with inventory management have been noted. During Op APOLLO, there was no effective overall mechanism for ADM(Mat)/J4 Log to monitor inventory, reserve stocks, and control allocation of operationally critical items once they were issued from national stock.[25] During the deployment and employment phases of Op APOLLO, neither ADM(Mat)/J4 Log staff, nor the movements staff, nor the tactical Combat Service Support staff could track movement and location of materiel. There was no common tracking system to monitor equipment status and stock availability and movement throughout the supply chain, from Canada to, and within, the various theatres of operations.[26]

[24] Annex A to 3350-134-1 Comd JTFSWA Op APOLLO Roto 1 End-Tour Report – Observations, and Lessons Learned 21 October 2002. 3453-23/KINETIC (J7 Lessons Learned) 4 October 2001.
[25] Annex B to 3350-134-1 Comd JTFSWA Op APOLLO Roto 2 End-Tour Report 14 April 2003.
[26] Ibid.

73. The National Material Distribution System (NMDS) is the CF system that records the movement of materiel and can be utilized throughout the distribution system to track shipments. However, it cannot track status of shipments provided by commercial carriers nor by the US TRANSCOM system. For Op APOLLO, the 3 PPCLI move from Edmonton to theatre was accomplished through the execution of the CAN/US Integrated Lines of Communication (ILOC) agreement, using C17 and C5 airlift. The US tagged all pallets and containers with their tags and the information on movement was held in the US system. Canadian staff in CENTCOM HQ, Tampa Florida and in J4 Log could retrieve information from the US that was not in NMDS. For sustainment the CAN/US ILOC was used with shipments departing from the US Airport of Embarkation (APOE) at Dover, New Jersey. Materiel shipped from 3 CSG to Dover was put into NMDS, but with no NMDS terminal in Dover, NMDS defaulted to show the materiel as having been automatically received. Sustainment shipments in the US transportation system could be tracked at CENTCOM HQ or the information obtained from the US by J4 Log, but not by the end-users in Afghanistan due to a lack of National Command and Control Information Systems (NCCIS) connectivity.

74. During the employment phase of an operation and distinct from the deployment phase, sustainment requires the speedy and timely movement of personnel, material and stores, which can only be accomplished by having access to assured sea and airlift. Although the ILOC agreement with the US proved to be an essential part of the sustainment effort during Op APOLLO, the three CF components were in constant competition for priority delivery on sustainment flights. If the CF is to meet sustainment requirements for deployed operations, there is a need for earmarked or pre-arranged chartered strategic sea and airlift, and have in place an effective movement control capability.[27]

75. For Op ATHENA, efforts have been made to rectify these problems. The new Canadian Forces Supply System (CFSS) is now being used to track all accountable items of supply down to the Supply Customer Account and Individual Account levels. But there is still no common tracking system to monitor equipment and stock status.

76. During Op APOLLO, it was not possible for DCDS to exercise national control over scarce or critical supply items. The CFSS could not flag items to be held as OPSTOCK at that time. The system's capability to identify and separately manage 'controlled stores' was not operational due to a data conversion failure to transfer OPSTOCK controls from the legacy CFSS to the new CFSS. This problem was rectified on 18 November 2002 when the new CFSS became fully operational. These restored OPSTOCK controls provide the means for the ADM(Mat) National Inventory Control Point to respond to DCDS controls, which are coordinated through J4 Log.

[27] Ibid.

77. Although improvements have been made in certain areas of the CF material management system, there is still a need to acquire a common tracking system, compatible with the US movements system, to monitor stock, equipment status, and movement throughout the supply chain.

> Recommendation: Develop a common tracking system, compatible with US systems, to monitor equipment status and stock availability and movement throughout the supply chain, from Canada to and within the various theatres of operations.
> (OPI: ADM(Mat))

National Support Element

78. During Op APOLLO, as noted in After Action Reports prepared for the DCDS, the ECSs, the three Environments, and Senior Operational Commanders expressed dissatisfaction over the role and operation of the National Support Element (NSE). This dissatisfaction can be attributed to the initial logistics concept, which saw independent logistic elements supporting each CF element, instead of as a joint logistics effort. Consequently, an NSE was not formed before the operation, never trained together and had no joint support doctrine, although it is a critical component of operational sustainment.

79. A National Support Element, as a formed unit, did not exist before Op APOLLO. Consequently, an ad hoc NSE was generated with personnel coming from across the CF. The deployment of the Canadian Joint Task Force South West Asia (CA JTFSWA) units and personnel took place over a period of six months with the NSE being deployed as one of the last units on 11 April 2002. Finding personnel for the NSE, who met the standards for individual training and were ready for overseas deployment, was an additional difficulty.

80. 3 PPCLI Battle Group personnel, in particular, were not satisfied with the support provided by the Strategic Line of Communications (SLOC)/NSE. With the SLOC in a middle eastern country with no SOFAs or MOUs or proper diplomatic clearances, and the NSE elsewhere in theatre, 3 PPCLI Battle Group ended up with 240 days worth of their backlogged stores sitting in sea containers in a theatre port. Once the NSE was properly established in theatre, the unit could count on getting the stores one day after it arrived at the NSE. The late stand-up of the SLOC and NSE hindered the Battle Group support plan as sustainment for certain classes of stores which did not arrive until 60 days after the arrival of 3 PPCLI in theatre.[28]

81. As a result of the experience gained from Op APOLLO, the requirement for a standing, equipped and trained joint support organization was validated. It was proposed that the function of the NSE that is now being considered for the Joint Support Group (JSG) be to conduct operational level mission support planning for the CF and to execute theatre activation by bringing together Command and Control of operations, Command Information Systems (CIS), Construction Engineers, Logistics, Movements, Finance, and Health Support Services. It was further proposed that this function be under the command and control of the Joint Operations

[28] Op APOLLO Army Post Operation Report Version 2001.

Group (JOG) Headquarters. This means that joint level CIS, Construction Engineers, and other logistics resources will be transferred to and tasked by the JOG.[29] This would permit the tactical level forces identified for deployment to prepare for deployment to theatre, confident in the knowledge that when they arrive, they will encounter a minimum of problems related to accommodations, transportation, communications, and sustainment issues.

> Recommendation: Implement the JSG to deliver theatre activation, establishment of the theatre logistics base, support to reception, staging and onward integration/movement, including integration of medical support, and theatre base closure. (OPI: DCDS/ADM(Mat))

Immediate Operational Requirements

82. The Immediate Operational Requirement and the Unforecasted Operational Requirements (UOR) process led to many problems during Op APOLLO. At one point 3 PPCLI had over 200 outstanding IORs.[30] This was due principally to the lack of OPSTOCKS/LOGSTOCKS and movement capability. Senior Commanders and logistics staff noted that before September 11, the prevailing attitude was that OPSTOCK and LOGSTOCK shortfalls were an acceptable logistic risk considering the expectations that there would be long warning times for deployment.

83. As a result of taking these logistic risks, troops deployed on Op APOLLO were under the impression that the CF did not do everything it could to get them the equipment and the supplies they needed for operations. The CF had indeed done what it could; the problem was the lack of OPSTOCKS/LOGSTOCKS and the fact that the missing items could not be readily obtained. For instance:

- The first IOR for 3 PPCLI arrived in theatre 55 days after initial deployment. Overall, the average time to receive an IOR was 45 days. This was well above the average median days to satisfy a demand (less airhead delay) of 27 days for Op KINETIC (Kosovo, April 1999 – July 2000) and for Op ECLIPSE (Eritrea, November 2000 – June 2001).[31]

- Daily IOR Reports from theatres did not match the reports produced by either the CFSS or the Defence Total Asset Visibility program (DTAV). As an example, an in-theatre report for Op APOLLO dated 6 May 2003 showed 116 outstanding IORs; the CFSS report for that same day shows 688 outstanding IORs; and the DTAV system shows 936 outstanding IORs for the same day and mission.

- Neither the National Command Element in Op APOLLO, nor the 3 PPCLI BG had the NCCIS connectivity to the supply system to track a large volume of IORs.[32]

[29] NMSC Project Briefing to SRB 17, 8 October 2003.
[30] 3350-134-1 Comd JTFSWA Op APOLLO Roto 1 End-Tour Report 21 October 2002.
[31] 7053-53 (CRS) September 2002, Audit of Material Support to CF deployed Operations, p.10.
[32] Annex D to 3350-143-1 Comd JTFSWA Op APOLLO Rotation Zero Report- Logistics 19 April 2002.

84. Even when IORs were processed promptly, various delays throughout the supply chain often occurred. This was due to a lack of materiel control, strategic lift, and customs delays caused by a lack of diplomatic clearances.

85. In addition, UORs submitted before departure from Canada were not filled until 45 days after the unit had arrived in theatre. Some UORs identified in Edmonton before the Battle Group's departure arrived in theatre right at the end of the tour. Many personnel believed that the UOR approval process in NDHQ was insufficiently responsive. Much of this problem can be attributed to the delineation of financial responsibility between the force generators and the force employer in place at the time. For Op ATHENA, efforts have been made to address this issue through the creation of an Operational Account to capture the incremental costs for this mission.

86. Many of the issues related to IORs and UORs can be attributed to funding limitations and to lack of extant OPSTOCKS/LOGSTOCKS. However, in order to determine the proper stock levels to satisfy high-readiness requirements, it is essential to have approved baseline TO&Es for these requirements. Furthermore, as noted in the Defence Readiness section of this evaluation, the concept of a "Day of Supply" needs to be re-defined. Existing definitions, which correspond to Cold War scenarios, are no longer valid. In the same light, scales of issue are dated and also need to be reviewed and revised. Lacking approved TO&Es against which to determine their respective scales of issue, and in the absence of an updated definition of "Days of Supply", it is extremely difficult to plan, purchase and assemble the required supplies, spare parts and consumables, and to produce the Task Force Movement Tables to effectively generate, deploy and sustain high readiness units and formations. As this is both a readiness and sustainment issue, a recommendation to redefine "Days of Supply" and to review Scales of Issue for high readiness units/formations has been made in the Defence Readiness section of this report.

87. IOR and UOR problems are symptomatic of a larger issue. ADM(Mat)'s shared responsibilities and accountabilities for CF readiness and sustainment, in conjunction with the ECS and DCDS, need to be clearly articulated in the DP. No individual service has the financial capability to achieve and sustain their assigned high-readiness tasks with current resource allocations. Consequently, the current distinction between force generator and force employer financial responsibilities during the pre-deployment phase of an operation can be counter-productive. Readiness and sustainment of the high-readiness units and formations must become an overall CF/DND effort.

> Recommendation: Clearly articulate ADM(Mat)'s shared responsibility and accountability for readiness and sustainment of high readiness units and formations with DCDS and the ECS. (OPI: VCDS/ADM(Mat))

National Procurement

88. National Procurement (NP) management at the corporate level is not currently focused on the readiness and sustainment of high-readiness units and formations. In addition, there are significant outstanding obsolescence management expenditures required on items such as major equipment refurbishment or rebuild programmes. The demands for increased obsolescence

management made as a result of the increased equipment Expected Life Expectancy (ELE) of virtually all major sea, land and air combat and support platforms, have put significant pressure on both the Capital and NP funding envelopes.

89. The overall NP situation compounds the readiness and sustainment problem. As already mentioned, shortages of spare parts impact negatively on serviceability and availability of equipment, which, in turn, impacts on the maintenance workload and training, and ultimately on operational readiness.

90. The three services lack financial resources to properly constitute and maintain Operational Stocks. The Departmental Performance Report for the period FY 2002/03 noted that it became necessary to move $302M into NP to alleviate the funding pressures.[33] A CRS note (January 2003) to the National Procurement Oversight Committee (NPOC) indicated a shortfall of $561M for the period FY 2003/04. Since then, the ADM(Mat) comptroller has indicated to the NPOC members that this shortfall has increased to about $800M.[34]

91. As a result of these funding limitations, this evaluation has concluded that there is a systemic lack of spare parts and goods, which impairs virtually all aspects of operations, maintenance, and training. The support system is constantly in a 'crisis management mode', particularly for short-notice deployments, when equipment and supplies have to be bought at the last minute, or materiel taken from other ongoing operations such as Bosnia, to equip other more urgent missions. For example, as noted in the case of 3 PPCLI Battle Group deployment for Op APOLLO, it took 45 days to assemble the required stores. In preparation for Op ATHENA, given a longer warning time and because of the lessons learned from Op APOLLO, a noticeable improvement in providing the required support was noted. High Readiness demands immediate availability of materiel and the capability to deliver it in a timely fashion.

Navy

92. In the case of the Navy, the existing maintenance and stock replenishment “bow wave” was exacerbated by Op APOLLO and the introduction of the Victoria class submarine directly impacted NP funding. OPTEMPO has resulted in having preventive (first line) maintenance not fully done, which pushes the work requirements back to the Fleet Maintenance Facilities (FMF) (2nd Line). In addition, corrective maintenance overloads are now growing. However, the FMFs are already working at their maximum capacity readying ships for deployments and introducing the Victoria Class submarines into service. Therefore, maintenance schedules are pushed further back in the maintenance cycle, for example at FMF Cape Scott in Halifax, a backlog of approximately 260,000 hours has been generated, which represents about 25 per cent of the yearly FMF output. As a result, ship refits will take longer and will cost more. These refits have already been extended by two to three weeks. This situation has placed extra pressure on the NP budget. If not corrected, this extra pressure may eventually result in the retirement of an entire class of ships in order to generate significant savings.

[33] National Defence Performance Report, March 31, 2003, p.51.
[34] DMG Compt E-mail Thursday, 13 November 2003.

93. The Navy NP demand was approximately $429M for FY 2003/04, but received an initial Q1 funding allocation of $251M. As a consequence of having the Navy deployed constantly in the war on terror for almost the last two years, and despite all DGMEPM cooperation, some of the previously stocked CPF items have reached zero stock levels. Some major components on the CPFs have failed faster than originally forecast, and now have to be transferred from ship to ship. There are not enough of these major components and attendant spares in stocks. Despite these high rates of failure, there are insufficient NP resources to fully fund the appropriate maintenance action.

Army

94. In the case of the Army, the principal NP issues are related to shortages of OPSTOCKS and LOGSTOCKS. As discussed previously for the Op APOLLO deployment, shortages of these stocks resulted in a delay of 45 days to assemble the required stores and constitute the major impediment to being able to generate a MCF in ….. ……. AIA Section 15(1) International Affairs and Defence
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Air Force

95. In the case of the Air Force, OPTEMPO also impacts negatively on NP funding availability by increasing sustainment requirements over a given period. Third line maintenance facilities cannot handle more planes arriving at a faster rate. Using the Hercules as an example, it used to take 120 days for a detailed 3rd line periodic inspection; it now takes 220 days per plane. This situation is further aggravated by a shortage of technicians across the fleets.

96. Every aircraft fleets' ELE has been extended. Extensions of ELE demand, as part of the required obsolescence management process, an increase in aircraft structural repairs and regular technology insertions. Funding for these additional demands remains an issue. Without these demands being met, it is likely that operational readiness for most of these aircraft fleets will be reduced. There is a current initiative being undertaken by DMGOR on behalf of ADM(Mat) and the Air Force to develop a costing model that is based on linkages between NP funding and the prediction of weapon system readiness. If the methodology is proven to be useful in this instance, there may be applications for this methodology across all CF equipment fleets.

97. Availability of spare parts, which are funded through NP, is an issue across all the Air Force communities. Senior Air Force Maintenance Staffs have noted that spares are currently holding up the required Preventative Inspection Process. Using the Hercules fleet as an example, sparing has been under-funded over the past several years. Given that the lead-time for spares procurement is between 6-18 months, it has been publicly acknowledged that the result has been a severe degradation of Hercules serviceability and availability for operations.

98. "Pack Up Kits", which are designed to provide a given number of days of supply for high readiness operational deployments, have been identified and scales have been published. However, lacking specific mission direction, Air Force Command and Support Staffs have acknowledged that it has been difficult to pre-assemble these pack-up kits because most of the items are being used on a daily basis. At this point in time, only the CP-140 (Aurora) and the Tactical Aviation communities have such a kit.

99. Finally, due to financial constraints, the Air Force took the risk of not replacing the Precision Guided Munitions expended during the Op KINETIC (Kosovo) air campaign in 1998, thus having a direct impact on the readiness and sustainment capabilities of the CF-18 fleet. This decision was made prior to September 11, when it was an acceptable risk to move more of the limited NP funds into the upgrade of operational fleets.

Conclusion

100. There are insufficient resources to balance operational and structural readiness for the three services. The demands made on obsolescence management by increased ELE and technology insertions have not yet been met and, if not addressed, will result in a significant decline in capabilities. Whether the increased obsolescence management expenditures are considered to be a legitimate NP expenditure or are deemed to be a Capital expenditure is not the main issue. The real issue pertains to funding. With current resources, these expenditures will affect either the Capital envelope and the Strategic Capability Investment Plan (SCIP); or the money will have to come out of the existing NP envelope, which will only exacerbate the current NP funding challenges. Training, maintenance, and activity levels are dependant on NP. Lack of spare parts affects force generation and significantly increases risk with respect to readiness and sustainment of deployed operations.

101. Financial constraints have left the CF with very limited or nil operational and logistics stocks available for urgent requirements. This situation has been compounded by a high OPTEMPO, which has resulted in stocks being depleted and not being replaced. Without sufficient OPSTOCKS, and a proper materiel control and tracking system, it is difficult to support high readiness units and formations. Without sufficient operational stocks, agreed to readiness timelines for high readiness units cannot be met or sustained.

Recommendation: Make the readiness and sustainment of high-readiness units/formations an overall DND/CF effort by ensuring that as a first priority, National Procurement funding be applied to readiness and sustainment, including the regeneration of national operational and logistics stocks. Concerted attention should also be given to prior CRS recommendations on National Procurement/Re-Provisioning and on Materiel Support to Deployed Operations.
(OPIs: VCDS/ADM(Mat))

PERSONNEL SUPPORT ISSUES

102. During the course of this evaluation, a number of personnel-related issues have been noted which affect high readiness and sustainment capabilities, and therefore will be treated as a separate subject.

Personnel Database

103. At this point in time, there is no mechanism in place to ensure a thorough follow-up of military personnel after redeployment to Canada. There is no DND/CF database that specifically keeps track of both Regular Force and Reserve personnel who have been deployed on international operations. There is, therefore, no means to determine the details of any subsequent post-operational reintegration efforts and follow-up activities that may have been required. The current version of PeopleSoft does not provide this capability. Although, DCDS has directed such a program to be implemented, no extra financial or personnel resources have been provided for that purpose. Consequently, that directive has not been fully implemented. There is a continuing risk for the DND/CF in ensuring due diligence in the proper follow-up of military personnel after redeployment to Canada.

Navy

104. The Navy is of the opinion that some of the DCDS personnel policies are "land-centric", as they do not accommodate Navy specific requirements. Consequently, their implementation generates an increased workload and delays, as waivers or exceptions need to be requested. For example, the Navy had problems during the preparation of ROTO 0 for Op APOLLO with the Foreign Service Premium "points" system and the Home Leave Travel Assistance (HLTA) program. Many questions relating to these policies were not answered until the National Command Element (NCE) was established in Tampa, long after the ships had sailed.

105. For the Navy, the current HLTA policy is particularly difficult to implement. This program must start as early as possible in the mission cycle, as it is dependent on the ports visited, where personnel can embark and disembark for leave. There are only a few “windows of opportunity” which must be used. HLTA tends to be a source of frustration and a significant morale issue in the Navy.

106. As an example of a “best practice”, the Military Family Resource Centre (MFRC) in Halifax provides a unique contribution to personnel support to MARLANT deployed operations. This MFRC is fully engaged with the Naval rear parties in providing support during deployed operations. This MFRC handles the full range of rear-party issues on a twenty-four/seven basis by providing a “one stop shopping” service. The Navy supplements the MFRC with Regular Force personnel, including pay staff. This MFRC works very closely with the N1 MARLANT staff on rear party issues. This uniquely integrated approach has been beneficial to the CF members, their families, and to the Navy. The approach taken by the MFRC in Halifax could have utility to the remainder of the CF.

Passports and Visas

107. Passports are an issue for all three services. Personnel must have a valid passport before deployment, in particular for high readiness units and formations at ……. NTM. For those members without a current passport, the process of procuring passports during the mounting phase of an operation has proven incapable of consistently delivering all the necessary passports on time. Lacking a valid passport precludes the acquisition of necessary regional visas, which hinders the mobility of CF personnel in theatre, whether for operational or administrative purposes.[35] Current policy dictates that CF members must obtain a government employee "green passport" for international operations. However, experience gained on Op APOLLO by the three services has determined that a blue passport is sufficient in most cases. High-readiness units and formations personnel require a valid passport before deployment.

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Dental Records

108. Dental records are also an issue. Home units currently hold members dental records. As a result, both Regular and Reserve augmentees assigned to high readiness units for deployment, often arrive at a receiving unit without a copy of their dental records. In addition to causing delay in the screening process, this practice would make the identification of human remains more difficult.

Reserve issues

109. The CF needs to review the policies required to generate, train, employ, and then reintegrate Reservists. Class C contracts for deployed operations are a recurring issue, particularly for the Army. The one-year contract limitation is viewed to be too restrictive, as even for a six-month operational deployment, most personnel need to be employed for 13 to 14 months to allow for proper screening, training, employment and post-deployment requirements. This one-year policy forces the unit and formation staffs to arrange two contracts, with each one having to be approved by NDHQ. In addition, reservists are posted to the receiving unit under Temporary Duty terms unlike their Regular Force counterparts, who are Attached Posted to that same unit. As a result this has created inequities. For example, during preparation for an operational deployment, Reserve platoons from LFAA and LFCA were not allowed Christmas leave transport assistance paid by the CF.

110. Medical and dental screening for Reservists remains a continuing issue. The CF does not pay for the mandated medical and dental examinations required prior to being accepted for employment, unless the individual is retained for service, and if so, only long after the member has had to absorb those costs. Reservists either do not have the money or do not want to absorb these costs without assured employment. Consequently, Reservists are often not screened for deployment by their parent unit/formation as required before reporting for training. As an example, in preparation for a Bosnia deployment in 2002, a full platoon of reservists from LFAA reported without dental checks or records.

[35] Annex G to 3350-134-1 (Comd) CJTFSWA Op APOLLO Rotation 0 Report 19 April 2002.

111. The CF does not have the optimal policies in place to generate, train, employ, and then reintegrate Reservists, particularly for deployments abroad. There is a requirement to review Class C contracting practices including terms of service, contract duration, medical and dental costs, and DAG issues.

112. There is a requirement to review the problem areas with the personnel policies noted above in order to enhance high readiness.

Recommendation: Direct the creation of a capability (CF national database) to keep track of both Regular Force and Reserve personnel, who have been deployed on international operations, to allow proper follow-up during and after the reintegration process. (OPI: ADM(HR-Mil))

Recommendation: Review personnel policies related to deployed operations including Home Leave Travel Assistance, passports, and Reserves screening/contracting practices. (OPI: ADM(HR-Mil))

Medical Support

113. ADM(HR-Mil) cannot fulfill all the medical tasks assigned in the Defence Plan for all high-readiness tasks. The Canadian Forces Health Services Group (CFHSG – formerly CFMG) can meet their Vanguard tasks including Roles 1 and 2, and provide a limited Role 3 (Advanced Surgical Centre) capability. The CFHSG has stated that they can deploy one Advanced Surgical Centre (ASC). There is a TO&E for the ASC with its 40-bed capacity to support the IRF(L). By 2005, CFHSG has noted that current trends and forecasts indicate that the ASC may have no surgeons available. Furthermore, an ASC, which has been designed to support a Battle Group size commitment, is not sufficient to support the MCF Brigade. Moreover the CFHSG has concluded that, due to a shortage of medical personnel and equipment, the 1 Canadian Field Hospital (100 bed hospital) in support of the MCF could be assembled, but could not be sustained. There are also personnel and equipment shortages in medical NBCD counter-measures. There is limited casualty evacuation (casevac) and medical evacuation (medevac) capabilities within the CF. Finally, the CF has no mortuary capability. This requirement is not currently part of the JSG concept.

114. During this evaluation, serious concerns were expressed about the command and control relationship between Field Ambulances/CFHSG and Canadian Mechanized Brigade Groups. As an example, the last minute requirement for an Enhanced Medical DAG Process imposed upon those personnel deploying to Op ATHENA caused medical support problems. This new process, directed by CFHSG, but without additional resources, demanded a more detailed medical screening than that which had previously been completed. This process required the involvement of a number of medical specialists. Given the semi-isolated nature of Petawawa, and the lack of resident specialists, it was a challenge to ensure that all soldiers were screened prior to deployment.

115. It has been stated by Army and Air Force officials that there is a break in the relationship between the field units/formations and local DND/CF medical staffs. Unit Medical Stations no longer exist. Medical officers and Medical Assistants are no longer affiliated to any particular unit. As a result, with unit sick parades no longer functioning, CF members now have to go to the Base Health Care Centre. This situation has resulted in the development of an adversarial relationship between units and medical staffs. The lack of uniformed medical staff has caused commanders to call into question the ability of the CFHSG to provide adequate support for operational deployment, employment and redeployment.

116. There is a requirement for an evaluation of the CFHSG capability to provide medical support to deployed operations. Due to the scope of this evaluation, this subject area could not be fully evaluated and would require a further study, which would evaluate medical support capability to deployed operations.

Recommendation: Direct that an independent evaluation of the ability of the Canadian Forces Health Services Group to support deployed operations be undertaken.
(OPI: ADM(HR-Mil))

BEYOND THE VANGUARD/MCF CONCEPT

117. This section contains a discussion of Evaluation Objective 4 concerning the continued validity of the current Vanguard/Main Contingency Force construct, with a goal of providing insights into future concepts. Much has been said about the questionable validity of the Vanguard/MCF model. This particular model is linked to the Cold War era, and as such it can be said to be obsolete. Nevertheless, it is still a major part of the current Canadian Defence Policy, and until the policy is amended, the direction to fulfill these Defence Tasks (DT) remains valid.

118. Following September 11, however, the Vanguard/MCF concept has been overtaken by events; high readiness has now become the new paradigm. In the future, whether Canada chooses to retain the word MCF to refer to its main contingency forces and to refer to the lead elements, as the Vanguard is irrelevant. The fact is that some CF elements will be required to be at a high readiness state, while others will be at either reduced or normal readiness. The following paragraphs, therefore, propose a different conceptual framework, which when combined with the recommended readiness monitoring process, will facilitate the management of readiness and sustainment in the DND/CF.

119. Defence Readiness can be defined as "having a military capability to apply when it is needed, where it is needed and for how long as it is needed".[36] All of our NATO/ABCA allies have adopted an Expeditionary Force concept, using a graduated readiness force model, with units/formations placed at different levels of readiness. To be ready and quickly deployable either to deter a potential crisis or be able to thwart it swiftly has become the new paradigm. The most common "graduated readiness" is called tiered readiness with units/formations placed at either reduced, normal or high readiness states. For example, the US Army is exploring a "modular" or "plug-and-play" concept. According to this concept, brigade units of action will be on fixed training and "cyclical readiness" life cycles.

120. Tiered readiness demands that each unit/formation be given a responsibility and the commensurate resources to provide a certain capability or capabilities at an assigned level of proficiency, at a specific notice to move, and capable of being sustained for a given period of time. Tiered readiness is even more important for the CF, since there are simply not enough financial resources to keep all the combat elements of the CF at a high level of training and readiness during the same fiscal year.

121. Defence Readiness is made up of two distinct kinds of readiness: Operational Readiness and Structural Readiness. Operational Readiness refers to the ability of units and formations to successfully carry out operations in a timely manner, and to be sustained for as long as required. Operational Readiness = Readiness + Deployability + Sustainment. Readiness refers to the ability of existing forces to respond in a timely and effective manner. Deployability refers to the ability to move troops, equipment, and supplies to a theatre of operations in a timely manner. Sustainment refers to the ability to maintain operational tempo for as long as necessary to achieve military objectives.

[36] Alan Hinge, "Australian Defence Preparedness," Australian Defence Studies Centre, Canberra, 2000, p. 4.

122. Structural Readiness is the ability of a force structure to supply the numbers and kinds of units, platforms and equipment to meet operational demands. It involves developing an appropriate force structure that is well maintained and kept up to date and modernized when required. So Structural Readiness = Force Structure (including Human Resources) + Modernization. Force structure refers to the numbers, size, and composition of units, ships, and squadrons. Modernization deals with the technical sophistication of forces, weapon systems, and equipment. Structural Readiness is critical as it sets the limits of potential capability for the CF.

123. There is also an ongoing tension between Structural Readiness (principally Capital) and Operational Readiness of existing forces (O&M and NP). Structural Readiness calls for long-term planning and financial commitments, versus Operational Readiness that appears to be a "soft target" for savings when budgets have to be balanced. It is always easier to cancel an exercise, or to delay maintenance, or reduce fuel or ammunition allowances, than to renegotiate or cancel a contract with a major supplier. Therefore, the challenge remains to manage the day-to-day business (operational readiness), without mortgaging the future (structural readiness). Operational Readiness represents consumption on skills and stocks today, while Structural Readiness represents investment in the force structure for tomorrow. (DND/CF definitions of readiness and sustainment are footnoted below[37]).

124. In summary, Defence Readiness can be expressed as having the capability to provide enough properly trained and equipped forces to accomplish a mission where, when and for as long as allocated resources permit. Canada will not go to war alone, but as part of a coalition of liked-minded nations or an alliance. Therefore, there is the requirement to have the capability to provide enough properly trained and equipped forces to make a relevant military contribution where, when, and for as long as judged necessary. Relevancy in the Canadian context can be defined as providing a tactically viable military contribution capable of achieving its mission, and of sufficient importance to accomplish Canada's political goals.

125. There are four dimensions to Defence Readiness:

- Readiness "FOR WHAT" = What will we have to do? = Specific valid defence tasks based on Canada's Defence Policy as reflected in domestic and international commitments.

[37] Department of National Defence, Defence Plan On-Line 2003-2004, Ottawa, 2003. **Readiness**. Readiness consists of both operational capability and response time, is a measure of the ability of an element of the CF to undertake an approved task. Operational capability is the actual capability of an element of the CF compared to its authorized organizational strength, measured by the relative state of its personnel strength, serviceable equipment holdings, training, service support and command and control components. Response time is the time between issuance of a warning order and the requirement of a tasked element to be fully ready in its normal location to respond to a task. It does not include transit time to the area of operations. **Sustainment** is the capacity of a military force to maintain its operational capability for the duration required to achieve its tasks. Sustainment consists of the continued supply of consumables, maintenance and replacement of combat and non-combat attrition of equipment, military civil engineering services, health services support, and personnel support services, including replacements.

- Readiness "OF WHAT" = What will we need to do it with? = How much and what kind of capabilities including people, force ratios, doctrine, training and validation, equipment, scales of issue, activity levels and usage rates, material acquisition lead times, stocks held for sustainment, and performance measurement indicators and measures. It also includes a NCE/NSE capability, the necessary support arrangements, and assured strategic lift.

- Readiness "FOR WHEN" and "FOR HOW LONG" = When will we have to do it and for how long? Readiness "FOR WHEN" is about the time available to respond, warning time, mobilization process, political response and setting the right balance between operational and structural readiness over a long period of time. Readiness "FOR HOW LONG" is about sustainability requirements, whether it is for six months, one year or longer.

READINESS FOR WHAT

126. The Readiness "FOR WHAT" dimension is the most important dimension because it controls the others. There is a strategic and policy dimension that needs to be answered first: what kind of world, what kind of role does Canada want to play in that world, and finally what kind of military does Canada need to achieve its objectives? These questions are critical, but are well beyond the scope of this report. However, readiness "FOR WHAT" has an operational and tactical dimension that involves Horizon One planning, and management of the Sustaining Agenda. The advantage of concentrating on operational readiness is that this area is under the control of the DND/CF. Concentrating on operational readiness is particularly applicable to the CF since the current CF Strategic Operating Concept calls for providing tactically self-sufficient units.

127. The Defence Tasks contained in the DP should answer the four basic questions raised above. As an example, the Army "Vanguard" tasks given in the current DP are numerous and cover both NATO and UN contingencies. However, the Army can only generate and sustain one light infantry battle group and one medium battle group. Therefore, in the case of the light battle group, it does not matter whether it turns out to be an IRF(L) or a SHIRBRIG task. In future Defence Plans, the Army could be simply tasked to generate one light battle group and one medium battle group composed of the following elements…(OF WHAT) and capable of performing the following tasks…(FOR WHAT) in order of priority, be at X days NTM (FOR WHEN), and sustainable for a maximum of… (FOR HOW LONG).

READINESS OF WHAT

128. The readiness "OF WHAT" corresponds in our Defence Planning and Management Framework to Capability-Based Planning. It is an essential element and fortunately one that has been developed in recent years, but it needs further definition. It needs to focus not only on Horizons Two and Three (force structure and modernization), but also on Horizon One, that is on readiness, deployability, and sustainment. Capability-Based Planning must be concerned with finding the right balance between operational readiness (the Sustaining Agenda) and structural readiness (the Change Agenda and Capital procurement). It also demands that operational readiness becomes the focus of the Sustaining Agenda.

129. Achieving a better management of Readiness "OF WHAT" issues begins with a better use of the existing force structure by refining the "FOR WHAT". There must be clear linkages between resources and preparedness levels and resolution of issues from a horizontal perspective instead of a vertical one. The organization must focus first on outputs (effectiveness), and then on the how (efficiency). If the Defence Tasks were defined as to answer the four basic questions, then operational readiness would provide focus to the Sustaining Agenda. This would also enhance the DND/CF Strategy Map (Performance Measurement) by providing a clear linkage between resources and preparedness levels, and between readiness and sustainment.

READINESS FOR WHEN

130. Before September 11, preparedness "FOR WHEN" was based on the assumption that short notice conflict was unlikely. There would be plenty of warning time. Therefore, defence planners could concentrate on investing more in structural readiness and accept a lower state of operational readiness in exchange for higher military potential in the medium to long-term.

131. International terrorism and new home defence security requirements have shattered those assumptions. World War III remains a remote possibility; consequently that unlikely scenario cannot be the basis for defence planning, as other types of crises are happening at a disconcerting rate. The world has become more unstable than was originally envisaged in the immediate post-Cold War period. Limited conflicts of short duration with limited objectives and limited in space have become the norm. Consequently, all our allies and NATO have chosen to increase their state of readiness. High readiness has become the new paradigm for NATO. The US Army aims at being able to deploy a Brigade Combat Team/Brigade Unit of Action in …….. a full combat division in ……. and five divisions in ……..... Being able to react quickly either to deter a potential crisis or be able to thwart it swiftly has become paramount.

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READINESS FOR HOW LONG

132. Readiness "FOR HOW LONG" is also an issue. The White Paper and the Defence Plan stipulate an indefinite sustainment period in low intensity operations. The fact that Canada had to withdraw its modest land contribution from Afghanistan (Op APOLLO) after only six months seems to have convinced the Canadian government to commit troops for a full year for Op ATHENA. The Air Force CF-18 Vanguard, as envisaged in the White Paper is unsustainable. A more suitable sustainability period will have to be determined as part of the future defence policy review. To be able to sustain whatever military contribution Canada makes for a minimum of one year seems a more suitable planning assumption.

> Recommendation: Amend the Defence Tasks to reflect specific and prioritized tasks with response and sustainment requirements. (OPI: VCDS)

CONCLUSION

133. In today's strategic context, indications are that the US will remain the sole power capable and willing to intervene, unilaterally if necessary, in world affairs. The magnitude of the US military transformation does create imperatives and acts to shape the doctrine and force structure of its allies as, illustrated by the new NATO Response Force Concept. High readiness has become the new paradigm. Consequently, all our NATO/ABCA allies have chosen to increase their states of readiness and are adopting expeditionary force structures. High readiness demands that military forces be combat ready and quickly deployable in a combat configuration either to deter a potential crisis or be able to thwart it swiftly. High readiness also demands that the forces be sustainable and interoperable with the US military.

134. This evaluation has shown that High Readiness is incompatible with some of the existing practices. Conceptually, High Readiness requires:

- A corporate focus on readiness and sustainment, which is well beyond the capacity of any single ECS or Level 1.

- Interoperability with US forces of the command, combat and support elements. This is critical as the CF needs to be able "to plug and play" into the various US systems.

- A readiness monitoring process at the corporate level.

- Planning including standing MOUs and SOFAs with appropriate countries.

- Fully manned and equipped sub-units/units/formations based on standing TO&Es.

- Enough resources to maintain the minimum individual and collective training level to bring units/formations from Normal Readiness to High Readiness in the prescribed time, and then to maintain their high level of readiness once the unit or formation has been declared Operationally Ready (OPRED). This also applies to the command and the support elements. This is accomplished through a rigorous training process, with performance validation completed by others outside of the unit or formation under assessment. The shorter the warning time, the more highly trained a unit must be. For instance, a …….. NTM will allow a lower training level. A unit that is at ……. NTM is expected to be at high readiness. AIA Section 15(1) International Affairs and Defence

- Enough appropriate and serviceable equipment for both training and deployment, including spares and consumables.

- Adequate training facilities.

- Acquiring and stocking the resources required for sustainment and making sure they are available when needed. This means finding the right balance between ready stocks (immediately available National Operational Stocks with an emphasis on long-lead items) and those stocks sourced from industry, which can be acquired quickly.

- A CF common tracking system to monitor equipment status and stocks availability and movement throughout the supply chain, from Canada to and within the various theatres of operations.

- Assured strategic lift to meet readiness timelines and to sustain ongoing operations.

135. It is proposed that the CF adopt a process similar to the US Joint Quarterly Readiness Review Process, which is oriented towards an ongoing evaluation of the current forces readiness. The focus is on near-term operational readiness issues, not on the long-term structural readiness. Feedback derived from the readiness evaluation process would feed the resource prioritization process in the annual Defence Planning and Management cycle. This would be a refinement to capability-based planning, not a replacement. Nor would it contradict the current performance measurement framework, but would enhance the operational overtone to the DND/CF Strategy Map. The process would assess current readiness, that is the ability of the High Readiness Units of the CF to respond in a timely and effective manner in order to achieve the approved Defence Tasks. It would also assess the ability of the DND/CF to sustain these tasks for the mandated period.

136. In order to address the issues revealed by the Readiness Review Process, it is proposed that the readiness and sustainment of high-readiness units/formations become the first priority for NP funding. Having determined and defined precisely the Preparedness "FOR WHAT", NP funding could then be allocated in priority to achieving the readiness levels required by the "OF WHAT" elements, whether it is a Naval Task Group, an infantry battle group or a squadron of CF-18s.

137. Making operational readiness the priority for NP would focus attention on reconstituting badly needed national operational stocks of spares and ammunition required for force generation and sustainment, thus ensuring availability of items when needed. It would also address the Immediate Operational Requirements and the Unforecasted Operational Requirements, which are inevitable.

138. Clearly, refocusing NP expenditures towards high-readiness demands will help to align demand and funding for this account. The challenge would remain to maintain a reasonable pace of transformation. However, a focus on the basic/current commitments made by Canada, and ensuring corresponding readiness and sustainment of current forces will not only better highlight the costs of necessary transformation, but actually is a prerequisite to transformation. The tension between short-term operational readiness and longer-term structural readiness, and the implications for the practicability of transformation, emphasize the importance of the integrated review of Canada's foreign and defence policies announced by the Prime Minister.

139. Consequently, the following recommendations are aimed, in the short-term, at a strategic reorientation of the management of current resources to better meet the requirement for increased CF readiness and sustainment. To implement these recommendations, however, will demand a concerted corporate effort.

PRINCIPAL RECOMMENDATIONS

DEFENCE READINESS

140. Re-align the readiness timelines between the Defence Plan and the NATO Defence Planning Questionnaire, and, to the extent practicable, better ensure that the commitments in both documents correspond more closely to existing capabilities. **(OPI: ADM(Pol)/VCDS)**

141. Amend the Defence Tasks to reflect specific and prioritized tasks with response and sustainment requirements. **(OPI: VCDS)**

142. Develop a readiness monitoring process similar to the US Joint Quarterly Readiness Review Process. **(OPI: DCDS/VCDS)**

143. Redefine "Days of Supply", revise the Scales of Issue, and adopt standardized Tables of Organization and Equipment with associated Task Force Movement Tables for high readiness units and formations that will meet common allied and commercial loading and shipping criteria. **(OPI: ADM(Mat/DCDS/ECS)**

144. Examine the feasibility of developing a graduated readiness Expeditionary Force structure for the CF-18 fighter community. **(OPI: CAS)**

145. Put in place the necessary arrangements for strategic lift to ensure the deployment and sustainment of Canadian forces in a timely fashion corresponding to the Defence Plan readiness timelines. **(OPI: ADM(Mat)/ADM(Pol))**

146. Working with DFA, establish the necessary framework for future deployment and sustainment of CF elements in key countries around the world, to include the necessary SOFAs and MOUs. **(OPI: ADM(Pol)/DCDS)**

SUSTAINMENT

147. Make the readiness and sustainment of high readiness units/formations an overall CF/DND effort by ensuring that as a first priority, National Procurement funding be applied to readiness and sustainment, including the regeneration of national operational and logistics stocks. **(OPI: VCDS/ADM(Mat))**

148. Clearly articulate ADM(Mat)'s shared responsibility and accountability for CF readiness and sustainment with DCDS and the ECS. **(OPI: VCDS/ADM(Mat))**

149. Implement the Joint Support Group to deliver theatre activation, establishment of the theatre logistics base, support to reception, staging and onward integration/movement, including integration of medical support, and theatre base closure. **(OPI: DCDS/ADM(Mat))**

150. Develop a common tracking system, compatible with US systems, to monitor equipment status and stock availability and movement throughout the supply chain, from Canada to and within the various theatres of operations. **(OPI: ADM(Mat))**

PERSONNEL SUPPORT

151. Direct the creation of a CF national database to keep track of both Regular Force and Reserve personnel, who have been deployed on international operations, to allow proper follow-up during and after the reintegration process. **(OPI: ADM(HR-Mil))**

152. Review personnel policies related to deployed operations including Home Leave Travel Assistance, passports, and Reserves screening/contracting practices. **(OPI: ADM(HR-Mil))**

153. Request an independent evaluation of the ability of the Canadian Forces Health Services Group to support deployed operations be undertaken. **(OPI: ADM(HR-Mil))**

ANNEX A – CRS NOTIFICATION LETTER

Col. Thain

National Defence / Défense nationale

National Defence Headquarters
Ottawa, Ontario
K1A 0K2

Quartier général de la Défense nationale
Ottawa (Ontario)
K1A 0K2

1258-137 (CRS)

6 January 2003

Distribution List

NOTIFICATION OF CRS EVALUATION OF VANGUARD/MAIN CONTINGENCY FORCE READINESS AND SUSTAINMENT

References: A. CRS Review Plan, August 2001
B. Defence Plan 2002, April 2001, (http:\\vcds.dwan.dnd.ca/vcds/dgsp/dp/intro_e.asp)
C. 1994 White Paper on Defence
D. Treasury Board "Guide for the Development of Evaluation and Accountability Frameworks," August 2000
E. Shaping the Future of the Canadian Forces: Strategy for 2020, June 1999, (http:\\vcds.dwan.dnd.ca/cds/strategy2k/intro_e.asp)
F. CF Force Employment Model, JCRB 08/02 ROD, 17 May 2002
G. NATO Response Force Concept, October 2002

BACKGROUND

1. The Vanguard and Main Contingency Force (MCF) concept was articulated as one of the principal Canadian Forces (CF) force employment constructs in the 1994 White Paper. Over subsequent years, geo-political changes, in concert with CF deployments, both domestically and internationally, have affected demands upon high-readiness units, their attendant sustainment needs, and the importance that these be appropriately assessed. Vanguards, as subsets of an MCF, have been deployed on a number of operations in the past decade, and in some cases, remain deployed internationally. The requirement to support these ongoing operations, in addition to

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Liste de distribution

AVIS D'ÉVALUATION DU CS ÉVALUATION DE LA DISPONIBILITÉ OPÉRATIONNELLE ET DU MAINTIEN EN PUISSANCE DE L'AVANT-GARDE ET DE LA FORCE DE CONTINGENCE PRINCIPALE

Références : A. Plan d'examen du CS Ex 2001-2002, août 2001
B. Plan de la Défense 2002, avril 2001 (http:\\vcds.dwan.dnd.ca/vcds/dgsp/dp/intro_f.asp)
C. Livre blanc sur la défense de 1994
D. « Guide d'élaboration des cadres d'évaluation et de responsabilisation » du Conseil du Trésor, août 2000
E. Façonner l'avenir des Forces canadiennes : Une stratégie pour l'an 2020, juin 1999 (http:\\vcds.dwan.dnd.ca/cds/strategy2k/intro_f.asp)
F. Modèle d'emploi de la force des FC, RD du CBCI 08/02, 17 mai 2002
G. Concept de force d'intervention de l'OTAN, octobre 2002

CONTEXTE

1. Le concept d'avant-garde et de force de contingence principale (FCP) avait été articulé comme l'un des principes fondamentaux d'emploi de la force pour les Forces canadiennes, dans le Livre blanc sur la défense de 1994. Depuis le Livre blanc, les changements géopolitiques ainsi que les déploiements des FC au pays et à l'étranger ont soulevé des préoccupations, à savoir qu'on n'a pas bien évalué les exigences relatives aux unités à haut niveau de préparation et leurs besoins de soutien connexes. Des avant-gardes, en tant que sous-éléments d'une FCP, ont été déployées pour diverses opérations au cours des dix dernières années, et dans

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providing other high-readiness units and formations, has posed challenges for Environmental Chiefs of Staff (ECS) in their force generation role.

2. The CF Force Employment Model, as has been recently developed, provides a quantitative outline of force commitments and their sustainability requirements, including Vanguard and other high-readiness units. This personnel-based model was created in an effort to better focus understanding of current commitments and their effects on residual resources and capabilities. Finally, NATO has circulated a new force structure proposal, the NATO Response Force Concept, which may impact on the CF readiness posture.

PROJECT AIM AND SCOPE

3. Aim. The aim of this project is to evaluate CF Vanguard and Main Contingency Force readiness and sustainment, as well as the continued validity of the current construct.

4. Scope. The Evaluation Team will make use of the guide at Reference D in the conduct of this evaluation. In general, the evaluation will be comprised of the following:

a. An Evaluation of Vanguard/MCF Readiness and Sustainment. The evaluation will examine the CF capacity (including pertinent obstacles and opportunities) to meet expected Vanguard readiness and sustainment levels. This examination will extend to other High-Readiness Unit requirements, both domestic and international, with the exception of the NBCRT and .....

certains cas, elles sont demeurées à l'étranger. Le soutien des opérations en cours ainsi que la disponibilité d'autres unités et formations à haut niveau de préparation a suscité des inquiétudes, surtout chez les chefs d'état-major d'armée (CEMA), relativement à leur rôle de mise sur pied de la force.

2. Le modèle d'emploi de la force des FC, récemment mis au point, donne un aperçu quantitatif des engagements pris et du soutien requis, y compris l'avant-garde et les autres unités à haut niveau de préparation. Ce modèle fondé sur le personnel a été créé en vue de mieux comprendre les engagements actuels et leurs effets sur les ressources et capacités résiduelles. Enfin, l'OTAN a proposé une nouvelle structure de force appelée concept de force d'intervention de l'OTAN, qui pourrait avoir une incidence sur la disponibilité opérationnelle des FC.

OBJET ET PORTÉE DU PROJET

3. Objet. Ce projet a pour objet d'évaluer la disponibilité opérationnelle et le maintien en puissance de l'avant-garde et de la force de contingence principale des Forces canadiennes, ainsi que la validité du concept actuel.

4. Portée. L'équipe d'évaluation utilisera le guide cité à la référence D pour mener ses travaux qui, de façon générale, se présenteront comme suit :

a. Évaluation de la disponibilité opérationnelle et du maintien en puissance de l'avant-garde/la FCP. On déterminera si les FC peuvent amener l'avant-garde aux niveaux attendus de disponibilité opérationnelle et de maintien en puissance, tout en tenant compte des obstacles et des possibilités. Cette évaluation portera aussi sur les autres unités à haut niveau de préparation, pour des missions tant au pays qu'à l'étranger, à l'exception de l'EINBC et de .....

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b. An Evaluation of the Vanguard/Main Contingency Force Concept. The evaluation will examine the relevance and continued suitability of the Vanguard and Main Contingency Force construct in view of both the new CF Force Employment Model and the NATO Response Force Concept proposal.

5. Evaluation Objectives. There are four principal Evaluation Objectives as follow:

a. Objective 1: To confirm that the general tasks assigned to the CF Vanguard/MCF and other High-Readiness Units (HRU) and organizations are appropriate in terms of structure, timelines and standards;

b. Objective 2: To confirm how the DCDS and the ECS generate the forces necessary to meet the readiness levels;

c. Objective 3: To confirm how the ECS, ADM(Mat) and others meet the sustainability requirements; and

d. Objective 4: To examine the continued validity of the current Vanguard/MCF/ High Readiness unit construct, with a goal of providing insights into future concepts.

b. Évaluation du concept d'avant-garde/de force de contingence principale. On examinera la pertinence et l'à propos du concept d'avant-garde et de force de contingence principale en rapport avec le nouveau modèle d'emploi de la force des FC et du concept proposé de force d'intervention de l'OTAN.

5. Objectifs de l'évaluation. Quatre grands objectifs d'évaluation doivent être réalisés en vue d'atteindre le but fixé :

a. Objectif 1 : Confirmer que les tâches générales confiées à l'avant-garde/la FCP et à d'autres unités à haut niveau de préparation (UHNP) et organisations des FC sont adéquates sur les plans de la structure, du calendrier et des normes;

b. Objectif 2 : Confirmer comment le SCEMD et les CEMA mettent sur pied les forces nécessaires pour atteindre les niveaux de préparation;

c. Objectif 3 : Confirmer comment les CEMA, le SMA(Mat) et d'autres intervenants assurent le maintien en puissance requis;

d. Objectif 4 : Examiner la validité du concept actuel d'avant-garde/de FCP/ d'unité à haut niveau de préparation, afin de mieux saisir les concepts à venir.

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DELIVERABLES

6. The completed evaluation report will provide conclusions and recommendations regarding the delivery and sustainment of Vanguard/MCF and High-Readiness Unit capabilities. The report will also prepare a program logic model and assist in the development of a suitable performance reporting and measurement strategy.

APPROACH

7. Methodology. In general, the Evaluation Team will follow the process outlined in Reference D. This will involve the following elements:

a. Review of available open literature, internal documentation, applicable policies or agreements and the implementation thereof;

b. Examination of the Vanguard/ MCF/ HRU readiness and sustainment issues from the perspective of stakeholders, including interviews with authorities both inside and outside the CF/DND, and benchmarking against a number of selected allies;

c. Undertake selected detailed case studies of recent CF Vanguard and other High Readiness Unit deployments and their results; and

d. Preparation of a results based logic model.

RÉSULTATS ATTENDUS

6. Le rapport d'évaluation fournira des conclusions et des recommandations sur la production et le maintien en puissance des capacités en matière d'avant-garde/de FCP/d'unités à haut niveau de préparation. Il permettra aussi d'établir un modèle logique de programme et d'élaborer une stratégie adéquate de rapport et de mesure du rendement.

APPROCHE

7. Méthodologie. De façon générale, l'équipe d'évaluation suivra le processus décrit dans le document de référence D, qui comprend les éléments suivants :

a. Revue de la documentation non classifiée et interne, des politiques ou accords applicables ainsi que de leur mise en œuvre;

b. Examen des questions de disponibilité opérationnelle et de maintien en puissance de l'avant-garde/de la FCP/des UHNP, du point de vue des intervenants, y compris des entrevues avec des autorités à l'intérieur et à l'extérieur des FC/du MDN, et une analyse comparative avec certains alliés;

c. Études de cas détaillées de récents déploiements de l'avant-garde et d'autres unités à haut niveau de préparation des FC ainsi que des résultats obtenus;

d. Préparation d'un modèle logique axé sur les résultats.

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ANNEX A

TEAM COMPOSITION

8. The CRS Team includes:

a. Approval Authority – DGRS Mr. J.G. Van Adel, 995-7792;

b. Team Leader – Col J.G. Fleury, 995-0338; and

c. Team Member – Mr. D. J. Moore, 996-4885; and

d. Consultants – To be arranged if necessary.

9. As this relatively complex evaluation progresses, the scope may be adjusted in order to ensure sufficient focus and manageability. We will also be attentive to opportunities to provide interim deliverables. Addressees will receive updated advice respecting any changes to the project. In the interim, any queries concerning the evaluation may be directed to the undersigned, DGRS or to the responsible Team Leader, Colonel J.G. Fleury at 613-995-0338.

10. Addressees wishing to name a specific point of contact are requested to pass details to the Team Leader by 24 January 2003. The Team Leader will initiate contact with appropriate authorities to arrange visit clearances as necessary.

Chef – Service d'examen
Le major-général

K.G. Penney
Major-General
Chief Review Services

Distribution List (page 6)

COMPOSITION DE L'ÉQUIPE

8. L'équipe du CS Ex comprend :

a. l'autorité approbatrice – DGSE, M. J.G. Van Adel, 995-7792;

b. le chef d'équipe – Col J.G. Fleury, 995-0338;

c. le membre d'équipe – M. D.J. Moore, 996-4885;

d. des consultants – au besoin.

9. Au fur et à mesure que cette évaluation complexe progresse, la portée du projet est sujette à être ré-évaluée afin de maintenir l'objectif premier et de s'assurer que le tout demeure faisable. Nous essayerons aussi de fournir, lorsque possible, des mises à jour intérimaires. Le cas échéant, tous les intéressés seront avisés des changements. Toute demande de renseignements sur l'évaluation devrait être adressée soit au sous-signé, soit au DGSE, ou au chef d'équipe, le colonel J.G. Fleury, au (613) 995-0338 ou au (613) 992-0528 (fax).

10. Les destinataires qui désirent nommer un contact spécifique sont priés de fournir les détails au chef d'équipe d'ici le 24 janvier 2003. Celui-ci se mettra en rapport avec les autorités compétentes pour obtenir des permis de visite, s'il y a lieu.

Liste de distribution (page 6)

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ANNEX A

Distribution List

Action

Internal

VCDS
ADM(Pol)
DCDS
CMS
CLS
CAS
ADM(Mat)
ADM(HR Mil)
ADM(IM)

Information

Internal

DM
CDS
Assoc DM
JAG
CF Legal Adviser
DGPA
DGSP

External

CANMILREP NATO
DComd NORAD
Comd MARLANT
Comd MARPAC
Comd LFAA
Comd LFQA
Comd LFCA
Comd LFWA
Comd 1 CAD
Comd LFDTS
Comd CFIOG
Comd CDLS(W)
Comd CDLS(L)
CFILO(W)
CFILO(L)

Liste de distribution

Exécution

Interne

VCEMD
SMA(Pol)
SCEMD
CEMFM
CEMAT
CEMFA
SMA(Mat)
SMA(RH-Mil)
SMA(GI)

Information

Interne

SM
CEMD
SM déléguée
JAG
Conseiller juridique des FC
DGAP
DGPS

Externe

CANMILREP OTAN
CmdtA NORAD
Cmdt FMAR(A)
Cmdt FMAR(P)
Cmdt SAFT
Cmdt SQFT
Cmdt SCFT
Cmdt SOFT
Cmdt 1 DAC
Cmdt SIDFT
Cmdt GOIFC
Cmdt ELFC(W)
Cmdt ELFC(L)
OLRFC(W)
OLRFC(L)

6/6

ANNEX B – DEFENCE PLAN DIRECTED CANADIAN FORCES PRINCIPAL HIGH READINESS TASKS AND OP APOLLO/OP NOBLE EAGLE DEPLOYMENT SUMMARY

Navy High Readiness Tasks

- One frigate on …….. Notice To Move.
- One frigate as a Vanguard Element within ……. Notice to Move.
- Naval Task Group within …… Notice To Move.
- 2nd Naval Task Group within …….. Notice To Move.

AIA Section 15(1) International Affairs and Defence

Op APOLLO

- Sailed Naval Task Group within ten days of the receipt of a Warning Order in October 2001, and surged an extra frigate during ROTO 0. Continued with alternating Naval Task Group, and one and two ship deployments.

Army High Readiness Tasks

- One light infantry battalion group on …… Notice To Move for the NATO Immediate Reaction Force (Land).
- One medium infantry battle group on …… Notice To Move, for SHIRBRIG and UNSAS.
- NATO Main Contingency Force Vanguard infantry/armoured battle group on ……. Notice To Move.
- One brigade group OR up to three battle groups for NATO Main Contingency Force on …….Notice To Move.
- Immediate Reaction Unit in each Land Force Area on ……. Notice To Move for Domestic Operation.

AIA Section 15(1) International Affairs and Defence

Op APOLLO

- Provided one light infantry battalion group to Afghanistan campaign 2002.

ANNEX B

Air Force High Readiness Tasks [38]

- CF-18 for domestic Air Sovereignty on ……. Notice To Move.
- CF-18 for NORAD on …… Notice To Move.
- … CF-18 Vanguard for Rapid Reaction Force (Air) on …… Notice To Move.
- … CF-18 added to the Vanguard for Main Contingency Force on …… Notice To Move.
- .. CH-146 Griffon for Vanguard on ……... Notice To Move for NATO (…… Notice To Move for UN task) and ……. Notice To Move for Main Contingency Force support.
- Up to 5 CH-124 Sea King Helicopter Air Detachments, one at …….. Notice To Move (NTM), one at …… NTM (Vanguard), and three on ……. NTM to support the first Naval Task Group (NTG 1).

AIA Section 15(1) International Affairs and Defence

Op APOLLO

- 3 CC130 Hercules sustained.
- 2 CP140 Aurora sustained.
- 2 CC150 Airbus ROTO 0 and 1 only.
- 11 CH124 Helicopter Air Detachments partially sustained.

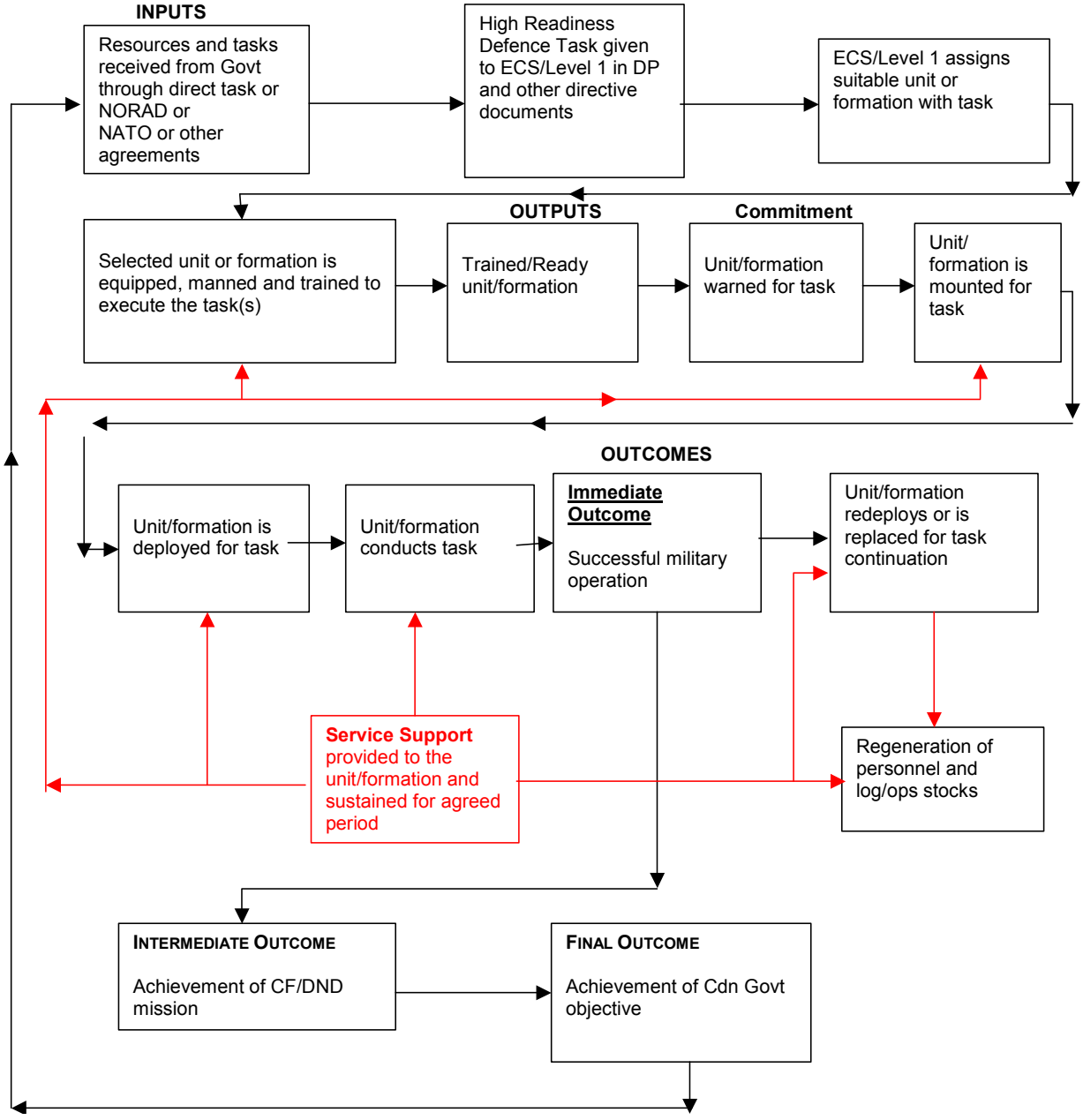
NORAD – Since 11 September 2001
Domestic Air Sovereignty X X CF-18 sustained

- Op NOBLE EAGLE X X CF-18 sustained

* Note that with the exception of the CH-124 assignments to support the Navy, Defence Plan 2003 does not provide detailed numbers of aircraft from the various fleets to be at High Readiness. NORAD Plans do outline CF-18 readiness requirements in detail.

[38] Exact aircraft numbers for NORAD deployments are classified. Details can be provided upon request.

ANNEX C – READINESS AND SUSTAINMENT LOGIC MODEL



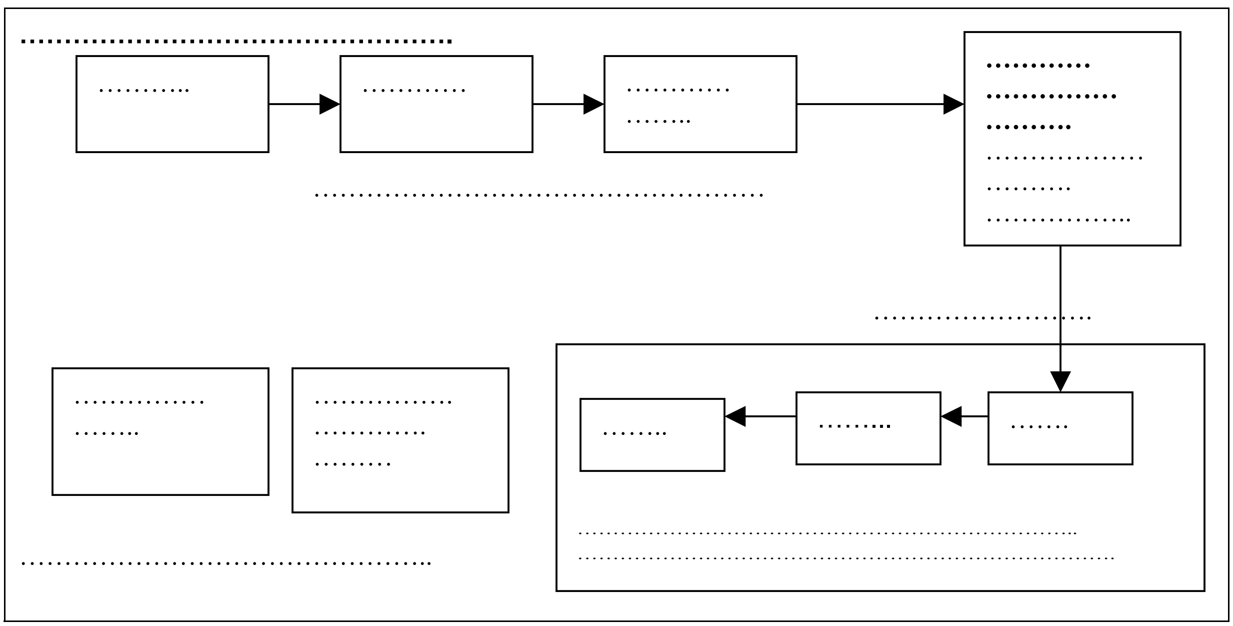
ANNEX D – US JOINT CHIEFS OF STAFF – CHAIRMAN'S READINESS SYSTEM

Ref: CJCSI 3401.01C 1 October 2002

GENERAL

In the US defence system, ……………………………………………………………………………

AIA Section 15(1) International Affairs and Defence



AIA Section 15(1) International Affairs and Defence

……………………………………………………………………………………………

AIA Section 15(1) International Affairs and Defence

ANNEX D

…… AIA Section 15(1) International Affairs and Defence

CJCS READINESS SYSTEM

The CJCS Readiness System is ……

…… AIA Section 15(1) International Affairs and Defence

…… AIA Section 15(1) International Affairs and Defence

…… AIA Section 15(1) International Affairs and Defence

ANNEX D

The JQRR measures the means available to the combatant commander given specific plans designed to achieve regional taskings. This system would be compatible, and complementary to, the CF/DND DP task assignment process. In the JQRR process, the various high level planning documents, similar to our Defence Plan, OPLANs and other documents serve as the basis for measuring current readiness via the JQRR. ……
…… AIA Section 15(1) International Affairs and Defence Section 21(1)(a) Advice
…… The JQRR is used as a tool for assessing current readiness, not as a vehicle for validating desired force enhancements or new capabilities.

……
…… AIA Section 15(1) International Affairs and Defence Section 21(1)(a) Advice
……..

…… AIA Section 15(1) International Affairs and Defence Section 21(1)(a) Advice

As noted above, much of the product of the JQRR is ……
…… A system similar in scope to the US CJCS Readiness System could readily be adapted to CF/DND use. Its focus, …..…… AIA Section 15(1) International Affairs and Defence Section 21(1)(a) Advice
…… A similar CF/DND system could be closely aligned with the already established capability-based planning efforts, and would be complementary to the Horizon Two and Three planning framework.

APPENDIX 1 TO ANNEX D – US JOINT READINESS FUNCTIONAL AREAS

Functional Area	Associated Elements
…… ……	…… …… ……
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….	…… ……

AIA Section 15(1) International Affairs and Defence

ANNEX E – LIST OF EVALUATION INTERVIEWS CONDUCTED

NDHQ Ottawa

CLS
Asst CMS
Asst CLS
Asst CAS
Asst DCDS
DGSP
DGJFD
DGMPR
DGMEPM
DGLEPM
DGAEPM
DGAFD
DG Air Pers
DFPPC
D Nato Pol
COS Med Ops
J1 Coord
J3 Intl
J3 Contl
J4 Mat
J4 Log
J4 Log Ops 2
J4 Log Ops 3
DFPPC
DFPPC 2
DFPPC 3
DFPPC 4
DFPPC 6
DFPPC 6-2
DMPOR
D Mar Pers
DMMSPR
DLFR
DLSP
DLP
DLSS
DLERM
DSPC (PMF)
D Air FE
D Air SP
DDA 2-3
DLSP 4-2
DSPC 3
DSPC 5
PD NMSC
PMO CFTPO

MARLANT Halifax

N3 Staff
N1 Staff
CO HMCS Halifax and staff
CO FMF Cape Scott and staff
N4 Mat Sp
CO FLS Op APOLLO ROTO 0

LFWA Edmonton

Comd LFWA
Comd 1 CMBG
CO 3 PPCLI
3 PPCLI Coy Comds
3 PPCLI Ops & Trg staff
3 PPCLI Pers & CSS staff
G1 LFWA and staff
G1 1 CMBG and staff
G3 LFWA and staff
G3 1 CMBG and staff
G4 1 CMBG

2 CMBG Petawawa

Comd LFCA
Comd 2 CMBG

ANNEX E

JFHQ Kingston

Comd JOG
Comd JSG Designate

LFDTS Kingston

Comd LFDTS
ACLL Staff

1 CAD Winnipeg

Comd 1 CAD
A1 and staff
A3 and staff
A4 and staff
A3 Fighters
A7 and staff
Comd CCC and staff (Trenton)
AFSC Proj staff

3 Wing Bagotville

Comd 3 Wing
3 Wing Log O
CO 433 Tac Ftr Sqn
3 Wing Trg O
3 Wing Admin O
3 Wing Log and IT staff
3 Wing Maint O

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ANNEX G – LIST OF ABBREVIATIONS

ABCA	Australia/Britain/Canada/America
AOR	Area of Responsibility, or, Auxiliary, Oiler, Replenishment
APOE	Airport of Embarkation
ASA	Air Sovereignty Alert
ASC	Advanced Surgical Centre
ATOF	Army Training and Operations Framework
BCT	Brigade Combat Team
BOI	Board of Inquiry
BTL	Basic Training List
CDA	Canadian Defence Attaché
CFHSG	Canadian Forces Health Services Group
CFJSR	Canadian Forces Joint Signals Regiment
CFMG	Canadian Forces Medical Group
CFSS	Canadian Forces Supply System
CFTPO	Canadian Forces Tasking, Plans and Operations
CJTFSWA	Canadian Joint Task Force South-West Asia
CPF	Canadian Patrol Frigate
CRR	Combat Readiness Requirement
CSA	Combat Support Agency
CSS	Combat Service Support
DAG	Departure Assistance Group
DDH	Destroyer (In the CF case, the Tribal Class destroyer)
DP	Defence Plan
DPQ	Defence Planning Questionnaire
DTAV	Defence Total Asset Visibility
ECS	Environmental Chief of Staff
ELE	Expected Life Expectancy
FLS	Forward Logistics Site
FMF	Fleet Maintenance Facility
GMT	General Military Training
HELAIRDET	Helicopter Air Detachment
HLTA	Home Leave Travel Assistance
ILOC	Integrated Lines of Communication
IOR	Immediate Operational Requirement
IRF(L)	Immediate Reaction Force (Land)
IRU	Immediate Response Unit
ISAF	International Security Assistance Force
JCRB	Joint Capabilities Review Board
JOG	Joint Operations Group
JQRR	Joint Quarterly Readiness Review
JSG	Joint Support Group
JTF 2	Joint Task Force 2

ANNEX G

LAV	Light Armoured Vehicle
LFDTS	Land Forces Doctrine and Training System
LIO	Leadership Interdiction Operations
LOGSTOCKS	Logistics stocks
LRP	Long-Range Patrol
LSVW	Light Support Vehicle Wheeled
MCF	Main Contingency Force
MFRC	Military Family Resource Centre
MIO	Maritime Interdiction Operations
MOB	Main Operating Base
MOC	Military Occupation Code
MOU	Memorandum of Understanding
MRE	Meal, Ready to Eat
NATO	North Atlantic Treaty Organization
NBC	Nuclear, Biological, Chemical
NBCRT	Nuclear, Biological, Chemical Response Team
NCCIS	National Command and Control Information System(s)
NCE	National Command Element
NFTC	NATO Flying Training in Canada
NMDS	National Materiel Distribution System
NP	National Procurement
NPOC	National Procurement Oversight Committee
NSE	National Support Element
NTG	Naval Task Group
NTM	Notice to Move
O&M	Operations and Maintenance
OJT	On-Job Training
OPSTOCKS	Operational Stocks
OPTEMPO	Operational Tempo
OTU	Operational Training Unit
PERSTEMPO	Personnel Tempo
PGM	Precision Guided Munitions
PMB	Program Management Board
RFF	Request for Forces
ROE	Rules of Engagement
SCIP	Strategic Capability Investment Plan
SEG	Systems Effectiveness Group
SHIRBRIG	Standby High Readiness Brigade
SLOC	Strategic Lines of Communication
SNR	Senior National Representative
SOFA	Status of Forces Agreement
SROC	Senior Readiness Oversight Council
STANAVFORLANT	Standing Naval Forces Atlantic

ANNEX G

STO	Survive to Operate
TAL	Tactical Airlift
TAV	Technical Assistance Visit
TES	Trained Effective Strength
TFMT	Task Force Movement Table
TFS	Tactical Fighter Squadron
TOCA	Transfer of Command Authority
TO&E	Table of Organization and Equipment
UOR	Unforecasted Operational Requirement
Wng O	Warning Order
YFR	Yearly Flying Rate