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Backgrounder

Canadian Defence Policy

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ABSTRACT

The international military context has changed considerably in the last two decades. Nuclear weapons are still a dominant factor, but greater emphasis is being placed on conventional warfare and on defensive rather than offensive measures. This inevitably affects Canadian defence policy, especially with regard to North America. The 1987 White Paper made various proposals for modernizing the Canadian forces so that they could deal more effectively with the new military situation. Many of the initiatives, notably the purchase of nuclear-powered submarines and the modernization of air defences, also take into account other factors, such as protection of Canadian sovereignty. Because of arms control negotiations and the apparent easing of international tensions, however, there may be little public support for substantial increases in defence spending. Indeed, so many demands are made upon Canada's military resources that, even with an increased defence budget, Canada may not be able to meet its commitments fully.

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CANADIAN DEFENCE POLICY

INTRODUCTION

Many things have changed during the 16 year period between the 1971 White Paper, Defence in the 70s, and Challenge and Commitment, tabled in the House of Commons by the Minister of National Defence on 5 June 1987. Weapons technology has progressed at an enormous rate while relations between the two superpowers have experienced highs and lows between détente and glasnost. The cornerstone of the West's strategic policy is still nuclear deterrence. The ability of the United States to launch a nuclear attack, even after suffering an attack on its own territory, deters the Soviet Union from initiating any aggression against the United States or its allies. In recent years, however, more attention has been paid to defensive measures, President Reagan's Strategic Defense Initiative (SDI) being the best example. In fact, the Western World's military posture is undergoing one of the most significant changes since 1945. The threat remains the same, but the response to it is altering. This study examines how the military context has changed and analyzes the White Paper's response to the developing situation.

THE NEW MILITARY CONTEXT

A. Changes in United States Strategy

Since 1945, to deter military aggression the United States has relied on its ability to attack an enemy country with nuclear weapons. Until recently, the emphasis was on offence; bombers and missiles based on land and in submarines were the main elements of the military arsenal.

As the West's main power, the United States provided most of the nuclear deterrence which countered the threat posed by the Soviet Union. Considerable air defences were established in North America in the 1950s in order to protect the bombers and missiles based in the United States, but these were allowed to deteriorate when missiles replaced bombs as the main threat. Because of the technological requirements and considerable costs of anti-missile defences, the United States decided to rely instead on its offensive capabilities. It also negotiated with the Soviet Union the Anti-Ballistic Missile (ABM) Treaty which limited each side to one operational ABM facility.

The Soviet Union, however, continued to maintain strong air defences and undertook some research on ABM defence. The numerous foreign invasions of its territory throughout history have left their mark on the Soviet Union, which pays considerable attention to defence. Indeed, "the notion of defending the homeland is central to Soviet strategic thinking."(1) The United States, on the other hand, escaped invasion and emerged victorious from the Second World War during which its strategic bomber force played a key role. For three decades after the war, its military valued its offensive capabilities and downplayed defence. When the Soviet Union began developing ABM defences, the United States introduced multiple warhead missiles to complicate the task of the defenders and to maintain the credibility of its nuclear deterrence force. The emphasis was on improving the offensive forces to deal with Soviet defences rather than on developing similar defences. The combination of strategic bombers, land-based missiles and missiles on board hard-to-detect submarines was deemed to offer a credible deterrence to Soviet aggression. Passive defence, in the form of radar networks for example, was established to provide warnings of attacks, but active defence had low priority.

This attitude began to change in the late 1970s. Concerns were expressed over the lack or neglect of air defences over the years. The Soviet bomber threat, which since the 1950s had been constantly

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(1) Keith Payne and Colin Gray, "Nuclear Policy and the Defensive Transition," Foreign Affairs, Vol. 62, No. 4, Spring 1984, p. 832.

downgraded as irrelevant in the missile age, became a source of great concern. As well, the increased sophistication of the Soviet bomber force and the development of air-launched cruise missiles led military planners to fear surprise attacks on the command, control and communications facilities vital to the nuclear deterrence forces.(2) In 1979, the United States began to develop the Air Defense Master Plan (ADMP) with the aim of improving continental air defences. Not surprisingly, defence against missiles and other threats was also reconsidered.

In the late 1970s and early 1980s, three factors paved the way for new undertakings in defence, especially against missiles. The first factor was the growing concern over the ability of the United States to deter Soviet aggression. The end of détente and the limitations of the arms control process "aggravated the consequences of a change in the balance of forces which appeared more and more favorable to the Soviet Union."(3) Military strength became a political issue in the United States amid concerns that the credibility of the nuclear deterrence was being reduced by the Soviet Union's growing superiority in the number of missiles and by the perceived vulnerability of American weapons in the face of extensive Soviet defences. There was growing frustration with Soviet violations of the ABM treaty, such as the construction of the long-range radar at Krasnoyarsk to enhance its existing ABM capabilities, while Americans could not "stop even one missile from falling on the United States."(4) While the Soviet Union had both strong offensive and defensive forces, the United States had weak defences and the effectiveness of its offensive forces was more and more in doubt in view of the Soviets'

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(2) Joel Sokolsky, "Changing Strategies, Technologies and Organization: The Continuing Debate on NORAD and the Strategic Defense Initiative," Canadian Journal of Political Science, Vol. 19, No. 4, December 1986, p. 759.

(3) Louis Deschamps, The SDI and European Security Interests, Atlantic Paper No. 62, Atlantic Institute for International Affairs, London, 1987, p. 13.

(4) Simon Worden, "What Can We Do? When Can We Do It?" National Review, Vol. 38, No. 35, 31 December 1986, p. 37.

alleged superiority. It no longer seemed possible to rely simply on strong offensive forces to deter a Soviet attack and extensive strengthening of defences was advocated.

The second factor was the fact that it was now within the reach of technology to provide a truly effective defence, even against missiles.(5) Even the nuclear-powered missile-carrying submarine, which had long been considered invulnerable because of its ability to stay submerged anywhere in the oceans, was more and more subject to detection because of technological advances.(6) Thus, not only was there a perception that defences needed strengthening, but there also was the technology to accomplish the task.

The third factor, and the final ingredient necessary to change the strategic posture of the United States, was political will. President Reagan had campaigned on the need to build up military strength. His administration increased military spending in the early 1980s, placing special emphasis on defence. The most obvious demonstration of this was President Reagan's 23 March 1983 announcement of the Strategic Defense Initiative (SDI), often called Star Wars, which called for the examination of the feasibility of providing the United States with an effective defence against missiles, part of which could be based in space. The President claimed that the goal of strategic defence was to make nuclear weapons "impotent and obsolete" and to remove the threat of Mutual Assured Destruction (MAD) which had heretofore been the only way of deterring aggression. In fact, the President implied that not "the offense, but the defense, shall deter war."(7)

Edward Teller, known as the father of the hydrogen bomb, played a key role in convincing the President of the feasibility of

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(5) Leon Wieseltier, "Madder Than MAD, Why Star Wars May Be a Higher Form of Mutual Assured Destruction," The New Republic, Vol. 194, No. 19, 12 May 1986, p. 18.

(6) See for example Jonathan Tucker, "Cold War in the Ocean Depths, The U.S. Navy is Upgrading Its Sonar Surveillance Systems to Detect Quieter Soviet Subs," High Technology, Vol. 5, No. 7, July 1985, p. 29-37.

(7) Wieseltier (1986), p. 18.

space-based defences, and in advocating the emphasis on defence rather than on offence. For Teller, the terror of MAD could be replaced by the stability offered by defence:

> Defense reduces the danger from weapons of mass destruction, whether incendiary bombs, biological agents or nuclear missiles. Also, if both sides are defended, attack becomes riskier and war is deterred.(8)

Thus, the influential physicist who argued for the development of the hydrogen bomb in the 1940s to ensure the effectiveness of American offensive forces, now favours defensive measures to maintain deterrence. The necessity of the new emphasis on defence and of SDI itself is still the subject of debate. The fact remains, however, that the focus of American military policy has changed significantly. This was confirmed by Secretary of Defense Caspar Weinberger who stated:

> In fact, strategic defense represents a change of strategy, for a more secure deterrent. It offers a far safer way to keep the peace.(9)

The deterrent must offer protection not only against missiles, but also against any other threat. SDI has been likened to a roof which could stop incoming missiles, but which could not stop bombers and cruise missiles from flying under it to attack command and communication installations of both SDI and deterrent forces. To complement SDI - to provide the walls under the roof - the United States has undertaken the Air Defense Initiative (ADI) in order to provide more efficient air defence surveillance, tracking and engagement

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(8) Edward Teller, "Defense Is the Best Defense," New York Times Magazine, 5 April 1987, p. 47. See also Edward Teller, Better A Shield Than a Sword, Perspectives on Defense and Technology, The Free Press, New York, 1987, p. 3-41.

(9) Caspar Weinberger, "U.S. Defense Strategy," Foreign Affairs, Vol. 64, No. 4, Spring 1986, p. 679.

systems.(10) ADI is basically an evolution of the ADMP and its annex, the Strategic Defense Architecture 2000 (SDA 2000) study started in 1982. Surveillance satellites and other systems for ADI could be deployed in the 1990s, even if those for SDI are not. Although ADI is mainly concerned with air defence, antisubmarine warfare (ASW) is also important because cruise missiles could be launched from submarines close to the continental United States.(11) One of the goals of ADI is to provide new means, or supplement existing ones, of detecting and engaging both sea launched cruise missiles (SLCMs) and the submarines launching them.

Thus, U.S. military planners are dealing systematically with every possible military threat to the continental United States and, in the process, are changing the nature of deterrence so that it is becoming more defensive:

> by ensuring its [the Soviet Union's] inability to defeat the United States - promising a long and potentially unwinnable war which could allow the vastly superior U.S., and U.S.-allied, military-industrial potential to come into play.(12)

This implies that SDI, ADI and other defensive systems must be able to survive attacks and have war-fighting capabilities for a prolonged nuclear war. It also means that civil defence measures, which have been neglected for many years, have acquired new importance. If the military-industrial potential can survive a nuclear attack, thanks to effective defences, it becomes worthwhile to offer blast shelter protection to at least a portion of the population, such as local officials, to ensure the operation of facilities after an attack. Thus, in 1986, the United States Federal Emergency Management Agency prepared new civil defence plans.(13)

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(10) Sokolsky (1986), p. 765. See also John Morrocco, "Push for Early Air Defense Initiative," Aviation Week and Space Technology, Vol. 126, No. 5, 2 February 1987, p. 18-20; David Kattenburg, "Canada's Role in An SDI Offshoot," Globe and Mail (Toronto), 9 July 1987, p. A7.

(11) Paul Mann, "Defense Dept. Official Cites Need for Early Decision on Space-based Radars As Part of ADI Surveillance Network," Aviation Week and Space Technology, Vol. 126, No. 15, 13 April 1987, p. 26.

(12) Payne and Gray (1984), p. 828.

(13) See Jennifer Leaning, "Star Wars Revives Civil Defense," Bulletin of the Atomic Scientists, Vol. 43, No. 4, May 1987, p. 42-46.

In short, if all of these defensive systems were deployed, war would no longer mean the quick annihilation of both superpowers as a result of one's retaliation for the other's attack, but rather a prolonged conflict where conventional forces could play a more important role. Since extensive U.S. defences could reduce the Soviet Union's ability to retaliate to an attack and give the United States first-strike capabilities, it is feared that the new United States approach will damage the strategic stability which has existed for some 30 years.(14) The major elements of the new defence posture, such as SDI and ADI, are highly controversial and the decision to deploy them is still years away. The fact remains, however, that United States military strategy has changed significantly and, inevitably this implies an adjustment of the Western World's military posture.

B. Effects on NATO

One of the main elements of that posture is the defence of Western Europe by the North Atlantic Treaty Organization (NATO). The European member countries have been reconsidering their position within NATO since the SDI announcement in 1983. They recognized that SDI and the defence-oriented attitude behind it had important implications for the organization:

> The SDI has, for the first time, made the "European question" peripheral to the Americans' perception of their territorial security interests.(15)

Europe is still important for the security of the United States, but the emphasis on the defence of the continental United States is affecting NATO's military policies.

NATO at present has a strategy which features an assured response through conventional forces to any Soviet attack on the central

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(14) See, for example, "Arms Control and the Defence White Paper," Arms Control Communiqué, No. 38, 18 June 1987, p. 4.

(15) Louis Deschamps, The SDI and European Security Interests, Atlantic Paper No. 62, Croom Helm, London, 1987, p. 50.

front in Germany and on the flanks, followed if necessary by flexible escalation. This would involve the use of battlefield nuclear weapons to stop Soviet advances into Western Europe and ultimately retaliation by the United States nuclear deterrence forces if the invasion continued. When SDI was announced, Europeans realized that one of the main elements of their security, the willingness of the United States to use its nuclear arsenal against Soviet aggression in Western Europe, might be reduced if the continental United States could achieve extensive protection against nuclear attack.(16) A United States safe from attack might show little interest in Western European security and have little inclination to use its nuclear weapons against an aggressor. If both superpowers had extensive defences and no longer had to worry about nuclear retaliation, it would be safe for them to engage in conventional warfare in Europe.(17) In short, from "a strategic point of view any American policy that takes away the threat of the use of nuclear weapons, reduces European security."(18)

In this context, the desire of the United States and the Soviet Union to reach arms control agreements like that eliminating intermediate-range nuclear forces (INF) in Europe, has increased the concerns of Europeans for their security. The INF agreement removing American cruise and Pershing II missiles in exchange for the withdrawal of Soviet SS-20 missiles affects only a small part of the American nuclear arsenal which forms the basis of NATO's flexible response strategy. Furthermore, NATO deployed its INF forces as part of the doubletrack policy (or zero-zero option) which offered to withdraw them if the Soviets did likewise. The INF agreement basically confirms the wisdom of such a

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(16) Jonathan Dean, "Europe in the Shadow of Star Wars," in John Tirman, ed., Empty Promise, The Growing Case Against Star Wars, Beacon Press, Boston, 1986, p. 163.

(17) Philip Williams, "West European Security After Reykjavik," Washington Quarterly, Vol. 10, No. 2, Spring 1987, p. 37.

(18) Deschamps (1987), p. 14. See also "The Disarmament Danger, Western Europe Won't Be Safe Without Some Nuclear Weapons," Economist, Vol. 303, No. 7501, 6 June 1987, p. 16.

policy. Nevertheless, West European governments have reacted with some dismay to the announcement of the INF agreement and have been trying to slow down the arms control negotiations.(19) Already concerned by the new defence posture of the United States and in particular by the effects of SDI on the value of U.S. nuclear deterrence to European security, the Europeans are worried lest the INF agreement could be the first step in the dismantling of United States nuclear deterrent forces based in Europe. The lack of consultations between the United States and its NATO allies prior to discussions on the INF agreement at the Reykjavik summit of October 1986, and the proposal at that time to withdraw nuclear weapons have raised fears of the eventual "decoupling" of Europe and the United States on security matters. The European members of NATO are therefore facing an upheaval of their security policies and "the alliance is in a state of flux far greater than at any time since its inception."(20)

The West Europeans are considering many options to compensate for the possible reduction of INF and short-range nuclear weapons, including the deployment of other nuclear weapons such as cruise missiles on ships off the European coast. But the reduction in the number of nuclear weapons in Europe and increasing doubts over the value of the United States nuclear deterrence for Europe's security imply above all the increase of NATO's conventional forces.(21) The Warsaw Pact enjoys a numerical advantage over NATO in terms of conventional forces, while NATO relies on nuclear weapons to compensate for the imbalance in manpower and equipment. To some extent, this dependence on nuclear weapons has led to West Europeans to keep their conventional forces to a minimum. A study of NATO's central front in the Economist magazine described the attitude of Europeans as follows:

> They believe their security lies in a conventional force that is strong enough to last for a few days, but weak enough to indicate clearly to the Soviet Union and

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(19) Williams (1987), p. 44.

(20) Ibid., p. 46.

(21) Payne and Gray (1984), p. 829; John Morrocco, "Allies Weigh New Deployments to Offset Proposed INF Cuts," Aviation Week and Space Technology, Vol. 126, No. 20, 18 May 1987, p. 18.

> its allies that any attack on the West would soon encounter the nuclear might of the United States.(22)

Now that the intervention of the nuclear might of the United States is less certain, the disparity between NATO and Warsaw Pact conventional force levels becomes more disquieting for the Europeans.

NATO has been paying more attention to building stronger conventional forces in recent years and the INF agreement has added impetus to such efforts. The NATO defence ministers participating in the meeting of the defence planning committee in May 1987 pledged increased support for conventional arms development and procurement.(23) The European NATO partners, however, are also mindful of growing demands within the United States for the withdrawal of American troops from Europe in view of the growing budget deficit and complaints that Western Europe has relied too much on the United States for its defence and has spent too much on social welfare to the detriment of its conventional forces.(24) If some United States conventional forces as well as nuclear forces were withdrawn from Europe, the Europeans would be even more hard pressed to build up conventional forces comparable to those of the Warsaw Pact. Though it seems unlikely that American troops will be withdrawn from Europe in the near future, not so long ago changes in NATO's flexible response strategy and the nuclear posture of the United States also appeared to be unlikely.

The countries of Western Europe have often considered taking greater responsibility for their own defence, but in 1987 they approached the question with a new sense of urgency. Faced with a rapidly changing strategic situation, the possibility of further arms control agreements on weapons vital to their security and some uncertainty over the continued presence of United States forces in Europe, the West Europeans have opened

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(22) James Meacham, "NATO's Central Front," Economist, Vol. 300, No. 7461, 30 August 1986, p. 22 (survey).

(23) John Morrocco, "Euromissile Pact May Affect NATO's Conventional/High-Technology Balance," Aviation Week and Space Technology, Vol. 126, No. 24, 15 June 1987, p. 122.

(24) See for example Melvyn Krauss, How NATO Weakens the West, Simon and Shuster, New York, 1986, p. 24-26 and Irving Kristol, "NATO: Do We Still Need It? The Case Against," Freedom at Issue, No. 95, March-April 1987, p. 5-6.

the debate on how to ensure their defence without the United States or even NATO.(25) A number of proposals have been made, including the creation of a Franco-German brigade which could eventually lead to a common defence strategy for the West European countries. Many political and military problems would first have to be overcome, however, and there is considerable scepticism that this could be achieved.(26) Nevertheless, the NATO alliance is obviously facing a period where the consensus between the United States and its European allies on security issues will be put to the test.

THE WHITE PAPER'S RESPONSE

A. Basic Policy

In view of the developments in the western world's strategic situation, the new White Paper on Defence comes at an opportune time. In Canadian defence policy, however, White Papers are like roadside signposts. Few and far apart, they show the way ahead, but they especially confirm the road which has been travelled. Both the 1971 and 1987 White Papers reflect changes in policies that were undertaken before their publication. Indeed, both were preceded by other signposts such as White or Green Papers marking the review of Canadian foreign policy.

Defence in the 70s followed the 1969 review of foreign policy which dealt with Canada's role in a world where nuclear missiles had revolutionized war and where European countries had fully recovered from the Second World War. The 1971 White Paper, reflecting Canadian public opinion to some extent, therefore downgraded the importance of conventional

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(25) See David Wood, "Europe Set To Go Its Own Way on Defence," Gazette (Montreal), 25 April 1987, p. B4; "Europe's Braver Colours," Economist, Vol 304, No. 7506, 11 July 1987, p. 11-12; Jocelyn Coulon, "L'Europe se cherche une voie," Le Devoir (Montreal), 17 July 1987, p. 1. A recent report by U.S. experts calling for less reliance on the "nuclear umbrella" may add impetus to the debate. See "Un rapport suggère l'abandon du 'parapluie nucléaire' défensif," Le Droit, 13 January 1988, p. 10.

(26) See Louis Wiznitzer, "Critics Dismiss Franco-German Army as 'Fantasy'," Toronto Star, 28 June 1987, p. H8.

forces in the nuclear age and Canada's commitment to NATO in light of Europe's ability to defend itself.(27) It emphasized instead the protection of Canadian sovereignty and the defence of the North American continent (which at that time did not require large military forces).

Soon after the publication of the White Paper, however, growing concerns over the Soviet Union's arms buildup and Canada's attempts to secure a contractual link with the European Economic Community as part of its Third Option strategy necessitated a review of defence policy. On 27 November 1975, the basic defence priorities were confirmed in a statement in the House of Commons, but the announcement of new weapons purchases also implied a fresh interest in the commitment to NATO and the importance of Canada's continued participation in Europe's defence for the success of the Third Option strategy. Later in the decade, when the neglect of continental air defences became a concern, Canada joined the United States in studying the problem and accepted in 1982 the ADMP proposals for the modernization of air defences. Thus, by the early 1980s, the NATO and NORAD commitments had recouped much of their original importance. The perception of the value of conventional military forces in the nuclear age and of Canada's contribution to European defence had changed considerably since the 1971 White Paper.

The 1987 White Paper, Challenge and Commitment, was also preceded by a review of Canadian foreign policy. The new Progressive Conservative government initiated the process in May 1985 with a Green Paper which was examined in public hearings by the Special Joint Committee of the Senate and of the House of Commons on Canada's International Relations. The Committee's June 1986 report elicited a reply from the Department of External Affairs, Canada's International Relations, published in December 1986. This agreed with most of the points raised by the Committee and reaffirmed Canada's alignment with the United States and its NATO allies while indicating the desire to present a distinct and practical

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(27) Martin Shadwick, "Canadian Defence Policy," International Perspectives, September/October 1983, p. 7.

Canadian perspective on East-West issues such as arms control. The report also dealt with the issue of sovereignty in the Canadian Arctic, a major concern of the government as indicated in the statement of the Secretary of State for External Affairs to the House on 10 September 1985 in reaction to the voyage of the Polar Sea through the Northwest Passage. The affirmation of Canadian sovereignty and the modernizing of Canada's northern defences were identified as dominant themes in a comprehensive northern foreign policy.

The 1987 defence White Paper reflected the importance of world security and the protection of sovereignty in Canadian foreign policy. Canadian defence policy was divided into five elements: strategic defence, the defence of United States nuclear retaliatory forces; conventional defence, the contribution of conventional military forces to NATO; the affirmation of sovereignty throughout Canadian territory; continued participation in United Nations peacekeeping operations; and the formulation of arms control proposals in conjunction with the Department of External Affairs. The defence priorities were basically the same as those indicated in 1971, but there were significant changes in emphasis.

In 1971, the protection of sovereignty had been designated the first priority because of the downgrading of the continental defence and NATO commitments. With the military value of aircraft, ships and troops placed in doubt by the nuclear missile age, non-military and quasi military roles such as coastal and Arctic surveillance were emphasized to compensate for reduced roles in NORAD and NATO. Thus, the protection of sovereignty reflected not only a political concern, but also an attempt to make conventional military forces useful in the nuclear age. In 1987, however, the White Paper listed Canada's role in strategic deterrence and conventional defence before sovereignty to reflect the renewed importance of NORAD and NATO and the government's commitment to collective security. The value of military forces was now perceived differently in both military and political terms. Since 1971, the modernization of North American air defences, the need for strong conventional forces in Europe to counter the Soviet buildup, and the growing emphasis on conventional war-fighting capabilities resulting from the defensive deterrence strategy adopted by

the United States have considerably increased the significance of conventional military forces. In political terms, the government's desire to reaffirm Canada's alignment with the United States and Western Europe, as expressed in the foreign policy review, also enhanced the value of military commitments to NORAD and NATO. Thus, the protection of sovereignty, as a military role, received less emphasis than in 1971, though the key initiatives in the White Paper demonstrate that this protection, in political terms, was one of the Canadian government's main preoccupations in its response to the changing military situation.

B. Key Initiatives

1. Creation of a Three-Ocean Navy

a. Revitalization of the Navy

The shift away from NATO signalled in the 1971 White Paper had important repercussions for the naval element of the Canadian Armed Forces. Already in decline because of the decommissioning of ships like the aircraft carrier HMCS Bonaventure, the navy saw a good portion of its sea-lane protection and anti-submarine warfare (ASW) tasks replaced by coastal surveillance missions. The protection of convoys and the detection of ICBM-carrying submarines which could be anywhere in the oceans appeared unrealistic in the missile age. Renewed interest in NATO in the mid-1970s led to the construction of new patrol frigates, but this was not enough to stop the navy's decline. High maintenance costs, the constraints on the defence budget due to the purchases of expensive new equipment such as the Aurora long-range patrol aircraft and the CF-18 jet fighter, and low priority in the general scheme of things gave little opportunity for the expansion and modernization of the navy's fleet. By the 1980s, the navy's effectiveness was seriously in doubt.

The 1987 White Paper confirmed the high priority now accorded to the revitalization of the navy and indicated that six new frigates would be ordered in addition to the six already under construction. These 12 new frigates, plus the four destroyers being modernized under a program announced in 1986, the Tribal Class Update

Modernization Project (TRUMP), will provide the navy with a modern surface fleet with enhanced ASW and air defence capabilities. Under the New Shipborne Aircraft (NSA) program, these ships will be equipped with British-Italian designed EH-101 helicopters which will increase their ASW and surveillance capabilities. The White Paper also announced the proposed purchase of 10 to 12 nuclear-powered submarines to provide the navy with an effective ASW capability in the Arctic as well as in the Atlantic and Pacific Oceans. The replacement of the three conventional diesel-powered submarines, now used mainly for ASW training, by four to twelve conventional submarines had already been under consideration as part of the Canadian Submarine Acquisition Project (CASAP) prior to the White Paper. The White Paper not only confirmed that these submarines would become one of the main elements of the navy's ASW capability, but also indicated the decision to make them as effective as possible through the use of nuclear propulsion.

The emphasis on submarines for ASW is an important change in Canadian naval policy. The value of submarines for ASW has long been recognized and was noted in the 1983 report on maritime defences of the Sub-Committee on National Defence of the Senate Standing Committee on Foreign Affairs. In the Canadian context, however, the importance attached to the protection of the Atlantic sea-lanes implied the use of surface vessels rather than submarines, which are not as suited for escort tasks.(28) The focus is now on ASW off the coasts of Canada in all three oceans as defence against Soviet submarines equipped with cruise missiles and to assert Canadian sovereignty by controlling incursions by foreign submarines. The speed and range of nuclear-powered submarines plus their ability to operate safely for long periods under Arctic ice, a capability conventional submarines do not have, make them ideally suited for patrols in the waters off the long Canadian coastline. The high costs

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(28) Commander E.J.M. Young, "Submarines for the Canadian Maritime Forces," Canadian Defence Quarterly, Vol. 16, No. 1, Summer 1986, p. 25. See also, however, Rear-Admiral S.M. Davis (retired), "It Has All Happened Before: The RCN, Nuclear Propulsion and Submarines - 1958-68," Canadian Defence Quarterly, Vol. 17, No. 2, Autumn 1987, p. 34-40.

of these submarines imply that fewer new surface vessels than hoped for will be bought, but the White Paper argued that the proposed mix of nuclear "attack" submarines (which hunt other submarines) and surface vessels would provide an effective and balanced fleet.(29)

The proposed purchase of nuclear submarines is the most controversial aspect of the White Paper. Questions have been raised over the high costs of the submarines (estimated at $500 million each), the necessity of having submarines in the Arctic and the effect of the acquisition of nuclear submarines on Canada's position on arms control and nuclear weapons proliferation.(30) Fears have also been expressed that Canadian submarines might become involved in the Forward Maritime Strategy of the United States Navy aimed at destroying Soviet submarines carrying ballistic missiles in their home waters. This offence-oriented strategy is viewed as a threat to the stability of deterrence.(31) Canadian links with this strategy, however, may be tenuous and it could be argued that this is a defensive tactic similar to the Follow-on Forces Attack (FOFA) strategy of NATO where, upon a Soviet strike in Europe, Soviet forces in Warsaw Pact territory would be attacked by NATO air forces to prevent the reinforcement of the main Soviet attack.

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(29) Canada, Department of National Defence, Challenge and Commitment, A Defence Policy for Canada, Supply and Services Canada, Ottawa, 1987, p. 54.

(30) See, for example, Arch MacKenzie, "The Wisdom of Acquiring Nuclear-Powered Subs," Toronto Star, 10 May 1987, p. B1; Tariq Rauf and Dan Hayward, "Nuclear-Powered Attack Submarines: Does Canada Really Need Them?" Arms Control Communiqué, Nos. 36-37, 15 May 1987; David Haglund and John Young, "Nous nous tirons des balles dans les pieds," Le Devoir, 9 June 1987, p. 9; William Arkin and Steve Shallhorn, "Canada Even More Under U.S. Thumb in Sub Plan," Globe and Mail, (Toronto), 7 July 1987, p. A7; James Eayrs, "Shooting Holes in the Ice-pack Rationale", Ottawa Citizen, 24 November 1987, p. A9. See also Young (1986).

(31) "Arms Control and the Defence White Paper," Arms Control Communiqué, No. 38, 18 June 1987, p. 1.

b. Protection of Sovereignty

Of greater concern to Canadians is the ability of nuclear submarines to protect Canadian sovereignty in Arctic waters. The value of submarines in this role was questioned because of their apparent inability to show the flag and to fire a shot across an intruding vessel's bow. The assertion of Canadian sovereignty, however, implies more than simply detecting an intruder and chasing it away. Indeed, the proposed purchase of nuclear submarines is but one element of a naval policy which seeks to establish clearly Canada's control over the defence of its territorial waters.

Besides the creation of an effective ASW fleet, the White Paper also indicated plans for the acquisition of towed-array sonar system vessels and the installation of a fixed, under-ice surveillance system in the Arctic. The towed-array vessels are basically ocean-going tugs which will slowly tow off the Atlantic and Pacific coasts arrays of several hundred hydrophones at the end of a 2,000 metre cable (to avoid interference from the vessel's noise). The Surveillance Towed Array Sonar System (SURTASS) being developed by the U.S. Navy for use in the 1990s will be able to detect submarines hundreds of kilometres away. Since the SURTASS vessels cannot operate in Arctic waters because of the ice, a surveillance system similar to NATO's Sound Surveillance System (SOSUS) between Greenland and Europe will be installed using hydrophones moored to the ocean floor in chokepoints in the Arctic Archipelago through which submarines would have to pass to reach waters to the south. The surveillance system will pick up the sound of passing submarines and alert Canadian aircraft and vessels to their presence. Thus, Canada will have effective submarine detection systems all around its coasts as well as the submarines and surface vessels necessary to deal with any intruders.

There are two reasons why Canada is undertaking such an extensive expansion of its ASW capability. The first reason is the new defensive posture of the United States. The emphasis on defence led to the modernization of continental air defences and the establishment of SDI, and has also increased the importance of ASW around the continental United States. To avoid SOSUS-equipped chokepoints between Greenland and Europe

and in other locations, Soviet submarines carrying ballistic missiles might try to pass through the Arctic ocean to reach Atlantic and Pacific sea-lanes and the coasts of the United States. Soviet submarines might be able to launch cruise missiles from the Arctic Ocean and off the North American coasts to circumvent the shield provided by SDI and to destroy its command, control and communication systems and other vital defensive systems. The seriousness of the Soviet submarine threat to North American security is open to debate; the fact remains, however, that the United States military is giving anti-submarine defence, especially in the Arctic, high priority. The U.S. Navy, for example, is paying special attention to the Arctic capabilities of its new Seawolf class of nuclear attack submarines and the Bell-Boeing V-22 Osprey vertical take-off and landing (VTOL) shipborne aircraft now being developed.(32) Its recently completed ASW master plan for the next ten years places more emphasis on the interception and destruction of Soviet submarines "in the open ocean as well as in natural choke points before they reach their operating areas off the coast of the U.S."(33) The possibility that Soviet submarines might pass through Canadian Arctic waters to reach the coasts of the continental United States or to at least get close enough to launch cruise missiles at targets in that country is therefore of great concern to the U.S. military. As a loyal partner in continental defence, Canada can only share this concern.

The second reason for strong Canadian ASW forces is the necessity, for the sake of Canadian sovereignty, to demonstrate that Canada can deal effectively with any Soviet intrusion in its waters. U.S. naval strategy would be seriously flawed if, after escaping detection in the chokepoints and in the open ocean, Soviet submarines could roam unmolested through Canadian waters near the continental United States. The defence of

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(32) See Charles Hanley, "Superpowers Nose-to-Nose in Arctic," Toronto Star, 8 November 1987, p. H3. See also Brendan Greeley, "Navy to Exploit V-22's VTOL, Range in Hunting Arctic Subs," Aviation Week and Space Technology, Vol. 126, No. 23, 8 June 1987, p. 30.

(33) John Morrocco, "Navy Master Plan Emphasizes Airborne ASW Systems," Aviation Week and Space Technology, Vol. 127, No. 2, 13 July 1987, p. 111.

Canadian waters is therefore crucial to the United States, especially in light of the present emphasis on defence. In this situation, the Canadian government has basically two options: allow U.S. forces to defend Canadian waters and accept the inevitable repercussions for Canadian sovereignty, or undertake this defence itself and accept most or all of the high costs involved. The Canadian government has chosen the second option in keeping with the attitude of successive Canadian governments since 1943 when the British High Commissioner, after a tour of military installations in the Canadian northwest, warned the Cabinet about dangers posed to sovereignty by the presence of U.S. forces.(34)

Since 1943, the Canadian government has made it a point to pay for and to operate, as much as possible, the air defence and other military systems on Canadian territory which are required for continental defence; Canadian sovereignty could not be compromised by letting the United States assume most of the responsibilities for the defence of Canadian airspace. Canada has therefore paid a good share of the construction costs of radar lines, insisted on the participation of Canadian personnel in most operations in Canada and deployed its own interceptor force. At times, Canada may not have attached as much importance to the threat as the United States, but it participated in the defence measures deemed necessary to meet its ally's concerns and to protect its own sovereignty. A Senate report on air defence pointed out that Canada must deal "with American perceptions of the threat as much as with the threat itself."(35) A Canadian surveillance system to detect the passage of foreign submarines would not necessarily protect Canadian sovereignty since U.S. forces might still consider it necessary to patrol Canadian waters to deal with the intruders. Canada must therefore demonstrate that it can detect intruding submarines' control, track their

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(34) See Canada, Department of External Affairs, Documents on Canadian External Relations, Vol. 9, Supply and Services Canada, Ottawa, 1980, p. 1565-1593.

(35) Canada, Senate, Special Committee on National Defence, Territorial Air Defence, 1st Session, 33rd Parliament, 1985, p. 50.

passage through Canadian waters, and, if need be, destroy them. Canada has been asserting its sovereignty in its airspace for years by the use of radar to detect intruding aircraft and jet fighters to identify them. The ability of submarines to destroy intruding vessels, even though in peacetime such drastic action would not likely be necessary, has the same deterrence value as the ability of jet interceptors to shoot down intruding aircraft.

The Minister of National Defence indicated Canada's resolve to take full responsibility for the defence of its territorial waters in his statement in the House of Commons introducing the White Paper:

> Some people would suggest that we contract out the defence of Canada's waters to others. The Government is prepared to discuss co-operation in all aspects of the defence of North America, but we will not allow Canada's sovereignty to be compromised. We will be a partner with our allies and we will not be a dependent.(36)

Canada is a willing participant in continental defence and may eventually agree to an anti-submarine defence arrangement similar to NORAD. In recent years, Canada has taken over most of the NORAD activities and installations in Canadian territory to assert its sovereignty in its airspace; it is even more determined to assert its sovereignty in its territorial waters.

Indeed, there is even more at stake in naval defence than in air defence. Sovereignty in territorial waters is essential in order to control the fisheries, to protect the environment and to develop the oil and mineral resources of the seabed.(37) Canada has already taken measures to assert its sovereignty in the Arctic, and especially in the Northwest Passage, since the United States, mindful of the precedent which could be established for similar straits throughout the world, disputes Canadian claims over this passage. Despite these measures and its historic

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(36) Canada, House of Commons, Debates, 5 June 1987, p. 6777.

(37) See John Honderich, Arctic Imperative: Is Canada Losing the North? University of Toronto Press, Toronto, 1987, p. 55-56. See also Bob Hepburn, "The Northwest Passage, What the U.S. Wants and Why," Toronto Star, 18 April 1987, p. B1; Val Sears, "Nuclear Subs: $10 Billion Bid for Sovereignty," Toronto Star, 23 May 1987, p. B5.

claims, Canada would not necessarily gain international legal confirmation of its position:

> An international legal tribunal being seized with this issue at the time of the passage of the Polar Sea would have undoubtedly found Canada's claim to the waters of the Arctic as historic internal water as indifferently pursued and inconsistently expressed, which would have been severely damaging to Canada's position.(38)

When the similar Gulf of Maine boundary dispute case was brought before the International Court of Justice, the United States emphasized the importance of its historical presence in the disputed areas in fishing and other maritime activities including defence. Canada, on the other hand, argued that the Court should concern itself primarily with more recent activities, especially those of the last decade.(39) If the Northwest Passage issue was brought before the International Court of Justice, Canada would again be likely to emphasize recent activities, such as the 10 September 1985 announcements, rather than the apparently weaker argument of historical presence. Thus, Canada's announced intention to have an Arctic navy would

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(38) Ted McDorman, "In the Wake of the Polar Sea: Canadian Jurisdiction and the Northwest Passage," Les Cahiers du Droit, Vol. 27, No. 3, September 1986, p. 634.

(39) See Louis De Vorsey and Megan De Vorsey, "The World Court Decision in the Canada-United States Gulf of Maine Seaward Boundary Dispute: A Perspective From Historical Geography," Case Western Reserve Journal of International Law, Vol. 18, No. 3, Summer 1986, p. 430. The revelation in December 1987 of a draft agreement between Canada and the United States on cooperation in the Arctic raised concerns that Canadian sovereignty was not being asserted. See Ian Hunter, "Arctic Agreement with U.S. Ignores Canadian Sovereignty," Ottawa Citizen, 5 December 1987, p. A1. However, as the news story pointed out, the draft agreement stressed that neither the agreement nor ventures undertaken under its authority would affect the differences of opinion between the two countries on the status of the Arctic waters. The agreement signed on 11 January 1988 basically governs the operation of ice breakers in the Arctic pending the resolution of the dispute over the Northwest Passage and is similar to agreements on fisheries and oil exploration in disputed waters reached before or during the presentation of cases to the International Court. Since the agreement does not end the Northwest Passage dispute and does not affect foreign military operations in the Arctic, it does not in effect reduce the necessity for Canada to demonstrate military control in its waters.

have an impact on its case even though the fleet is being increased over a 20-year period.

Because of the high costs or the nature of the propulsion system, the Canadian Government could eventually decide not to purchase nuclear submarines. Canada, however, would still be faced with the necessity of increasing the navy's capabilities in Arctic waters or of finding another way of asserting its sovereignty there. Canada has to demonstrate clearly to Canadians, Americans and others that, it cannot afford to leave its sovereignty in doubt in any part of its territory and that other countries need not be offended by its firm actions.(40)

2. Reinforcement of Surveillance

a. Patrol Aircraft

Because of its preoccupation with sovereignty, Canada insists on acquiring SURTASS and minesweeping vessels instead of letting the United States operate the relatively small number of ships involved. To be consistent, however, Canada must also undertake most if not all of the other military surveillance tasks on its territory, such as ASW air patrols and air defence. The White Paper therefore indicated a number of such measures.

For ASW and sovereignty protection patrols, Canada already has a fleet of 18 Aurora long range patrol aircraft which play a key role in anti-submarine defence except in the Arctic, where the ice limits their ability to detect submarines and they are used mainly for sovereignty protection patrols. It has long been recognized, however, that there are not enough Auroras to undertake effectively all the tasks required of

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(40) See comments by United States Naval Attaché which suggest angry reaction in the United States to the submarine program in "'NORAD of the Sea' Price for Nuke Subs," Ottawa Citizen, 19 November 1987, p. A1. See also Jeff Sallot, "U.S. Aiding Canadians in Sub Hunt, Envoy Says," Globe and Mail (Toronto), 20 November 1987, p. A5 and Marjorie Nichols, "U.S. Attaché's Untimely Slip Reveals Threat to Sovereignty," Ottawa Citizen, 20 November 1987, p. A2.

them.(41) Only about one sovereignty patrol a month can be carried out in the Arctic at present.(42) The White Paper therefore announced that at least six new long-range patrol aircraft will be purchased, while the existing fleet of medium-range Tracker patrol aircraft, which supplement the Aurora patrols off the Atlantic and Pacific coasts, will be modernized. That these 30 year old aircraft will be refurbished rather than replaced and that only six new Auroras will be purchased gives some indication of the budgetary problems faced by defence planners. The Government is, however, considering equipping the patrol aircraft fleet with synthetic aperture radar, like the Canadian-designed Iris Reconnaissance Radar Systems which provide a radar image of the ground whatever the weather. This would enhance Canada's ability to monitor activities in the Arctic territories and to protect its sovereignty there.

b. Air Defence

1) Bolstering of Air Defences

When the White Paper was released, the North American Air Defence Modernization Program was already well under way and its main features firmly established. The North American Aerospace Defence (NORAD) Agreement between Canada and the United States was renewed for five years at the March 1986 summit meeting between Prime Minister Mulroney and President Reagan. At the previous summit meeting in March 1985, the Prime Minister and the President had signed a Memorandum of Understanding which outlined the joint efforts of Canada and the United States to modernize the continental air defence network. The main elements of the modernization plan include the North Warning System (NWS) consisting of 13 long-range

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(41) See Paul Mann, "Canadian Defence White Paper Will Call for Nuclear Subs, More Patrol Aircraft," Aviation Week and Space Technology, Vol. 126, No. 19, 11 May 1987, p. 56; and Canada, Senate, Sub-committee on National Defence of the Standing Committee on Foreign Affairs, Canada's Maritime Defence, 1st Session, 32nd Parliament, 1983, p. 60.

(42) Ron Lowman, "Airmen Applaud Plan for More Patrol Planes," Toronto Star, 4 July 1987, p. B5.

radar systems and 39 short-range radar systems, most of which are located in Canada's north, and a network of airfields in the Arctic, including the Forward Operating Locations (FOLs) for air defence fighters and Dispersed Operating Bases (DOBs) for the Airborne Warning and Control System (AWACS) aircraft. The plan also makes provision for the co-manning by Canadian personnel of the AWACS aircraft and some Over-the-Horizon Backscatter (OTH-B) radar sites in the United States. The AWACS and the OTH-B radar systems are operated and funded by the United States. The measures undertaken under the Memorandum of Agreement were the result of the reevaluation of air defence needs carried out in the Air Defence Master Plan (ADMP), which both Canada and the United States accepted as a sound planning document in 1982, and in the Strategic Defence Architecture 2000 (SDA 2000), Phase 1, study in which both countries also participated. Since many policy decisions on air defence had already been taken, the White Paper basically reaffirmed Canada's commitment to continental air defence cooperation and its recognition of the importance the United States attaches to strong defences.

The White Paper also stated that the number of Canadian personnel committed to NORAD is being increased for the co-manning of AWACS aircraft and OTH-B radar sites. The Government also announced that extra CF-18s will be bought, in addition to the 138 already purchased. These extra aircraft will compensate for those lost in accidents, six up to now. A certain rate of attrition is to be expected in the operation of high performance aircraft and the extra aircraft will help to keep to about 24 the number of CF-18s assigned to the air defence mission. This number may be a minimum, considering the expanse of Canadian airspace. There has been some speculation recently that the service life of the CF-18s may be shorter than expected, especially in light of fatigue tests on one airframe.(43) Further tests will confirm if modifications are needed. If the lifespan of the CF-18 airframe is indeed reduced, so that aircraft have to be replaced sooner than expected some 10 to 15 years from

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(43) Paul Mann, "New CF-18 Fatigue Tests Raise More Doubts About Service Life," Aviation Week and Space Technology, Vol. 127, No. 7, 17 August 1987, p. 18-20. See also Ron Lowman, "CF-18 Fighter Problem Neither New Nor Unique," Toronto Star, 23 August 1987, p. B4.

now, budgeting for air defence modernization and other programs could be more difficult.

The number of aircraft available for air defence is not just a question of logistics nor is the co-manning by Canadian personnel of AWACS aircraft and OTH-B sites simply a gesture. Canada's ability to police its airspace is an important element in the protection of its sovereignty, as is its involvement in any air defence operation on Canadian territory which it cannot for logistic or budgetary reasons undertake completely by itself. In recent years, Canada has requested that NORAD regional boundaries be redrawn to conform to national borders and insisted on building and operating the NWS stations which are on Canadian territory.(44) Since it would be very expensive to operate its own fleet of AWACS aircraft, Canada allows United States AWACS aircraft to operate in Canadian airspace, but only with involvement of Canadian personnel.(45) The co-manning by Canadians of some OTH-B radar sites in the United States also emphasizes the Canadian-American partnership in continental air defence which features a commitment to security and a respect for the other partner's sovereignty.

2) Space-based Surveillance

While confirming the course taken by this partnership in recent years, the White Paper did examine the future for air defence cooperation and its important implications for Canada's defence policy. Canada plans to participate in research in future air defence systems undertaken as part of the Air Defense Initiative (ADI) of the United States. Canada's interest in the research, development and deployment of space surveillance systems was also reaffirmed. The two issues are

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(44) Sokolsky (1986), p. 769.

(45) Martin Shadwick, "Canadian Air Defence," International Perspectives, March/April 1985, p. 14. See also Canada, Department of National Defence, "Beatty Praises NORAD Modernization," News Release, 18 September 1987.

interrelated since a space-based radar system may become part of ADI.(46)

As an evolution of the ADMP and SDA 2000 which led to the current modernization program, ADI is naturally of interest to Canada. It seeks to provide more efficient surveillance, tracking and engagement systems for continental air defence to which Canada has reaffirmed its commitment. Until the White Paper's announcement, however, it was not clear if Canada would formally participate in ADI. Canada has been involved with the United States in meetings of the Aerospace Defence Advanced Technology (ADAT) Working Group, but has taken its time to decide on a firm commitment to ADI participation because of some public concern that Canada's participation in NORAD and air defence modernization projects like ADI would lead to its involvement in SDI.(47) The Canadian government stated in its 7 September 1985 reply to the invitation from the United States Secretary of Defense that it did not want to participate in SDI on a government to government basis (although Canadian companies and institutions are free to become involved in its research program). Some Canadians are nonetheless concerned that both the NORAD command structure and ADI will be linked to SDI, thereby associating Canada with the system.(48)

The establishment by the United States of a unified Space Command (USSPACECOM) in October 1985 placed the commander-in-chief (CINCSPACE) in command of the U.S. Air Force Space Command, which monitors

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(46) Paul Mann, "Defense Department Official Cites Need for Early Decision on Space-based Radars as Part of ADI Surveillance Network," Aviation Week and Space Technology, Vol. 126, No. 15, 13 April 1987, p. 25.

(47) See for example David Kattenburg, "Canada's Role in an SDI Offshoot," Globe and Mail (Toronto), 9 July 1987, p. A7; "Arms Control and the Defence White Paper," Arms Control Communiqué, No. 38, 18 June 1987, p. 3-4; Canada, House of Commons, Standing Committee on National Defence, Minutes of Proceedings and Evidence, 2nd Session, 33rd Parliament, 25 June 1987, p. 14:10-14:13 and 14:30-14:33.

(48) On Canada and SDI see Sokolsky (1986); Paul Rohrlich, "Canada and Star Wars," International Perspectives, May/June 1985, p. 17-20; John Honderich, "SDI in Canada?" Peace and Security, Vol. 1, No. 2, Summer 1986, p. 4-5; David Mueller, "Inescapable SDI," International Perspectives, September/October 1986, p. 14-16.

space, and of NORAD, which takes care of the air breathing (jet engine) threat (bombers and cruise missiles). Space Command is distinct from the SDI Organization (SDIO) and even if it was assigned an ABM and anti-satellite defence role as a result of SDI deployment, NORAD would not necessarily be involved in those tasks.(49) NORAD could be far removed from the ABM defence element even though it was part of a unified command structure. ADI is a more complex problem for Canada. ADI is not part of SDI and its elements can be deployed whether or not SDI becomes operational, although it might be difficult to justify its cost, if it did not accompany ABM defences.(50) Some of the research for ADI, however, can be of use to SDI, notably in surveillance systems. Space-based radar for the detection of bombers and cruise missiles is one of the concepts being considered for ADI. Space-based radar could also be an important component of a deployed SDI system and the two defence initiatives could possibly share not only the research on such a surveillance system, but also the satellites and the communications links. The United States has already developed the experimental TEAL RUBY satellite designed to detect aircraft and cruise missiles. This is part of a program which is separate from both ADI and SDI, but might become part of the latter because of its possible use for missile detection.(51)

Canada is participating in the TEAL RUBY experiments, along with Australia and Great Britain, because space-based surveillance of Canadian airspace would provide complete radar coverage of Canadian territory, something which is not possible simply with land-based radars. Even with the NWS and overflights by AWACS aircrafts, there will still be large gaps in the radar coverage in Canadian territory. Space-based surveillance could not only considerably enhance air defence capabilities, but also provide Canada with the most effective control possible over its airspace, thereby affirming its sovereignty in that airspace. Therefore,

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(49) Sokolsky (1986), p. 766.

(50) Morrocco (1987), "Push For Early SDI Deployment Could Spur Air Defence Initiative," p. 18; Mann (1987), "Defense Department Official Cites Need for Early Decision on Space-based Radars as Part of ADI Surveillance Network," p. 25.

(51) See Sokolksy (1986), p. 77 and Mueller (1986), p. 15.

in addition to participation in the TEAL RUBY experiments, Canada has also undertaken its own research program on space-based radar, allocating to it in early 1987 $47 million over five years. Studies completed in 1986 have demonstrated the feasibility of space-based surveillance and the research program will help to determine the technological requirements in greater detail.(52)

There is considerable support for Canadian military involvement in space. Both the Special Committee on National Defence of the Senate and the Standing Committee on External Affairs and National Defence of the House of Commons have strongly recommended a space-based air surveillance system.(53) While fulfilling military needs, the deployment of such a system would also produce economic and technological benefits. The White Paper indicates that the Government favours Canadian involvement in space surveillance, but that it is still considering the extent of this. Canada could deploy its own space-based surveillance system by placing in orbit between four and ten satellites designed and built in Canada. This would fulfill Canadian requirements, while allowing Canada to make an important contribution to NORAD. The costs for such a system, however, would likely be too high for Canada to absorb alone. The Senate report estimated that a system with eight to 12 satellites would cost about $150 million a year for the first five years of the program and $350 million a year for the next ten, but this might only be sufficient for a system with minimum capabilities.(54) Thus, the White Paper anticipates Canadian participation with the United States in a space-based system, in keeping with the 30 years of air defence cooperation in sharing costs and

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(52) See Paul Mann, "Canada Regards Space-based Radar as Follow-on to North Warning System," Aviation Week and Space Technology, Vol. 127, No. 13, 28 September 1987, p. 135.

(53) See Canada, Senate, Special Committee on National Defence, Canada's Territorial Air Defence, 1st Session, 33rd Parliament, 1985, p. 56-57, and Canada, House of Commons, Standing Committee on External Affairs and National Defence, Report, 1st Session, 33rd Parliament, 1986, p. 76.

(54) Sharon Hobson, "Canada's Space-based Radar Project," Jane's Defence Weekly, Vol. 7, No. 6, 14 February 1987, p. 226.

technology.(55) The joint space-based system can be considered the natural successor to the NWS; continuation of Canadian-American cooperation would be appropriate, but the basis for this cooperation would change considerably.

Land-based radar systems have to be placed as far north as possible in Canadian territory in order to provide deterrent forces with sufficient warning of an attack; thus, Canadian cooperation is vital to the United States. However, as the effectiveness of surveillance satellites with long-distance detection capabilities would not depend on Canadian territory, collaboration with Canada for air defence would become for the United States "a matter of choice, not of necessity."(56) The United States could itself operate a space-based system which would give it total surveillance of American and Canadian airspace. The White Paper insists, however, that Canada should also become involved in space-based surveillance; otherwise, it will simply forfeit the "responsibility for surveillance of Canadian airspace to the United States."(57) The Department of National Defence is concerned that a Canadian system would not have access to the latest American technology and that our ability to contribute to NORAD would be reduced.(58) Even with the considerable costs of a separate system, then, Canada would still have a less effective system than the United States and would have little control over American surveillance of Canadian airspace. In a joint venture with the United States, however, Canada would have the benefit of the best surveillance technology available and, through NORAD, would share in the control of Canadian airspace. This consideration, much more than the cost factor,

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(55) Challenge and Commitment, A Defence Policy for Canada, p. 59. See also statement by Chief, Defence Research Establishment Ottawa, in Mann (1987), "Canada Regards Space-based Radar as Follow-on to North Warning System," p. 135.

(56) John Hamre, "Continental Air Defence, United States Security Policy and Canada-United States Defence Relations," in G.R. Lindsey et al, Aerospace Defence: Canada's Future Role?, Wellesley Papers, No. 9, Canadian Institute of International Affairs, Toronto, 1985, p. 25.

(57) Challenge and Commitment, A Defence Policy for Canada, p. 59.

(58) Sokolsky (1986), p. 772.

explains why the White Paper favours cooperation with the United States in the deployment of a space-based system. Thus, the basis for Canadian-American cooperation in air defence surveillance, apart from the resolve to counter a common threat, is shifting from the dependence of the United States on Canadian territory for early warning to the necessity for Canada to become involved in United States space-based monitoring of North American airspace. It is up to Canada to demonstrate to the United States that a joint venture will be worthwhile.

Indeed, Canada's research on space-based surveillance is being used to illustrate the value of Canadian participation. While the United States considers the deployment of a space-based system, Canada is proceeding with research on technological concepts already being investigated in the United States in order "to expand Canada's industrial base in space-based radar technologies and facilitate future collaboration with the U.S. Defense Department."(59) In fact, Canada is ahead of the United States in some areas of research and Canadian officials have "indicated an interest in pursuing space radars even if the connections with the ADI program are not established."(60) If the United States eventually decides to deploy a space-based system, Canada will be able to make an important contribution. NORAD would continue with enhanced surveillance capabilities, providing Canada with some control of American surveillance of Canadian airspace, as well as keeping the Canadian military involved in a continental defence relationship. Indeed, the Canadian military is concerned that if it does not participate in joint space-based surveillance, it could be "left behind in organizational and technological developments that may impact upon North American defence."(61) The Canadian military's concerns are no doubt an added factor in Canada's willingness to participate in a joint system.

Moreover, the development of new American fighter aircraft and missiles which, because of their speed and range, would not require bases in Canada to intercept bombers and cruise missiles in the far north,

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(59) Mann (1987), "Canada Regards Space-based Radar As Follow-on to North Warning System", p. 135.

(60) David Kattenburg, "The Air Defence Initiative," Aerospace Canada International, September/October 1987, p. 29.

(61) Sokolsky (1986), p. 773.

and the deployment of an SDI system which could be effective without the positioning of radar systems and weapons on Canadian soil, would further reduce the importance of Canadian territory. Early involvement in the space surveillance program, however, would allow Canada to have more influence on its development and to make known its concerns lest air defence surveillance be linked to SDI. If the United States decides to deploy a combined air defence and ABM defence surveillance system, however, Canada will find itself in a difficult position. Having already rejected the deployment of its own space-based system, Canada would have to choose between participating in a system linked to SDI or not participating at all, accepting all the implications of this for Canadian sovereignty and Canadian military involvement in continental defence. Thus, space-based surveillance may become one of the most controversial defence issues in the years to come.

3. Strengthening of Territorial Defence

The measures taken to meet military requirements and to protect sovereignty in the defence of Canadian waters and airspace would be incomplete if the defence of Canadian soil was neglected. Although a land invasion of Canada is a very remote possibility, existing military installations and those under construction, like the NWS radar sites, could be vulnerable to sabotage and commando attacks if they were not offered protection by troops. Furthermore, the presence of troops and their ability to reach isolated areas and to monitor activities asserts Canadian sovereignty in the sparsely populated areas of the far north. Thus, to complement the patrols of Canadian waters and the airborne surveillance of the Canadian Arctic by Aurora aircraft, the White Paper indicated measures to bolster the Canadian military presence on Canadian territory. These include the expansion of the Canadian Rangers program, which provides some military training to Inuit, Indian and Metis reservists, the creation of new militia brigades to supplement the Special Service Force and the Canadian Airborne Regiment stationed in Canada, the establishment of a training centre in the Arctic and the establishment within the militia of a guard force to protect key installations. The White Paper basically confirms the direction taken since the 1971 White Paper established the

protection of Canadian sovereignty as one of the priorities of defence policy. There is now, however, greater emphasis on the military capabilities of the land forces in Canada and their ability to defend installations, a reflection of the changing perception that, instead of a short but devastating nuclear war, a conventional war might last long enough to make sabotage and commando raids a factor.

4. Consolidation of Forces in Europe

a. Cancellation of Northern Flank Commitment

Although the White Paper was prepared amid growing concerns in Europe about the effects of the INF agreement on NATO strategy, the measures it announced to bolster Canadian forces in NATO were more in response to Canadian needs than to the current debate. As a member of NATO, Canada is participating in discussions on the impact of the INF agreement on the alliance, but this does not affect its basic commitment to NATO, which the White Paper reaffirmed. It was indicated that Canadian forces in Europe will be consolidated in southern Germany where most of the forces are already located. The intention of the Government is to make the Canadian contribution to NATO more credible, effective and sustainable.

To do this, the Government decided to abandon its commitment to deploy the Canadian Air-Sea Transportable (CAST) Brigade Group and two Canada-based fighter squadrons to NATO's northern flank in Norway in time of crisis. In the late 1960s, when the number of Canadian troops in Europe was reduced as part of the downgrading of Canada's involvement with NATO, Canada undertook this commitment without incurring the expense of maintaining the brigade group and its air support in Europe. In 1977, the Canadian force was definitely assigned to northern Norway. Over the years, Canada maintained this commitment while upgrading its main NATO force in southern Germany. In 1986, Exercise BRAVE LION was undertaken to demonstrate the feasibility of the commitment and to evaluate and refine the plans and procedures. Chartered ships and civilian and military transport aircraft were used to deploy over 5,000 personnel and 2,000 vehicles, weapons systems and aircraft to Norway in the largest single deployment of Canadian troops and equipment since the Second World War.

The exercise took at least three weeks, but it has always been recognized that actual deployment would take place in a period of increasing tensions and that time would also have to be allowed for the training and regrouping of the forces upon arrival in Norway.(62) Though the CAST brigade group was never intended to be a rapid deployment force, the exercise demonstrated that with time and planning it could be effectively moved to Norway.

Maintaining the Canadian force in Norway for a long period during a crisis or actual warfare would be more complicated. It would be difficult to resupply the force in Norway from Canada or even from Canadian bases in Germany. Few additional troops could be sent to reinforce the brigade since, as during the exercise, other land and tactical air units in Canada would have been depleted in order to deploy the brigade group.(63) In a combat situation, two groups of Canadian troops would be engaged, one in Norway and one in Germany, but Canada would not be able to sustain either of them. Canadian troops would have to defend their positions with the resources available and hope for reinforcements from other NATO countries. Since the deterrence value of NATO's conventional forces depends on their ability to fight for a significant period, not just on their presence on the frontlines, Canada's commitments to NATO's northern and central flanks were not, from the military point of view, as credible as they could be.

The consolidation of Canada's contribution to NATO in southern Germany can increase the credibility of the most important commitment, that on the central front, while easing logistics problems. By assigning the brigade group slated for Norway, the 5e Groupe-brigade du Canada (5 GBC), to southern Germany, Canada would be able, in times of crisis, to sustain the 4th Canadian Mechanized Brigade Group (4 CMBG), the main Canadian force on the central front. The 5 GBC would be stationed in Canada, to avoid the cost of maintaining it in Europe, but its equipment

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(62) Lieutenant-General G.D. Hunt, "Reinforcing the NATO North Flank: The Canadian Experience," Canadian Defence Quarterly, Vol. 16, No. 4, April 1987, p. 32.

(63) Ibid., p. 38.

and supplies would be pre-positioned in Europe, facilitating rapid deployment of the troops, who would arrive at Canadian bases in Germany. Here they could depend on existing logistic and administrative support, which could not be as fully developed if they arrived in remote areas of Norway. Consolidation would also benefit the two fighter squadrons scheduled to accompany the 5 GBC. When the commitment to the northern flank was undertaken, the intention was to send squadrons of CF-5 fighter bombers, whose operation could have been sustained for some time, since Norway operated similar aircraft. Today, two squadrons of the more sophisticated CF-18s would be deployed. Since only Canada operates this type of aircraft on the European fronts, it would obviously be advantageous to deploy the aircraft to Canadian bases in southern Germany where they would supplement the CF-18 squadrons and could benefit from the shelters and maintenance facilities already in place.(64) Thus, by switching the destination of the 5 GBC and its air support, Canada could ensure that its main force on the central front would be sustained significantly and that its limited military resources would be used as efficiently as possible.

On the diplomatic front, however, Canada's decision to abandon its CAST commitment was criticized even before the publication of the White Paper. Canada consulted with its NATO allies on its decision and on ways the alliance could compensate for it. Norway was nevertheless strongly opposed to the withdrawal, which was also criticized in Canada.(65) The Canadian brigade group was well suited to the Norway commitment because of its experience in Arctic conditions and its replacement may not be easy. Canada has agreed to maintain the CAST commitment until 1989 to allow NATO time to adjust.(66) Although the

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(64) Honderich (1987), p. 155.

(65) See for example Martin Cohn, "Norway Assails Canada's Pullout Plan," Toronto Star, 24 May 1987, p. A7 and Jeff Sallot, "Norway Wants NATO to Find Substitute Force for Canadian Brigade," Globe and Mail, (Toronto), 25 May 1987, p. A5. See also editorial "In Norway's Defence," Globe and Mail (Toronto), 15 May 1987, p. A6.

(66) David Cox, "Sovereignty and Security: New Defence Policy," Canadian Business Review, Vol. 14, No. 3, Autumn 1987, p. 14.

withdrawal decision was viewed with some concern by NATO in general, it was not seen as a foretaste of future Canadian withdrawals from other NATO commitments. The United States, for example, recognizes Canada's consolidation on the central front as an attempt to bolster its role in NATO rather than as a retrenchment.(67) Indeed, the consolidation in southern Germany and other measures were proposed not only to make Canada's contribution to NATO more effective, but also to make it more evident.

b. Higher Profile Within NATO

Although the CAST commitment to Norway is important to the defence of NATO's northern front and absorbs a sizeable portion of Canada's military resources, it is not a highly visible component of Canada's contribution to NATO. Europeans likely know little about it, since even the Canadian public was largely unaware of it prior to exercise BRAVE LION.(68) Troops and tanks actually based in Europe offer more tangible evidence of a commitment to NATO than a promise to send troops in a crisis. The small size of the force based in southern Germany, however, the result of political decisions and budgetary restraints, reduces its impact. The 4,000-man 4 CMBG has been relegated to an area behind the central front to act as a reserve force and is viewed by certain analysts as being "of some value in plugging a gap" if hostilities break out on the front.(69) Canada is present on the central front, the main area for the NATO-Warsaw Pact confrontation, but it has a minor role. This, plus Canada's relatively low expenditure on defence compared with that of other NATO countries, especially as a percentage of the Gross Domestic Product, leaves this country open to criticism in both military and diplomatic circles, despite its commitments to two NATO fronts.

By consolidating on the central front, Canada wants to make its NATO forces more effective militarily and more "identifiable."(70)

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(67) David Leyton-Brown, "U.S. Reaction to the Defence White Paper," International Perspectives, July/August 1987, p. 4.

(68) Hunt (1987), p. 34.

(69) Meacham (1986), p. 15.

(70) Challenge and Commitment, p. 61.

The White Paper therefore indicated other measures to strengthen the force. Personnel in Europe will be increased to provide the infrastructure for the troops deployed from Canada during a crisis and to improve logistics and medical support. The acquisition of new main battle tanks (MBTs), likely M-1A1 Abrams or Leopard 2 tanks, was announced. The new MBTs are needed to replace the light armoured vehicles of the 5 GBC and to re-equip the armoured regiments of 4 CMBG at present operating Leopard C1 tanks. The greater firepower and range of the new MBTs would help the Canadian land forces in Europe play a more frontline and, therefore, more visible role on the central front. The White Paper also promised the provision of badly needed additional airlift capability.(71) The deployment from Canada of troops to sustain the force on the central front would depend a great deal on the availability of military air transport, as would the deployment of the Allied Command Europe Mobile Force (Land) (AMF(L)), a battalion-group of 1,200 soldiers, to the northern flank, a commitment Canada decided to retain despite the cancellation of the CAST deployment to Norway. The White Paper, however, did not specify when or how the airlift capability will be increased. Budget restrictions will likely result in piecemeal increases over many years. Canada's fighter squadrons, on the other hand, have already been significantly upgraded through the replacement of the CF-104s with the more sophisticated CF-18s. The deployment of two CF-18 squadrons to the central front instead of Norway will place, in times of crisis, five top flight Canadian fighter squadrons on NATO's frontline. The strengthening of Canadian forces in NATO was already underway before the release of the White Paper, but its announcements confirmed Canada's commitment to NATO and its desire for a higher profile, both military and political.

In order to play this more prominent role in NATO, however, Canadian land forces would have to take position on the central front itself instead of remaining in their present isolated location behind

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(71) For details on airlift requirements, see Canada, Senate, Special Committee on National Defence, Military Air Transport, 1st Session, 33rd Parliament, 1986, p. 27-35.

it.(72) Furthermore, the Canadian forces might have to move from southern Germany to the northern part of the central front or even to Schleswig-Holstein. The southern part of the central front, where most of the American forces are stationed, does not need as much reinforcement as the northern part, where smaller British, Dutch, Belgian and German forces are positioned.(73) The White Paper therefore indicated that Canada was ready to discuss with its NATO allies the possibility of positioning Canadian land forces elsewhere in Germany in a few years time.(74) Canada, however, has already invested heavily in its present extensive facilities, and since existing bases on the central front are fully occupied, new bases would imply considerable cost.(75) As a result, Canada insists that NATO should assume the costs for the transfer of Canadian troops to another section of the central front.

Although such a transfer, if it ever takes place, is many years away, the issue nevertheless has important implications for Canada's position in NATO. Canada recognizes that if it "brings little to the table, it cannot expect to be listened to" during political discussions within NATO and that being perceived even as trying to do its best, would "give it greater credibility."(76) Canada's proposed strengthening of

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(72) See "Alliance Atlantique: l'OTAN a d'autres plans pour le Canada," Journal de Montréal, 6 November 1987, p. 29 and "NATO May Ask Canada to Redistribute Troops to Areas of Greater Need," Ottawa Citizen, 24 November 1987. The former is the translation of the latter. Newspapers obviously do not always provide up to the minute coverage of important defence issues.

(73) See "Strategy Proven," Economist, Vol. 304, No. 7516, 19 September 1987 p. 57-58. See also Meacham (1986), p. 6.

(74) Challenge and Commitment, p. 65.

(75) See "Alliance Atlantique: l'OTAN a d'autres plans pour le Canada," Journal de Montréal, 6 November 1987, p. 29.

(76) John Holmes, "Canada, NATO, and Western Security" in John Holmes, ed., No Other Way, Canada and International Security Institutions, Centre for International Studies, University of Toronto, Toronto, 1986, p. 138.

its NATO force is welcomed by the alliance but Canada's commitment would remain undervalued unless its geographic situation changed. This can only come about if NATO agrees to cover the costs and, in view of Canada's clear commitment to NATO, the alliance may eventually agree to do this. However, the current state of flux of the military situation in Western Europe may affect the proposed transfer. The growing preoccupation of the alliance with the effects of the INF agreement and the possible withdrawal from Europe of some American troops may delay consideration of the transfer or may change the requirements of the central front. Canada will likely participate in NATO meetings with the intention of helping to ease the tensions affecting the defence consensus between the United States and the West European allies, but until the issue of the transfer of Canadian forces is resolved, its interventions may not carry as much weight as it would like.

5. Revitalization of the Reserves

The cancellation of the CAST commitment will significantly improve Canada's ability to sustain its force on the central front, but will not ensure all the reinforcements required. NATO retains its flexible response strategy, which implies the use of nuclear weapons if its conventional forces cannot stop the enemy's advance. As these forces now appear able to resist an attack for many weeks, not just days,(77) the use of nuclear weapons could be delayed considerably or even avoided. But, the longer conventional forces have to resist attacks, the more crucial the replacement of losses becomes, especially now that the advanced technology of weapons systems would likely cause a very high rate of casualties.(78) A heavy burden would therefore be placed on the regular troops and militia units remaining in Canada, already hard-pressed to protect key facilities and to ensure territorial defence. To ease this burden and to create a pool of trained personnel ready to be sent where needed in a matter of days, the White Paper announced the revitalization of the Reserves.

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(77) See Meacham (1986), p. 22.

(78) Lieutenant-General C.H. Belzile (retired), "Required Structural Changes in the Land Forces," Canadian Defence Quarterly, Vol. 16, No. 4, Spring 1987, p. 12.

A strengthened Reserve Force will enable Canada to sustain its NATO forces and increase the credibility of its commitment. It will also respond to the growing personnel requirements of territorial defence. Above all, it will allow Canada to meet growing demands on its military resources while avoiding the costly expansion of its Regular Force. The White Paper indicated that over the years the Reserve Force will be increased to 90,000 personnel. While Reserve pay and benefits will be improved, the costs will not be as high as those for a similar increase of personnel in the Regular Force since the Reserve Force is on duty only when required for training or combat. Many of Canada's NATO allies have long used reserve forces to fill a significant portion of their military requirements. The distinction between Regular and Reserve Forces will be greatly reduced with the introduction of a Total Force Concept integrating the functions of both. The Land Forces, especially the militia, will be reorganized to create an infrastructure which would provide replacements for casualties in Europe, the protection of important sites in Canada and the basis for the expansion of the army.(79) Furthermore, it may ease the burden on the present heavily committed land forces and allow Canada to undertake other tasks, such as peacekeeping missions.

6. Strengthening of Defence Industrial Preparedness

The growing emphasis on war fighting capabilities in current military strategy is reflected in the attention paid to industrial preparedness. Sustaining the force in Europe would depend not only on the replacement of casualties, but also on the resupply of equipment. Canadian industry could not replace important equipment like aircraft and tanks, but the supply of existing components and the production of new ones could keep surviving equipment operational. The continued supply of ammunition and other items which Canada can produce would also be crucial. There would be little point in strengthening the reserves and ensuring the rapid mobilization of troops, if they had few supplies and little hope of getting more. A departmental task force was already examining proposals to enhance planning for defence industrial preparedness when the White Paper was published. In October 1987, senior officials endorsed its proposals to

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(79) Ibid., p. 14.

promote investments in Canada's military industries and to enter into agreements with other countries to expand the production of military equipment.(80) The Minister of National Defence has also established an industrial advisory committee made up of business and university representatives.

To meet NATO requirements, Canada has been maintaining a 30-day stock of supplies, but since military analysts now believe that a conventional war could last for 60 days and even longer, Canada has to build up its stocks and ensure continued production of equipment.(81) Any such steps will have to be made in conjunction with the overhaul of the military support system, which now has difficulty meeting even the current 30-day requirement. Severe criticism of the supply system by the Auditor General may accelerate the response of the military to the problem.(82)

C. Commitment-Capability Gap

1. Efforts to Bridge the Gap

The 1987 White Paper candidly admitted that political decisions and limited budgets have left the Canadian Armed Forces with a small reservoir of personnel and obsolescent or scarce equipment. As a result, commitments cannot be met fully and effectively. As the White Paper notes, the Government has nevertheless decided to maintain present commitments instead of reducing them, although some have been altered to make better use of resources.(83) The Government has also decided that increased spending is necessary on a long-term basis to deal with the results of the past downgrading of military capabilities and to meet future

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(80) Robert Matas, "Ottawa Boosting Support for Troops in the Event of War," Globe and Mail (Toronto), 8 October 1987, p. A4.

(81) Ibid.

(82) See Canada, Report of the Auditor General of Canada to the House of Commons, Supply and Services Canada, Ottawa, 1987, Chapter 10. See also Neil Macdonald, "Armed Forces Under Fire for Creaky Support System, Outdated Thinking," Ottawa Citizen, 28 October 1987, p. A4, and Robin Ludlaw, "Years of Political and Financial Neglect Have Weakened Military," Ottawa Citizen, 31 October 1987, p. A20.

(83) Challenge and Commitment, p. 47.

challenges. It has committed itself to a minimum of a 2% per year base rate of real growth after inflation, over the 15 year period planned for in the White Paper. Since the 1987-1988 defence budget is $10.3 billion, the minimum growth rate will provide a budget of over $183 billion over the 15 year period.

This is a significant total, but there may be little to spare because of the high costs of the new equipment listed in the White Paper. The $5 to $12 billion estimated for 10 to 12 nuclear powered submarines attracted most of the public attention, but other expenditures are not negligible. Some $3.5 billion is needed for the six new patrol frigates, $240 million or more for the six additional long-range patrol aircraft, some $1 billion for 25 to 30 helicopters for the NSA program and over $600 million for minesweepers and SURTASS vessels. Many other equipment purchases are already underway or planned and minor programs, like the refurbishing of Tracker aircraft, will also require funding over the next 15 years. There are also considerable operational costs, including unexpected expenditures like the CF-18 modifications. Despite the steady increase in budget over the next 15 years, and the additional funds that may be allocated when some of the equipment purchases are initiated, there is some concern that the commitment-capability gap will not be closed.

Existing commitments will place heavy demands on the defence budget and the huge costs of the nuclear submarine program may strain it even more. The Government's estimate of the total costs of the nuclear submarine fleet is considered by many to be too low and more than $12 billion may be required for the total program.(84) There has been speculation that the Government might abandon the proposed purchase of nuclear submarines,(85) but the Minister of National Defence has

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(84) See Jeff Sallot, "Fleet of A-subs Likely to Cost Over $8 Billion, Study Says," Globe and Mail (Toronto), 16 November 1987, p. A1.

(85) See for example "High Price of Subs May Scuttle Purchase: Planner," Montreal Gazette, 14 November 1987, p. A10. The planner in question is Dr. G.R. Lindsey, former Chief, Operational Research and Analysis Establishment, Department of National Defence.

reaffirmed the Government's intention to go ahead with it and the other equipment programs announced in the White Paper.(86)

An alternative to the reduction in equipment purchasing would be a withdrawal from one of Canada's military commitments. Since the defence of Canadian territory is more important than ever for the protection of Canadian sovereignty and for the defence of the United States deterrence forces, the debate has focused on the NATO commitment. The withdrawal of Canadian forces from Europe is favoured by some, including the New Democratic Party (NDP). Others argue that for diplomatic, economic and military reasons, Canada should not leave NATO or remove its troops from Europe.(87) The White Paper makes it clear that the Government is not considering such a withdrawal from NATO.

If Canada is determined not to cancel any equipment purchase or to withdraw from any commitment, the only option left for bridging the commitment-capability gap is to increase defence spending. Such an increase has already been proposed, but the amount may not be enough. Indeed, in preparation for the White Paper, the Department of National Defence had apparently requested a 5% annual rate of increase, after inflation, for the defence budget and had considered a 3% rate as a minimum. After considerable discussion in the Cabinet during the last months of 1987, the government finally agreed to a 3% growth rate over a five-period.(88) But, even with this the commitment-capability gap will likely continue unless there are further increases in defence expenditures. At a time when even the 3% increase is controversial, the

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(86) See Jeff Sallot, "Beatty Says High Costs Won't Stop Defence Plan," Globe and Mail (Toronto), 19 November 1987, p. A9.

(87) See for example Robert Jackson, "NDP Overlooks NATO Advantages," Ottawa Citizen, 7 August 1987, p. A8; Dan Turner, "Broadbent Could Find Support for Weaker NATO Commitment," Ottawa Citizen, 17 September 1987, p. A9; J.A. Bayer, "Is There Life After NATO?", International Perspectives, September/October 1987, p. 13-16.

(88) See "Financing: a 2% Solution. New Defence Budget Formula May Not Bridge 'Rustout' Gap", Financial Post, 16 November 1987, p. 47. See also James Bagnall, "Defence Budget Hikes Funding," Financial Post, 21 December 1987, p. 4.

chances of further increases may be slim. Many factors can influence the extent of spending on defence, but the most important is public opinion.

2. Public Opinion

Although there may be a general consensus within the Canadian population on the need for defence and for strengthening existing forces after years of reduced expenditures, increases in defence spending are still controversial. The huge cost of the nuclear submarines has received most comment and there are no doubt many Canadians who share the views of some journalists that the proposed purchase is wasteful,(89) though the Department of National Defence conducted a public opinion poll which showed that 59% of Canadians supported it.(90) On military spending in general, a Gallup Poll showed that, at the national level, 49% of those questioned favoured the increased military spending proposed in the White Paper, while 34% disapproved.(91) The same poll showed continued support for the presence of Canadian troops in Europe as part of NATO. Of the 49% who approved, however, a significant number may disapprove of spending at a higher rate than the 3% growth rate. There is also strong opposition to increased expenditures among French Canadians. The Gallup Poll, which gave a breakdown of the results according to mother tongue, showed that, while 54% of those whose mother tongue is English and 48% of those whose mother tongue is other than English or French approved of the spending increase, only 36% of those whose mother tongue is French did so. Furthermore, 47% of this last group disapproved of increased military spending, while only

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(89) See, for example, Richard Gwyn, "A-subs Would Be a Waste for Canada," Montreal Gazette, 11 May 1987, p. B3, and Carol Goar, "Ten Better Uses Than Subs for $5 Billion," Toronto Star, 26 May 1987, p. A21.

(90) See Jeff Sallot, "Survey Told Beatty That Public Backed Purchase of A-subs," Globe and Mail (Toronto), 13 June 1987, p. A4.

(91) "57 percent Want Canadian Troops in Europe, With NATO," Gallup Poll, 24 August 1987. A poll conducted by the North-South Institute showed more opposition to increased defence spending. See "Survey Finds Opposition to More Arms Spending," Globe and Mail (Toronto), 23 December 1987, p. A4.

about 30% of the two other groups did so. The strong criticism of the White Paper in the Francophone press tends to corroborate the attitude reflected in the Gallup Poll.(92) Before the White Paper's publication, considerable attention had been paid in French Canada to the campaign for diverting the funds for one CF-18 to Third World needs instead, reflecting a feeling that defence spending is already too high. As well, the greater support for such spending in the rest of Canada may diminish as spending is actually increased. In short, Canadian public opinion may not be ready for substantial increases in defence spending, although it continues to support basic commitments like NATO.

Perhaps in anticipation of lukewarm support for more defence spending, the White Paper described the Soviet threat in strong terms and viewed the international situation with greater concern than had the 1971 White Paper. The somewhat aggressive tone of the 1987 document raised some fears that Canada might be undertaking policies not in keeping with its traditional concerns for peace and which reflected an outdated approach to the international situation.(93) Fears were also expressed that the tone of the White Paper, and especially the plan to buy nuclear-powered submarines, could affect Canada's efforts to play an important role in international discussions on arms control and North-South issues. It remains to be seen, however, if defence policy will have such an impact on Canadian diplomacy. For many of Canada's allies, the proposals are a belated response to their repeated calls for Canada to increase its share of the western world's defence. Since Canada is basically reinforcing its existing commitments to make its forces more cost-effective, the revised defence policy will not necessarily tarnish its reputation.

The proposed purchase of nuclear-powered submarines is significant in a country which has often called for nuclear disarmament and

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(92) See, for example, the series of letters to the editor in Le Devoir, 22 June 1987, p. 7 and 29 June 1987, p. 7.

(93) See, for example, William Epstein, "New Stance Tarnishes Canada's Reputation," Bulletin of the Atomic Scientists, Vol. 43, No. 8, October 1987, p. 11-12 and Gerald Caplan, "Defence Plan Reflects Outdated Dogma," Toronto Star, 20 December 1987, p. B3.

which has withdrawn from military commitments involving nuclear weapons. There is, however, an important difference between nuclear weapons and nuclear propulsion and there are valid technical reasons, such as speed and Arctic capabilities, for the use of nuclear-powered submarines in the great expanse of Canadian territorial waters. Because many Canadians are concerned about any use of nuclear technology, however, even the use of nuclear propulsion in the Arctic is controversial. Since the military usefulness of the nuclear submarines and their ability to protect sovereignty are also controversial, support for the purchase of costly nuclear submarines may be lukewarm, not only within the population, but also in the Cabinet during reviews of spending plans.(94) Even if the cost of the submarines can be absorbed over a 20 to 30 year period, the size of the projected costs and the suspicion that the estimates are too low produce resistance to the proposal and raise questions about other proposed equipment purchases. Furthermore, the cancellation of some proposed purchases could be advocated as the price for funding the nuclear submarines, especially if the public and Cabinet show little interest in a spending growth rate above the 2% level proposed in the White Paper. In short, the public and the Government may seem to accept the necessity of some increase in defence spending, but their continued support for it is not certain.

Indeed, the push to increase defence spending comes at a time when the Canadian public and their elected representatives have to deal with many conflicting trends. The INF Accord between the United States and the Soviet Union, the first treaty between superpowers to eliminate an entire category of nuclear weapons, and the possibility of further arms control agreements, as well as the recent changes in Soviet society, may give the impression that East-West tensions are easing and

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(94) See Jonathan Manthrope, "Beatty in Tough Fight to Save Military Policy," Ottawa Citizen, 21 November 1987, p. D24. See also David Crane, "How Defence Spending Could Blow the Budget," Toronto Star, 18 November 1987, p. A27; "Wanted: A Debate on Nuclear Subs," Toronto Star, 21 November 1987, p. B.2, and Val Sears, "Can Canada Afford $60 Billion for Defence?" Toronto Star, 13 December 1987, p. B4. See also "A-subs Plan To Be Promoted," Globe and Mail (Toronto), 7 January 1988, p. A5.

that the strengthening of defences is unnecessary. The cuts now being made to United States defence spending in order to reduce the deficit may reinforce this impression. Furthermore, Canada and other western countries face continuing demands for more funds for social, economic and cultural programs at the same time as strong pressures for the reduction of the budget deficit. The needs of the military may be accorded little priority if the arguments for defence win little support. Indeed, the public in Canada and in other NATO countries may feel that enough money has been spent on defence, especially when there is so much talk of disarmament. There are, however, other aspects which should be considered.

Although the superpowers are undertaking disarmament agreements, they are also expanding their war fighting capabilities and paying more attention to conventional warfare. The INF missiles form a very small part of the nuclear arsenals of the superpowers and although the INF agreement may pave the way for the elimination of ICBMs, there is still a long way to go until all nuclear weapons disappear. One factor which may hasten this disappearance, however, is ABM defence. Even the possibility of such defences is already affecting military strategy. In fact, the military are no longer preparing for a flash nuclear war, but rather for a conventional war which might last for two or more months without necessarily reaching the nuclear threshold.(95) The public, however, still viewing war between the superpowers as a quick and inevitable nuclear holocaust, may question the expansion of conventional forces which it expects would be destroyed in that holocaust. Since the public is usually indifferent to military matters, such preconceptions are not easily corrected and the reasons for military expansion may be misunderstood.

Canadians are well aware that the White Paper proposes increased expenditures at the same time as efforts are being made to reduce Canada's deficit. As well, although they may recognize that some increase is necessary because of past neglect, Canadians may have difficulty in accepting all the proposals when they observe their NATO allies limiting

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(95) See "INF Treaty Likely to Intensify Race in Exotic Conventional Weapons," Aviation Week and Space Technology, Vol. 127, No. 24, 14 December 1987, p. 19-21.

their defence spending. There is little likelihood that the West Europeans, who prefer to rely on nuclear weapons, will substantially boost their spending on conventional forces despite the INF Accord.(96) Furthermore, the United States will also be cutting defence spending in its efforts to reduce its deficit. The Canadian public could thus become sceptical of the need to reinforce commitments, especially on the central front, during a period of disarmament agreements. Then again, if U.S. budget cuts increase pressure for the withdrawal of U.S. troops from Europe, the NATO allies (especially Canada, which has been criticized in the past for low defence spending) could be asked to take a greater share of the defence burden on that continent. In short, contradictory developments abroad may leave Canadians with an unclear notion of Canada's defence requirements.

Canadians may not be ready to accept the substantial increases in defence expenditures required to bridge the commitment-capability gap and may be prepared to live with that fact. There is some consensus on the need for certain measures, but Canadians do not appear to be ready to end Canada's long history of too many defence commitments and not enough financial resources.

CONCLUSION

The White Paper on Defence indicated to Canadians the adjustments necessary for Canadian defence policy to adapt to the changing military context and listed the measures proposed to accomplish this. Canada's commitment to NORAD, NATO and the protection of sovereignty was reaffirmed, but the evolution of military technology and developments in the confrontation between the superpowers require changes in the roles and equipment of the Canadian Armed Forces. Indeed, the military context has changed substantially in the 16 year period which separates the 1971 and 1987 White Papers. The earlier document sought to justify the role of the

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(96) Karl Kaiser, "Le débat sur la stratégie de l'OTAN après le sommet de Reykjavik," Revue de l'OTAN, No. 34, December 1986, p. 9.

military in a period where conventional forces appeared to be redundant because of the nuclear missile; the latest policy statement has taken the opposite approach of listing measures for substantially improving the conventional war-fighting capabilities of the military. More attention is paid now to Canada's ability to sustain its troops in Europe during a long conflict and to the necessity to patrol territorial waters. Air defence has become more important, although technology is significantly changing the nature of its equipment requirements. Thus, increased defence expenditures are required not just to fill the gap created by past reduced spending, but also to pay for expensive equipment like nuclear-powered submarines required to patrol territorial waters. Despite the financial measures proposed, Canadian defence policy is still hampered by a commitment-capability gap.

Because of limited financial resources and the number of its military commitments, Canada has often had difficulty in fulfilling all its military roles. The White Paper proposed a minimum 2% rate of growth, after inflation, for the defence budget and some additional funds in the years to come for some equipment purchases. There is, however, already some concern that the budget increase will not cover all the projected equipment purchases and operational costs. Doubts have been raised about the military usefulness of the nuclear-powered submarines, and public support for the project is not as strong as it could be. In view of arms control negotiations, the social and economic requirements of modern society, pressures to cut the deficit and some confusion about changing military strategy, the Canadian public may not be ready to support substantial defence budget increases necessary to bridge the commitment-capability gap. Thus, Canada will continue to meet all its defence commitments, but its military forces will face increasing demands on its resources while the commitment-capability gap is slowly bridged.

The military will, however, continue to play a leading role in asserting Canada's sovereignty. This role was already a key feature of Canadian defence policy at the time of the 1971 White Paper, but technology and the changing international scene have given it new importance. Space-based radar and nuclear-powered submarines can provide Canada with an unprecedented and complete surveillance and control of any activity in its

territory, its airspace and its waters, thus enabling it to assert its sovereignty as never before. But deploying its own surveillance system in space would incur high costs for Canada, while reliance on U.S. space-based radar alone would give the United States considerable control over Canadian territory and airspace. Canada is therefore willing to participate in a joint venture with the United States. As well, though Canada's purchase of nuclear-powered submarines will ensure surveillance of its waters in the Arctic and along the Atlantic and Pacific coastlines, many Canadians have concerns about the use of nuclear propulsion and the effects of such vessels on Canada's image as a peacekeeper. The price of protecting Canadian sovereignty is high, but the alternative, delegating to others most or all of the responsibility for surveillance and control of Canadian territory, does not seem to be acceptable to Canadians. Canada, like other Western countries, benefits from the protection offered by the United States nuclear deterrent but it also insists on measures to ensure that its sovereignty will not be compromised. Indeed, the White Paper confirmed that, despite the changing military context, this protection of sovereignty remains the cornerstone of Canadian defence policy.

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