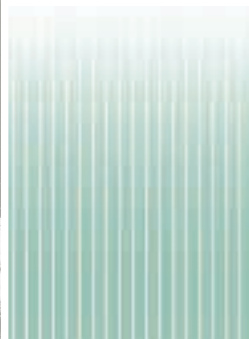
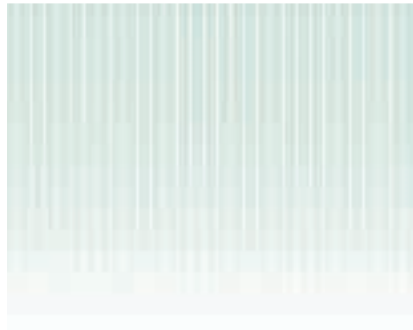




Environmentally Sustainable Defence Activities



A Sustainable
Development Strategy
for National Defence



December 2000

Code of Environmental Stewardship

The Department of National Defence and the Canadian Forces shall:

- integrate environmental concerns with other relevant concerns including those from operations, finance, safety, health, and economic development in decision-making;
- meet or exceed the letter and spirit of all federal environmental laws and, where appropriate, be compatible with municipal, provincial, territorial, and international standards;
- improve the level of environmental awareness throughout the DND and the CF through environmental awareness training, and encourage and recognize the actions of personnel leading to positive impacts on the environment;
- recognize that the life cycle aspects of hazardous material management (initial selection, procurement, use, handling, storage, transportation and disposal) is an essential factor in all planning with particular emphasis on determining whether the material should even be acquired given its characteristics;
- ensure that environmental considerations are integrated into procurement policies and practices;
- practice pollution prevention in day-to-day activities/operations by seeking cost-effective ways of reducing the consumption of raw materials, toxic substances, energy, water, and other resources, and of reducing the generation of waste and noise; and,
- acquire, manage and dispose of lands in a manner that is environmentally sound, including the protection of ecologically significant areas.



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Message from the Minister of National Defence

Sustainable development is in the interest of every Canadian. The Government's commitment to development that meets the needs of the present generation without compromising the ability of future generations to meet theirs is most prominently reflected in the requirement for departments and agencies to produce and update sustainable development strategies. The Defence mandate to defend Canada and Canadian interests and values must therefore include a concern for the present and future welfare of our physical environment. In 1997, our first Sustainable Development Strategy (SDS 1997) established the blueprint for a proactive approach for this protection of the environment and stewardship of the assets with which we have been entrusted.

In this update of our strategy, SDS 2000, we embark on a renewed commitment to that undertaking – a commitment that has been shaped by lessons learned, by evolving priorities, and by an increasing realization that sustainable development is a responsibility that every one of us shares. SDS 2000 is the demonstration that we in the Department of National Defence and the Canadian Forces will continue to do our share on behalf of the Government and the people of Canada.



A handwritten signature in black ink, which appears to read 'Art Eggleton'. The signature is stylized and cursive, with the first name 'Art' being particularly prominent.

Art Eggleton
Minister of National Defence

Message from the Deputy Minister and the Chief of the Defence Staff



Integrating Sustainable Development Principles into the Business of Defence

In our first Sustainable Development Strategy we declared our aim to demonstrate responsiveness to, and responsibility for, protecting the environment while ensuring environmental stewardship and protection of our national and corporate assets. Since then, we have turned talk into action through the actions of the employees of the Department of National Defence and the Canadian Forces members who have made it their business to achieve that aim.

This second strategy continues the pledge we made in 1997 and builds on our successes by establishing targets that will advance the government's principles of sustainable development in defence activities. The leadership of those who worked to elaborate this second iteration of our strategy is acknowledged and appreciated. Continuing that success will depend on the ongoing involvement of all levels of command and management.

Shaping a better future for Canada and Canadians through the application of sustainable development principles to defence requires a commitment of all members of the Defence team. We are confident that we will be successful.

J.M.G. Baril
General
Chief of the Defence Staff

Jim Judd
Deputy Minister

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Introduction

In December 1997, the Department of National Defence tabled its first Sustainable Development Strategy (SDS) in Parliament. The strategy publicly re-affirmed the long-standing commitment of the Department and the Canadian Forces to demonstrate responsiveness to, and responsibility for, environmental stewardship and protection of the national and corporate assets with which they are entrusted.

The Department of National Defence and the Canadian Forces recognize that our activities and operations have the potential to affect the environment. We are among the federal government's largest landholders and users of goods and services, are an active presence throughout Canada, and have a tradition of support for the international community's efforts to bring peace and stability to the world's trouble spots.

In his introduction to the 1997 Sustainable Development Strategy, the Minister of National Defence noted that "our contributions to sustainable development are anchored in our larger mandate to defend Canada and Canadian interests and values while contributing to international peace and security. A world with a weakened environment, fractured societies, and economic uncertainty for billions of people is an unstable world. It is a world in which Canada's interests are at risk...It is in our interest to prevent that from happening. It is in our interest to encourage sustainable development." This is just as true today.

Defence is responsible for the environmental aspects of the activities over which we exercise a direct influence, while enhancing global economic, social and environmental sustainability through its efforts in peace and security. In this context, Defence contributes to the integration of economic, social, and environmental considerations towards a common objective: "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

SDS 1997 provided a sound framework around which to structure the Department's commitment to the federal sustainable development agenda. Defence SDS 2000 builds on that framework while acknowledging that the attainment of the goals and objectives of sustainable development requires a long-term commitment. The subjects addressed in the last SDS are as relevant today as they were in 1997. The fruit of three years of experience in planning, managing, and reporting on sustainable development is reflected in SDS 2000.

The overarching theme of Defence SDS 2000 is conservation of the environment by integrating environmental considerations into decision-making at every level. Defence SDS 2000 provides the strategic direction, priorities and performance indicators for the Defence environmental program for the years 2001 to 2004. Recognizing the operational nature of Defence, SDS 2000 focuses on the environmental component of sustainable development while acknowledging the importance and interrelationship of the social and economic impacts of our activities.

Environmentally Sustainable Defence Activities...

*Activities conducted by
DND/CF, including military
operations and training, as
well as departmental logistics
and administrative support,
that meet the needs of the
present without compromising
those of the future.*

Departmental Profile

Mission Statement...

The mission of the Department of National Defence and the Canadian Forces is to defend Canada and Canadian interests and values while contributing to international peace and security. Defence objectives in support of this mission are to:

- provide strategic defence and security advice and information to the Government of Canada;
- conduct surveillance and control of Canada's territory, aerospace and maritime areas of jurisdiction;
- respond to requests from provincial authorities for Aid to the Civil Power;
- participate in bilateral and multilateral operations with Canada's allies;
- assist other Government departments and other levels of government in achieving national goals;
- provide support to broad federal government programs;
- provide emergency and humanitarian relief; and,
- maximize defence capabilities through the efficient and effective use of resources.

Some facts and figures...

Human Resources: Approximately 60,000 members of the Regular Force, 30,000 members of the Reserve Force, 20,000 civilian Defence employees, and 5,000 Canadian Rangers. The Department also supports the Cadets and Junior Canadian Rangers.

Landholdings: More than 20,000 square kilometres of land, including 27 land, naval and air bases and stations; 449 individual properties, including weapons ranges, training areas, military training centres, cadet camps, and local armouries; and 550 leased properties.

Realty Assets: 45% of the federal government's total floor space (approximately 11 million square metres).



A Leopard C2 Tank.



Equipment: More than 20,000 vehicles, ships, and aircraft in active use.

Annual Expenditures: \$11 billion for fiscal year 2001/2002.

International Commitments: 1999/2000 was one of the busiest and most demanding years for the Canadian Forces (CF) since the Korean War. For most of the year, more than 4,500 CF personnel were deployed on 23 missions around the world.

Fisheries Protection and Environmental Surveillance: The Air Force and Navy patrol nearly 6,000,000 square kilometres of ocean along Canada's coastlines, watching for illegal activities such as overfishing and polluting.

Disaster Relief: Defence provides relief in times of emergency. More than 16,500 CF members from across Canada were deployed when nearly 10 centimetres of freezing rain fell on eastern Ontario, Quebec and the Maritimes in January 1998, the largest domestic disaster relief operation in Canadian history.

Emergency

Preparedness Canada...

Emergency Preparedness

Canada contributes to

sustainable communities

through its mission to

safeguard lives and reduce

damage to property by

fostering better emergency

management (i.e. mitigation,

preparedness, response,

and recovery) in Canada.

Sustainable defence activities in the long term...

Defence is truly a national institution, with members coming from every part of Canada, and living, training and working in more than 3,000 communities across the country. The impact of the Defence presence on the social and economic fabric of the communities that surround our sites is significant.

Bases and Wings are small towns in their own right, and have a significant influence on the lives of Canadians both on site and in surrounding communities. They employ thousands of people and provide most of the facilities for their daily lives at work, at home and for recreation. Many Bases and Wings have industrial facilities for aircraft, ship and vehicle maintenance and all have facilities for the provision of water, fuel and other supplies to meet CF requirements. National Defence and the Canadian Forces develop, procure, operate, and eventually dispose of a vast array of equipment. The Department manages and uses huge tracts of land for training. In short, it is difficult to envisage a component of the environment that is not, directly or indirectly, potentially affected by Defence activities.

As such, we have a responsibility to maximize Canada's return on its defence investments. Today's operational requirements must be balanced against the need to renew and sustain Canada's defence capabilities for the future. This means managing resources prudently, with a longer-term perspective on the future. Defence is committed to ensuring that our activities are performed in an environmentally sustainable manner that achieves the mission without compromising the well-being of future generations.

Defence Environmental Policy Framework...

Sustainable development is fully integrated within the Department's policy and program framework. Commitment to sustainable development, to the implementation of an environmental management system compatible with International Organization for Standardization (ISO) 14001, and to the Code of Environmental Stewardship are integral components of the Defence environmental policy.

Consultation

Consultations for Defence SDS 2000 began, in effect, with the tabling of SDS 1997 in Parliament. It is the men and women of National Defence and the Canadian Forces who are responsible for delivering on sustainable development and are the focus of this ongoing dialogue. While this approach is consistent with the guidance contained in *Directions on Greening Government Operations*, organizations external to Defence have much to offer and their views were sought.



View of Lighthouse at Peggy's Cove, Nova Scotia.

Within National Defence and the Canadian Forces...

The objectives of internal consultations were threefold; to review the progress of SDS 1997 throughout its implementation, to consolidate and discuss lessons learned and identify areas for improvement, and to identify the goals, objectives and targets for SDS 2000.

An example of this internal consultative process was the November 24/25, 1999 workshop on Sustainable Development, which included a keynote address by the Commissioner of the Environment and Sustainable Development and was attended by over 100 participants representing every Base and Wing. This forum gave individuals the opportunity to provide their own perspective on sustainable development within Defence.

Senior commanders and managers have designated sustainable development representatives who, in turn, consult within their own Chains of Command. In this way, all levels of command have the opportunity to contribute to the discussions on sustainable development.

External consultations...

With other government departments

Interaction with other government departments, as part of the ongoing dialogue on sustainable development and environmental management, included participation on the *Interdepartmental Network on Sustainable Development Strategies*, the *Committee on Performance Measurement for Sustainable Government Operations*, and the *Federal Sustainable Development Strategy for the North Working Group*. Such discussion ensures that environmental issues are addressed consistent with the Government's sustainable development agenda and facilitate the exploration of areas where efforts can be coordinated with other Departments.



Leaders' Forum on Sustainable Development

Leading the public/private sector discussions was the April 4, 2000 *Leaders' Forum on Sustainable Development* hosted by the National Round Table on the Environment and the Economy. This forum brought together senior government officials (including Defence's Assistant Deputy Minister (Infrastructure and Environment)) with leaders from all sectors of Canadian society to seek guidance and counsel on the Government's approach to sustainable development.

The Canadian Environmental Industries Association

On August 21, 2000, an all-day meeting was held with representatives of 14 Government Departments/Agencies (including Defence) and 22 members of the Canadian Environmental Industries Association. Participants provided another perspective towards sustainable development and recognized the intrinsic value of collaborative public/private ventures as a key element for success.

With non-governmental stakeholders

Two major factors influenced the scope and nature of consultations with non-governmental stakeholders.

Paramount is the understanding that Bases and Wings are the first line of communication with the public and that they would be sensitive to local and regional concerns within their area of influence. These concerns would be reflected through the input transmitted via the Departmental Chain of Command.

Second, if consultations with non-governmental organizations are to be meaningful, there needs to be a linkage that extends beyond the drafting stage for the SDS; one that incorporates mechanisms for ongoing feedback and exchanges of information. At the national level, Defence has established linkages and is working with the Canadian Environmental Network to advance this long-term objective.

With our Defence Allies

Canada's defence allies have also contributed. National Defence and Canadian Forces staff participate in several North Atlantic Treaty Organization (NATO) and multi-lateral committees, foremost among which is the NATO Committee on the Challenges of Modern Society. These exchanges provide an invaluable international perspective on integrating sustainable development and environmental management with defence priorities and concerns.

In summary, consultations are a key tool in the commitment to open, responsible government and Defence recognizes the importance of discussing proposed changes or new initiatives with the people and groups affected. In this context, we will continue to build on the interchanges with both government and non-government environmental organizations that have been initiated through the sustainable development strategy process.

*Sustainable development:
A coordinated approach
for the North...*

*DND/CF participated in a
series of consultations across
the North contributing to a
coordinated approach to
sustainable development
among departments.*

*The discussions were useful
in ensuring that issues
important to Northerners
were incorporated
into individual strategies.*

SDS 1997: Lessons Learned

The assessment process: A commitment to continual improvement...

Commitment to continual improvement is a key requirement of the Defence environmental policy and the environmental management system. In the spirit of this commitment a thorough analysis was undertaken of SDS 1997 to identify areas upon which Defence SDS 2000 could improve. The analysis adopted a two-pronged approach; a critical internal self-assessment and a comparison of internal observations against external benchmarks.

The management reviews conducted in support of the annual Departmental Performance Reports were an invaluable source of input to the internal analysis. These reviews, which focused on yearly results, were complemented by a comprehensive review of the SDS dating back to its development and tabling in 1997, including the planning, implementation, performance measurement, reporting, and review phases. The self-assessment included input from representatives of the Chain of Command, who participated in a corporate level working group for SDS Implementation in November 1999, as well as input from sites, Bases and Wings at the annual Environmental Officers' Workshop.

External sources such as the Commissioner of the Environment and Sustainable Development's annual reports provided benchmarks against which to evaluate the conclusions that were developed during the self-assessment process. Interdepartmental and international fora also provided an opportunity to compare progress, best practices, and lessons learned with other departments as well as with defence establishments of other nations.

What SDS 1997 achieved...

SDS 1997 addressed significant environmental issues related to ecosystems, pollution prevention, hazardous materials, climate change, and cultural resources through 22 measurable targets.

Analysis of SDS 1997 led to the following conclusions:

- ✓ the overall approach to sustainable development was sound;
- ✓ the SDS was well received and accepted both within and outside National Defence and the Canadian Forces;
- ✓ notwithstanding the diverse and widespread nature of Defence activities, the SDS provided a solid foundation for the Defence environmental stewardship and protection program;



Search and Rescue "Labrador" practicing manoeuvres over Lake Ontario, near Toronto.

- ✓ the SDS and its targets provided an objective framework around which to structure action plans and performance measurement;
- ✓ Defence environmental management systems, immature as they were in 1997, demonstrated sufficient depth and flexibility to overcome “teething problems” that were experienced in the implementation and reporting of the SDS; and,
- ✓ sustainable development has become accepted as an important consideration within the Defence strategic planning process.

Nevertheless, it was clear that there were opportunities for improvement.

What should be done differently...

Integration of the SDS with business planning

SDS 1997 was complementary to, but not fully integrated with, the Defence business planning process. This imposed several challenges at the outset. Responsibilities for the implementation and reporting of targets could have been more clearly defined. The overall resource implications of the strategy could have been more fully developed in the planning stages. Finally, the linkages between the SDS and the operational activities and priorities of the Department could have been more clearly presented.

Implementation of SDS 1997 could have engaged management sooner in order to increase awareness of the strategy throughout all levels of the Department as early as possible.

Although the Department was able to work through these initial challenges, it was apparent that there is a need to better integrate the SDS planning within the overall Defence business planning process.



On Patrol in Zumalai, East Timor.

It was equally apparent that this could only be achieved through commitment – early in the planning phase – from senior management through the *Defence Planning Guidance* and through the direct participation of their delegated representatives in the SDS planning process. Both objectives were met in the planning for Defence SDS 2000.

These two initiatives strengthened the planning process and ensured better integration of sustainable development goals, objectives and targets in the Defence business planning cycle at all levels.

Environmental Management Systems

Although the national level environmental management system was still evolving in 1997, the Department succeeded in working through a full environmental management cycle in the development and implementation of the strategy: policy, planning, implementation, monitoring and measurement, and management review.

The process was not painless. There was much internal discussion on roles and responsibilities for different components of the environmental program. The linkages between the environmental aspects of Defence activities and the SDS goals, objectives and targets could have been more clearly communicated.

Much was learned about what worked – and what didn't – in the performance measurement and reporting framework and about the need for clear and timely guidance on what to report, by whom, and when. Better strategies were developed for informing senior management on progress towards meeting sustainable development objectives. Unforeseen shortcomings in the reliability and availability of baseline data were discovered and, to the extent possible, rectified.

While the SDS was widely accepted throughout National Defence and the Canadian Forces, the underlying principles of sustainable development can be more effectively communicated to all levels of management and more effectively integrated into Defence activities and programs.

During the past three years, Defence has made significant progress in adapting and implementing an environmental management system consistent with ISO 14001. This system provided the Department with sufficient depth and flexibility to meet the challenges of managing SDS 1997. The challenge now is to continue with and accelerate the integration of environmental considerations within management systems at all levels of the organization.



Hercules Aircraft over Niagara Falls.

Issue Scan

In 1987, the Brundtland Commission's report, *Our Common Future*, articulated an increasing global concern with the pace and inequality of development worldwide and its corresponding impact on the environment. Since then, the international community has responded with a range of instruments such as the Montreal and Kyoto Protocols, and the Basel and London Conventions, each of which is designed to address a specific aspect of environmental degradation.

Nationally, the federal government is addressing these global concerns with a legislative and policy framework. Legislation such as the *Canadian Environmental Protection Act, 1999*, the *Canadian Environmental Assessment Act*, and indeed, the amended *Auditor General Act*, to name a few, establishes the federal approach for turning talk into action.

In developing SDS 1997, the Department weighed the potential stresses and impacts of its activities on the environment against values that Canadians want to sustain. This analysis, which included internal and external consultations, reviews of past and current Defence planning documents, and considerations of global and national discussions on the state of the environment, led to the identification of the issues that were assessed to have the most significant impact on sustainable development, as they pertained to National Defence and the Canadian Forces.

In preparing for Defence SDS 2000, the Department reviewed the relevance of the 1997 issue scan. It was re-examined against not only the original standards but also in light of new and emerging federal policy and legislation, and best practices identified by industry and our allies. Major documents such as *Shaping the Future of the Canadian Forces: A Strategy for 2020* served to refine the focus of the analysis.

This review, while confirming the continuing applicability of the majority of subjects associated with the 1997 issue scan, led to a realignment of the 1997 issues. Ecosystems remained; pollution prevention and hazardous materials were merged into pollution; climate change was expanded; and, cultural resources was changed to stewardship. It also became clear that while the federal interpretation of sustainable development is expanding from environment, society and economy to include health, Defence's effort must focus on the component that it influences the most – the environment.

Defence is committed to addressing sustainable development through the following environmental issues as they relate to military activities and programs:

- ecosystems;
- pollution;
- climate change, ozone depletion and air quality; and,
- stewardship.

Ecosystems

In SDS 2000, we commit to protect the health of our ecosystems through:

- protecting rare and endangered species, wetlands and habitats; and,
- controlling pests without damaging non-target species.

Environmental security...

Protection of the environment locally, nationally, regionally, and globally is crucial to security. The fact that the environment should be protected and sustained rather than abused and degraded is a fundamental ethical principle.

With more than 20,000 square kilometres of land under its administration, Defence has long acknowledged its responsibility to consider environmental impacts in the management of its training areas and in the planning and conduct of its activities. Navy, army and air training and operations routinely extend over large areas of land, sea and airspace and activities of this scope inevitably have the potential to affect the surrounding environment.

Noise is an outcome of military activities. In SDS 1997, Defence committed to the development of a number of planning tools for noise. During the course of implementing this target, it was determined that new noise models for airfields and helicopters would not be cost-effective. Nonetheless, the Department is assessing the requirement for additional noise planning models and is continuing work on an impulse noise model for training areas. While noise continues to be an important concern, it is being managed locally.

The inappropriate use of pesticides can have undesirable effects. SDS 1997 committed to the reduction in use of pesticides and progress has been made. Experience has clearly demonstrated that using integrated pest management strategies is the best way to address this subject. SDS 2000 will deliver on this experience.

Defence recognizes the potential for the negative impacts that military activities can have on sensitive or rare ecosystems and the species that depend on them. As a result of SDS 1997, management plans that protect rare and endangered species, wetlands and critical habitat on selected training areas have been completed. Now is the time to implement these plans and ensure that due regard is given to critical habitat on all property under Defence's control.

Pollution

In SDS 1997, Defence addressed pollution prevention and hazardous materials as separate issues. The last three years have clearly shown that these are intertwined. SDS 2000 will address this area as one issue – pollution.

The impact of continuing pollution on an already stressed environment cannot be overestimated. While some methods of environmental protection focus on managing pollution after the fact, the more proactive pollution prevention approach seeks to avoid creating pollution in the first place.

Within the Defence mandate, the management of hazardous materials as potential pollutants merits particular attention. The nature of military operations is such that the use of hazardous materials cannot be avoided. National Defence uses more than 6000 hazardous products, ranging from gasoline to ammunition.



*Junior Canadian Rangers training
in Northern Quebec.*

Evolving technology has eliminated the need for some hazardous materials, but this same evolution may, in the future, demonstrate that materials that are currently considered safe have serious negative impacts. PCBs are the classic example. Fuel tanks and abandoned sites still reflect, in some instances, the lower standards of a past era.

Defence recognizes that proper management of materiel can minimize or eliminate the potential for adverse impacts on the environment and on human health. As the largest federal consumer of goods and services, Defence can lead through example by managing hazardous materials and potential pollutants properly, minimizing the consumption of resources, and maximizing pollution prevention opportunities.

Defence commits to protect human health and the environment through understanding the implications and improving the management of:

- hazardous materials and wastes;
- solid and liquid effluents;
- contaminated sites;
- fuel storage facilities;
- spills; and,
- water usage.

Climate Change, Ozone Depletion and Air Quality

International concern with the impacts of climate change, ozone depletion and air quality on ecosystems, human health and quality of life is steadily increasing.

Many aspects of Defence operations and activities have the potential to produce atmospheric pollutants and greenhouse gas emissions, either directly or indirectly. These include the Department's large fleet of vehicles, ships and aircraft, its extensive infrastructure, the scope and nature of its training, and the choices of energy sources and materiel in the equipment and supplies that Defence consumes.

Under the auspices of the *Climate Change Program Leadership Challenge*, Defence has been active in both encouraging and contributing to Greenhouse Gas (GHG) emission reductions for many years. We have shown leadership through initiatives such as Energy Performance Contracts, employee awareness and staff training in energy management.



CF 18 displaying the Airforce Anniversary colours.



These are all aimed at achieving ambitious energy consumption reductions in Defence operations by encouraging both energy efficiency and the use of renewable and alternative energy.

We continue to play an important role in being part of the solution. Through prudent exploitation of alternative products, energy sources, technologies, and methodologies, Defence can reduce the impact of releases and emissions on air quality and minimize the introduction of greenhouse gases and ozone depleting substances into the environment. This is a continuation of the work we committed to in our SDS 1997.

In responding to this ongoing commitment to protect the atmosphere, Defence must be aware of and respond to issues associated with:

- ozone-depleting substances; and,
- gaseous emissions associated with global warming ("climate change"), smog and acid rain.

We are committed to monitoring and reducing GHG emissions for our buildings and commercial fleet as well as applying "best practices" to equipment and fleets linked to the National Security mandate at home and abroad.

Stewardship

While the majority of the aspects of Defence activities relate specifically to one or more of the issues discussed above, a number of environmental program components relate to the very capability of the Department to plan, manage and deliver on its commitments.

These stewardship components are the building blocks that foster a collective awareness of the cumulative impacts of Defence actions, due regard for protection of the environment, and respect for our fellow citizens, our heritage and traditions. Through adherence to its Code of Environmental Stewardship, National Defence and the Canadian Forces will fulfill the objective of environmentally sustainable Defence activities.

The issue of stewardship touches every member of National Defence and the Canadian Forces. Adequately addressing it will ensure that environmental considerations are incorporated into decision-making at every level of Defence operations.

In our SDS 1997, we committed to protecting cultural and heritage sites, artifacts and monuments and preserving heritage buildings. This has been incorporated into the planning process and does not need the exposure in SDS 2000 to maintain the profile of this requirement.

Tools for creating and maintaining a workplace that takes environmental considerations into account as a matter of course are:

- Environmental Management Systems; and,
- green procurement.

Climate change...

"Climate change is perhaps the most daunting of a new generation of sustainable development problems that are testing governments around the world."

Report of the Commissioner of the Environment and Sustainable Development, 1998

Goals, Objectives and Targets

Defence SDS 2000 builds on the Department's environmental policy and environmental management framework to articulate the long-term strategic goals and objectives and shorter-term targets that underpin the commitment to sustainable development.

The goals establish the long-term strategic direction for the program, based on the analysis of the issues as they apply to Defence strategic planning. In general, the goals look out at least three SDS cycles (to 2010 and beyond).



A Canadian reservist with the United Nations in the Golan Heights.

The objectives narrow the focus to broad areas of action. Elimination of immediate risks to human health and safety, conformity with government policy, and reduction of risks to the environment were prime considerations in the determination of the objectives.

The SDS cycle is a critical validation point in the Department's environmental management system. Staff at all levels continually monitor developments in legislation, policy, changes in taskings and activities, new equipment and procedures, and the results of audit reports and performance management reviews. This monitoring process leads to the identification of new environmental aspects and the reclassification or deletion of others as appropriate. It is during the triennial SDS update that the aspects are thoroughly scrutinized and strategically significant aspects identified. The strategically significant aspects identified through this process provide the basis for the targets for the SDS.

The targets are the specific, measurable performance requirements that National Defence and the Canadian Forces are committed to achieve within the 2001-2004 timeframe. All members of the Defence team were directly involved, through the Chain of Command, in the formulation of the targets.

The goals, objectives and targets that Defence commits to are detailed in Table 1.

Action Plan

One of the key lessons learned from the SDS 1997 was that the SDS must be entrenched in the business planning process with the commitment of senior management at the highest levels.

The Defence business planning process begins with the annual *Defence Planning Guidance*. *Defence Planning Guidance 2001* provides the framework for translating Government direction into a capable and efficient Defence Services Program and provides senior Commanders and Group Principals with strategic-level guidance, including resource planning levels, for fiscal years 2001/2002 through to 2003/2004.

Defence Planning Guidance 2001 includes specific direction on the development, implementation and monitoring of the Departmental Sustainable Development Strategy. This direction reflects the commitment of senior management to the SDS and to the integration of environmental considerations into the planning and decision-making process.

Roles and responsibilities...

The SDS provides the strategic direction and priorities for the Department's environmental program for the next three years and beyond.

The Assistant Deputy Minister (Infrastructure and Environment) (ADM(IE)) is assigned the responsibility for development of the SDS and for monitoring its implementation by the Chain of Command. ADM(IE) provides oversight and advice, establishes departmental performance measures and environmental management system guidance, and acts as the focal point for coordinating efforts among the respective Defence components, other departments and external stakeholders.

A fundamental consideration in preparing Defence SDS 2000 has been that while the SDS is a national strategy, implementation is – for the most part – the responsibility of the Chain of Command. Those supporting actions that are critical to the achievement of individual targets are detailed in Table 1. In some cases, a specific organization is responsible for the supporting action, in others, all organizations within Defence have a responsibility.

Commanders and senior managers of the Department are responsible for ensuring that activities in support of the SDS are reflected in all levels of business plans and for implementing and reporting on the targets applicable to their areas of responsibility.

While individuals have a responsibility for the environmental impacts of their activities, the organization must provide them with the appropriate tools to fulfill that obligation.



HMCS Toronto in the Atlantic.

Supporting implementation...

To support the implementation of sustainable development, National Defence and the Canadian Forces must:

- accelerate the development, implementation and integration of environmental management systems throughout the Department;
- build upon the use of environmental assessment, including the assessment of policy, plan and program proposals, to ensure that environmental considerations are integrated with planning and decision-making;
- ensure that personnel have the appropriate training and tools;
- foster a common environmental policy and doctrine framework;
- promote the exchange of environmental management information and best practices;
- foster an open and transparent communications strategy with all our stakeholders, both within and external to government;
- promote the demonstration of responsiveness to and respect for the environment;
- integrate pollution prevention into all aspects of day-to-day operations;
- use green practices, processes and procurement;
- encourage a consultative approach to community relations;
- protect cultural and heritage resources; and,
- work with our military partners on common environmental concerns.

Common steps...

Successful achievement of the individual targets requires all levels within the Chain of Command to develop appropriate action plans. These plans include most or all of the following common steps:

- assign responsibilities and resources;
- establish and confirm the baseline;
- survey the market;
- research and test alternative products, processes and practices;
- assess the environmental impact of the alternatives, throughout their lifecycle;
- develop and validate resource implications using business case analysis;
- select the preferred/logical alternative;
- if required, mitigate the impacts of the selected alternative and associated processes;
- develop an implementation plan and required contingency plans;
- establish and confirm resource requirements;
- measure, analyze and report performance; and,
- follow up with a view of continually improving the environmental performance of the processes involved.

Measurement, Analysis and Reporting of Performance

The measurement, analysis and reporting framework for Defence SDS 2000 is an integral component of the Department's overall performance measurement process.

The targets in Table 1 are the key indicators upon which the Department relies to measure and report its progress in meeting its sustainable development goals and objectives.

Measurement...

Performance indicators have been identified for each of the targets in Table 1. In establishing the performance indicators for each target, the following were considered:

- availability of relevant baseline data;
- focus on issues with strategic corporate or national level impact;
- provision of strategically meaningful information;
- maximization of the use of current feedback mechanisms;
- maximization of the use of corporate performance measures/indicators and common performance indicators where applicable;
- rationalization of data gathering requirements; and,
- cost effectiveness.



Watch keepers at the National Defence Command Centre monitoring the screens as the year 2000 rolls in, in Newfoundland.

Analysis...

ADM(IE) is responsible for the consolidated national analysis of the data reported through the Chain of Command. This analysis is used to:

- assess the capacity and readiness to meet commitments to sustainable development;
- assess the extent to which the SDS targets and objectives are being met;
- evaluate the ongoing effectiveness of the environmental management system;
- identify whether the needs and expectations of our stakeholders are being met; and,
- provide early warning of emerging problems or deficiencies.

For similar reasons, all levels within the organization undertake the appropriate level of analysis of their data as it is reported up the Chain of Command.

Reporting...

The Department's progress on meeting its SDS commitments is reported to Government as an integral part of the annual Departmental Performance Report.

TABLE 1 - Targets, Indicators and Supporting Actions

- Issue** Ecosystems
- Goal** Protect the health of our ecosystems
- Objectives**
- Plan military and non-military activities on DND/CF land and marine holdings such that adverse impacts on habitats are minimized
 - Preserve biodiversity, in particular for species at risk

Target	Indicator(s)	Action(s) Supporting Common Steps (page 17)
A.1. Implement Training Area Management plans at selected sites ¹ by 31 March 2004	<ul style="list-style-type: none"> • Percentage of sites with implemented Training Area Management plans 	<ul style="list-style-type: none"> • Implement recommendations outlined in applicable Training Area Management studies
A.2. Initiate plans that protect species at risk and their habitats for DND-owned or leased property by 31 March 2004	<ul style="list-style-type: none"> • Percentage of identified sites with initiated plans 	<ul style="list-style-type: none"> • Promulgate national species at risk/habitat protection plan guidance by 31 March 2002 (Assistant Deputy Minister (Infrastructure & Environment)) • Identify all sites that require a plan by 31 March 2002
A.3. Develop and implement Integrated Pest Management (IPM) plans at all Bases/Wings by 31 March 2004	<ul style="list-style-type: none"> • Percentage of Bases/Wings with implemented IPM plans 	<ul style="list-style-type: none"> • Promulgate national IPM plan guidance by 01 April 2001 (Assistant Deputy Minister (Infrastructure & Environment)) • Departmental directive for pesticide reporting procedures by 01 October 2001 (Assistant Deputy Minister (Infrastructure & Environment))
A.4. Eliminate the use of pesticides for cosmetic lawn care purposes by 31 March 2004	<ul style="list-style-type: none"> • Percentage of Bases/Wings not using pesticides for cosmetic lawn care purposes 	<ul style="list-style-type: none"> • Establish departmental directive to eliminate pesticide use for cosmetic lawn care purposes by 31 Mar 2002 (Assistant Deputy Minister (Infrastructure & Environment))

1. Selected sites are: Borden, Chilcolfin, Cold Lake, Dundurn, Farnham, Gagetown, Meaford, Nanoose, Petawawa, Shilo, Suffield, Valcartier, and Wainwright.

TABLE 1 - continued

Issue	Pollution
Goal	Protect human health and the environment
Objectives	<ul style="list-style-type: none"> • Manage hazardous materials responsibly • Minimize the sources for introducing pollutants into the natural environment • Ensure appropriate management of potential pollutants • Minimize the consumption of renewable and non-renewable resources • Maximize opportunities to reduce, reuse or recycle consumable materials and packaging • Maximize pollution prevention opportunities

Target	Indicator(s)	Action(s) Supporting Common Steps (page 17)
B.1. Develop and implement hazardous material management plans at all Bases/Wings by 31 March 2004	<ul style="list-style-type: none"> • Percentage of Bases/Wings with implemented hazardous material management plans 	<ul style="list-style-type: none"> • Issue national guidance on development of plans by 01 October 2001 (Assistant Deputy Minister (Infrastructure & Environment) to facilitate)
B.2. Eliminate 15% of specified high-risk hazardous materials from use by 31 March 2004	<ul style="list-style-type: none"> • Percentage of specified high-risk hazardous materials eliminated from use 	<ul style="list-style-type: none"> • Issue national guidance on the 350 high-risk hazardous materials by 01 April 2001 (Assistant Deputy Minister (Materiel)) • Review and amend Canadian Forces Technical Orders
B.3. Send polychlorinated biphenyls (PCBs) for destruction as they are phased out	<ul style="list-style-type: none"> • Amount of PCBs removed from service annually • Amount of PCBs sent for destruction annually 	<ul style="list-style-type: none"> • Inventory in-service and stored equipment containing PCBs (excluding light ballasts) • Update DND PCB Phase-Out Strategy by 01 April 2001 (Assistant Deputy Minister (Infrastructure & Environment))
B.4. Reduce hazardous wastes sent for disposal by 5% by 31 March 2004 from 2000/01	<ul style="list-style-type: none"> • Quantity of hazardous waste sent for disposal 	<ul style="list-style-type: none"> • Incorporate pollution prevention plans in hazardous material management (refer to target B.1.) • Assess alternatives to direct disposal

TABLE 1 - continued

...continued

Issue

Pollution

B.5. Liquid effluents conform to applicable standards at point of discharge	<ul style="list-style-type: none"> • Percentage of sewage treatment plants (STP) in conformance with applicable standards • Percentage of points of discharge into municipal systems in conformance with local standards • Percentage of storm sewers in conformance with applicable standards 	<ul style="list-style-type: none"> • Complete STP optimization plan by 31 March 2002 • Issue national guidance on effluent monitoring by 31 March 2002 (Assistant Deputy Minister (Infrastructure & Environment)) • Develop and implement an effluent monitoring plan for storm sewers • Test discharges to municipal systems periodically for conformance with local standards
B.6. Contaminated sites are remediated, under remediation or risk managed	<ul style="list-style-type: none"> • Percentage of contaminated sites that are remediated, under remediation or being risk managed 	<ul style="list-style-type: none"> • Register contaminated sites in departmental property management (Aladdin) database • Update Contaminated Sites Remediation Framework by 01 April 2001 (Assistant Deputy Minister (Infrastructure & Environment))
B.7. Fuel storage tank systems conform to federal guidelines	<ul style="list-style-type: none"> • Percentage of fuel storage tanks in conformance by tank type (aboveground and underground) • Percentage of facilities with management plans in place 	<ul style="list-style-type: none"> • Implement fuel storage management plans by 31 March 2002 • Operate and maintain tanks in accordance with federal guidelines
B.8. Reduce aviation fuel storage capacity at Air Command facilities by 30% by 31 March 2004	<ul style="list-style-type: none"> • Percentage reduction in aviation fuel storage capacity at Air Command facilities 	<ul style="list-style-type: none"> • Fuel rationalization study – (Air Command)

TABLE 1 - continued

...continued

Issue Pollution

<p>B.9. Reduce treated water consumption by 3% by 31 March 2004 from 2000/2001</p>	<ul style="list-style-type: none"> • Volume (m³) of treated water consumed per year 	<ul style="list-style-type: none"> • Monitor treated water use on an ongoing basis • Maintain water distribution systems • Incorporate water saving methods in renovation and construction projects • Review industrial processes that use large volumes of treated water for water efficiency alternatives and implement preferred options
<p>B.10. Reduce solid waste landfilled by 3% by 31 March 2004 from 2000/2001</p>	<ul style="list-style-type: none"> • Weight (tonnes) solid waste landfilled from representative facilities 	<ul style="list-style-type: none"> • Identify representative facilities by 01 April 2001 • Incorporate waste reduction plans into all construction and demolition projects over 1000 m² in floor area • Implement waste reduction plans based on best practices, local programs and 3Rs (reduce/reuse/recycle)
<p>B.11. Demonstrate a downward trend in the volume of reportable spills</p>	<ul style="list-style-type: none"> • Volume of material spilled • Percentage of materials spilled versus material recovered • Quantity of aviation fuel jettisoned 	<ul style="list-style-type: none"> • Implement risk reduction strategies where applicable • Maintain appropriate spill response capability • Incorporate departmental reporting (SpillNet) and follow-up into day-to-day operations

TABLE 1 - continued

Issue Climate Change, Ozone Depletion and Air Quality

Goal Protect the atmosphere

- Objectives**
- Reduce the impact of releases and emissions on air quality
 - Minimize the introduction of greenhouse gases and ozone depleting substances into the environment

Target	Indicator(s)	Action(s) Supporting Common Steps (page 17)
C.1. Phase out products and equipment containing halocarbons based on economic, environmental and operational considerations	<ul style="list-style-type: none"> • Ozone-depleting potential of halocarbons remaining in service 	<ul style="list-style-type: none"> • Develop departmental strategy for the removal of halocarbons from equipment holdings (Assistant Deputy Minister (Materiel)) • Develop and implement phase-out and substitution plans for in-service equipment using halocarbons
C.2. Reduce the environmental impact of halocarbon releases	<ul style="list-style-type: none"> • Total Ozone Depleting Potential of halocarbon releases per year • Total Global Warming Potential of halocarbon releases per year 	<ul style="list-style-type: none"> • Incorporate departmental reporting (SpillNet) and follow-up into day-to-day operations
C.3. Develop a national air emissions strategy by 31 March 2003	<ul style="list-style-type: none"> • Strategy endorsed at national level 	<ul style="list-style-type: none"> • Assistant Deputy Minister (Infrastructure & Environment) to lead
C.4. Reduce Greenhouse Gas (GHG) emissions in accordance with DND/CF allocation under "House-in-Order"	<ul style="list-style-type: none"> • GHG emissions from infrastructure • GHG emissions from DND commercial vehicles • GHG emissions from DND vehicles and equipment linked to National Security 	<p>Develop a 3-year action plan by 01 April 2001 to:</p> <ul style="list-style-type: none"> • Monitor and track GHG emissions through energy consumption in all DND facilities • Submit buildings on Bases and Wings to Energy Performance Contracts in support of the reduction target • Monitor and track GHG emissions through fuel use of all DND commercial vehicles • Submit DND's commercial fleet to "best practices" for more energy-efficient vehicles • Monitor and track GHG emissions through fuel use of all DND vehicles and equipment linked to National Security <p>(Assistant Deputy Minister (Infrastructure & Environment) to facilitate)</p>

TABLE 1 - continued

Issue	Stewardship
Goal	Fully integrate environmental considerations into Defence management systems, processes and activities
Objectives	<ul style="list-style-type: none"> • Integrate environmental management system principles into the Defence management framework • Incorporate environmental considerations into life cycle management processes

Target	Indicator(s)	Action(s) Supporting Common Steps (page 17)
D.1. Implement environmental management systems by 31 March 2004	<ul style="list-style-type: none"> • Percentage of Headquarters and Bases/Wings with implemented environmental management systems 	<ul style="list-style-type: none"> • Develop environmental management systems consistent with departmental policy and the national framework
D.2. Promulgate national Green Procurement Strategy by 31 March 2002	<ul style="list-style-type: none"> • Strategy endorsed at national level 	<ul style="list-style-type: none"> • Assistant Deputy Minister (Materiel) to lead