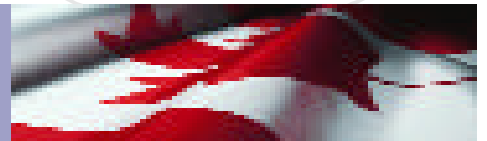


## SUSTAINABLE DEVELOPMENT STRATEGY 2003

# Environmentally Sustainable Defence Activities



[www.forces.gc.ca/admie/dge/sds/sds2\\_e.htm](http://www.forces.gc.ca/admie/dge/sds/sds2_e.htm)



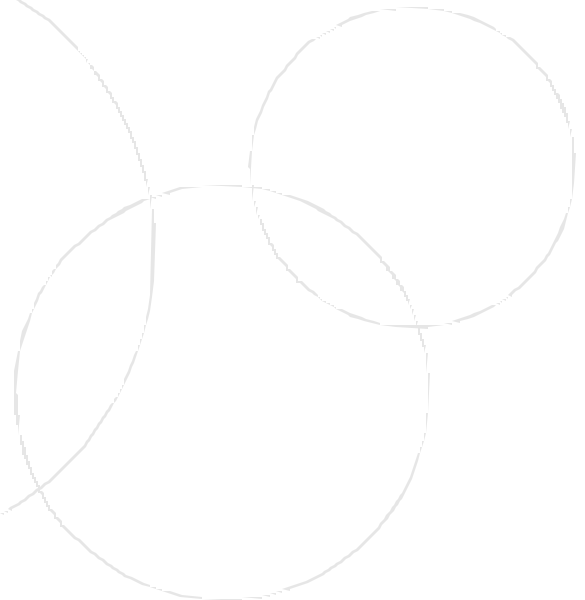
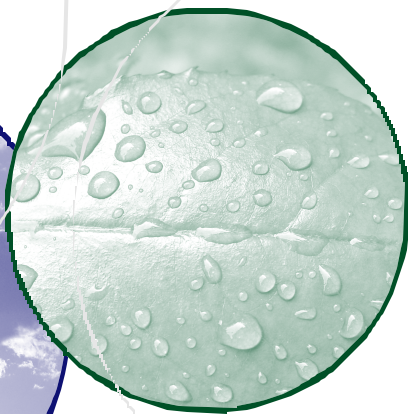
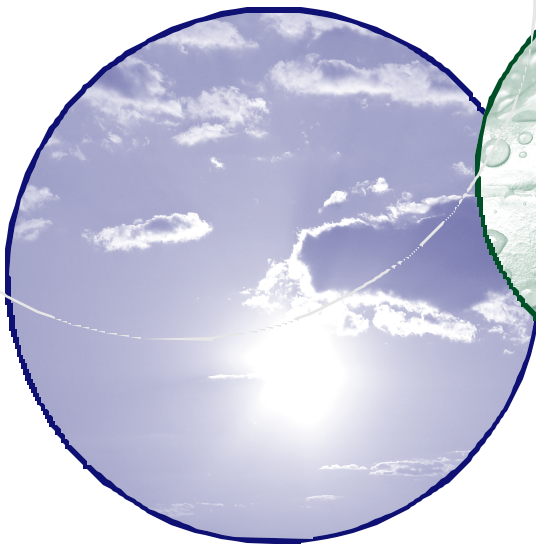
A-EN-007-000-AG-003  
December 10, 2003

# Code of Environmental Stewardship

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The Department of National Defence and the Canadian Forces commit to:

- ✦ 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 recognise 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;
- ✦ practise 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.





# Message from the Minister of National Defence

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In the years since the United Nations Commission on Environment and Development (UNCED) first coined the phrase “sustainable development”, the practical dimensions of “development that meets the needs of the present without compromising those of future generations” have assumed an increasingly high profile in the daily activities of government, business and industry.

The pragmatic application of sustainable development principles assumes ever greater urgency as increasing evidence of environmental degradation prompts such international measures as the Kyoto Protocol on greenhouse gases, the Montreal Protocol on halocarbon releases, and the Basel Convention on the trans-boundary shipment of hazardous waste.

In 1995, the Government of Canada responded to this challenge both abroad and at home. Amendments to the Auditor General Act have created a legislated requirement for Ministers to table in Parliament their plans for achieving sustainable development and to update those plans at least every three years.

The Department of National Defence’s Sustainable Development Strategy 2003 recognizes the environmental impacts of our activities on the world around us. It declares our commitment to minimize negative impacts and sets out a plan for achieving positive outcomes in terms of our stewardship of Canadian lands. The Defence Environmental Management System provides the management framework for achieving that plan. These two tools provide realistic targets as well as clear direction to members of the Defence team.

I am confident that the Department of National Defence and the Canadian Forces will continue to show leadership in support of this important government initiative.



A handwritten signature in blue ink that reads "David Pratt". The signature is stylized and includes a long horizontal flourish extending to the right.

David Pratt, P.C., M.P.  
Minister of National Defence

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

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As the Minister of National Defence has stated in the House of Commons, "We take our environmental responsibilities very seriously indeed". The considerable progress made in the last six years since we publicly undertook to meet environmental targets under the aegis of the Defence Sustainable Development Strategy reflects the depth of this commitment. While much has been done, more is necessary. This, our third update of the Defence Sustainable Development Strategy, continues the process started in 1997 of integrating environmental considerations into all aspects of our activities. As with past strategies, the focus on the environmental pillar of sustainable development is a conscious decision based on the essentially operational nature of our mandate.

The Defence Sustainable Development Strategy provides direction that must be translated into concrete action by all members of the Defence Team through the business planning process. The policies, tools and procedures to advance sustainable development are in place across the Defence organization. Now, everyone must do his or her part.

R.R. Henault  
General  
Chief of the Defence Staff

H el ene Gosselin  
Acting Deputy Minister



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# Introduction

The Defence Sustainable Development Strategy 2003 provides direction and guidance for the Department of National Defence and the Canadian Forces, collectively referred to as Defence, to discharge its obligations in support of Canada's objective to contribute to a legacy of sustainability.

The Defence Sustainable Development Strategy 2003 (Defence SDS 2003), acknowledges the unique aspects of the Defence mandate and mission, which are described more thoroughly in the annual Defence Report on Plans and Priorities. The key roles of Defence are to defend Canada, defend North America in cooperation with the United States, and contribute to international peace and security. It is through the exercise of these roles that Defence contributes to a world order in which economic, social, and environmental sustainability can be a reality.

As with past years, the most visible focus of Defence SDS 2003 is the environmental dimension of sustainable development. This is in recognition of the fact that environmental indicators provide the most reliable measurement



of progress for an operational entity such as Defence.

Defence SDS 2003 represents an important milestone. It is the first SDS that has the benefit of the experience of one complete SDS cycle (SDS 1997), including management review of how Defence delivered on its commitments. It is also the first SDS that has the advantages of an Environmental Management System framework that now extends throughout the organisation.

While the SDS is a national strategy, implementation of the SDS is a function of the chain of command. Commanders and senior managers are responsible for ensuring that the necessary direction, resources, and action plans required for implementing the SDS are reflected in all levels of business plans and for reporting on targets within their areas of responsibility.



# Departmental Profile

## The Defence Mission

Defence's mandate is to defend Canada and Canadian interests and values while contributing to international peace and security.

Defence is one of Canada's most visible national institutions, reflective of Canadian values, diversity and interests and with a presence in more than 3,000 communities in every province and territory across the nation. The many organisations and diverse activities for which the Minister of National Defence is responsible are set out in the document entitled The Defence Portfolio 2002.

Within Canada, key Defence services include:

- ✦ surveillance and control of Canadian approaches and territory;
- ✦ support to other government departments and agencies, e.g. fisheries patrols;
- ✦ national search-and-rescue services;
- ✦ assistance to civil authorities;
- ✦ aid to the civil power, delivered pursuant to section 275 of the National Defence Act;
- ✦ support for the federal response to terrorist and asymmetric threats;
- ✦ emergency preparedness; and,
- ✦ support to major international events in Canada.

Defence also contributes to broader national priorities. In addition to its contribution to the federal environmental agenda, Defence supports Aboriginal communities through the Canadian Rangers and the Junior Canadian Ranger Program, and Canada's youth through the Cadet movement; is a major federal sponsor and advocate of research and development through

Defence Research and Development Canada; and is an essential part of our national history, heritage, and identity.

In North America, Defence contributes to continental security in co-operation with the United States. Canada and the United States are co-signatories of more than 80 treaty-level defence agreements and 250 memoranda of understanding.

Internationally, Canada participates in multilateral operations mounted by the United Nations, the North Atlantic Treaty Organization (NATO), and coalitions of like-minded nations. Defence also makes significant contributions to NATO training programs. Defence supports a wide range of arms-control activities; maintains the ability to respond rapidly to humanitarian emergencies worldwide through the Disaster Assistance Response Team; and maintains the ability to protect and evacuate Canadians from areas threatened by conflict.

The Annual Report of the Chief of the Defence Staff details the current state of the Canadian Forces in the context of key achievements and challenges.

## Protecting the Environment

Defence is committed to ensuring that its activities and operations are conducted in an environmentally sustainable manner. In support of this policy, Defence has a multi-faceted environmental protection and stewardship program that extends through every level of decision-making.

This includes:

- ✦ environmental management programs to address the core environmental issues



associated with the activities of the Navy, Army, Air Force and other major Defence entities (such as the Materiel Group and Defence Research and Development Canada);

- ✦ the Corporate Environmental Program which addresses environmental pressures on orphan/legacy properties as well as certain active sites; and,
- ✦ other major environmental projects such as the Distant Early Warning Line Clean-Up Project and the decommissioning of military facilities.

### **The Defence Sustainable Development Strategy**

Defence SDS 2003 provides strategic direction and priorities for furthering sustainable development through a focus on environmental protection and stewardship. The emphasis on the environmental dimension of sustainable development recognises the operational nature of the Defence mandate.

The strategic emphasis on minimising the environmental footprint of Defence activities affords the greatest opportunity for Defence to effect significant change in support of sustainability. The results of this approach do not merely minimise negative effects but often produce positive benefits both for the environment and for society.

In discharging its core responsibilities for contributing to national and international security, Defence makes a significant contribution to the social and economic dimensions of sustainable development. Since Defence does not control the nature or extent of the ancillary socio-economic benefits flowing from the discharge of its mandate, it does not attempt to target them as it does its environmental impacts.

### **Linkages and Connections to the Broader Defence Framework**

In her 2001 report, the Commissioner of the Environment and Sustainable Development

suggested that "rather than trying to isolate the social dimension, we should go back to basics and think about human well-being and environmental quality and the linkages between them."

These linkages are apparent throughout the Defence SDS and the Defence environmental program. The clean up of contaminated sites has obvious social, economic and health implications, as do pollution prevention measures. Training area management plans provide social and economic benefits to the community at large, by minimising the negative impact of Defence activities. They enhance the potential use of some areas for recreational or commercial activities and contribute to the protection of unique ecosystems.

As an integral part of the strategic management and direction framework, the Defence SDS links to other internal strategies and programs that further the principles of sustainable development. For example, Defence participation in the "Procurement Strategy for Aboriginal Business," provides social and economic spin-offs to aboriginal business development.



# Consultation

The consultations for Defence SDS 2003 followed a track that had been well proven for SDS 1997 and SDS 2000. Consultations were held internally with the Defence managers, technical experts, staff, and personnel; and externally with federal departments and agencies. Through these consultations, Defence reinforced its awareness of current issues and concerns and ensured that the SDS is grounded in the realities of the Bases, Wings and organisations through which it is implemented.

## Internal Consultations

Internal consultations for Defence SDS 2003 were both structured, with formal working groups and meetings, and unstructured, through the day-to-day interaction with the staffs and managers dealing with ongoing environmental and operational matters. These consultations were essential in building a common understanding of evolving sustainable development issues; identifying lessons learned; and finalising Defence SDS 2003.



## External Consultations

Consultations with other federal Departments and Agencies provided a means for coordination on horizontal issues, such as sustainable building. Participation in committees such as the Sustainable Development in Government Operations committee and working groups, as well as participation in the Interdepartmental Network on Sustainable Development Strategies were key instruments in this regard, and fostered a common understanding of government policies and priorities.



The Department of National Defence and the Canadian Forces is an active participant in Sustainable Development in Government Operations (SDGO), an interdepartmental initiative designed to identify and coordinate opportunities to advance the federal commitment to be a leader in the development and deployment of sustainable development practices and technologies. Our department is working together with other SDGO departments to promote common measurement and reporting methods.

# From 1997 to 2003: Lessons Learned



## The Assessment Process

In his introductory message to Defence SDS 2000, the Minister of National Defence noted that "Our first Sustainable Development Strategy (SDS 1997) established the blueprint for a proactive approach for the protection of the environment and stewardship of the assets with which we have been entrusted." He added, "In this update of our strategy ... 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."

In the same way, Defence SDS 2003 builds on the achievements and the lessons of previous strategies. In the spirit of continual improvement, the planning process for Defence SDS 2003 included a critical analysis. The framework for this analysis was supported by the reports and recommendations of the Commissioner of the Environment and Sustainable Development. In particular, the Commissioner asked Departments to review:

- ✦ the goals, objectives and targets in their strategy, and performance against them;
- ✦ how the sustainable development strategy has influenced other planning documents and strategies;
- ✦ findings from the Commissioner's reports, departmental audits, and/or self-assessments; and,
- ✦ changing circumstances, including policy direction, legislation, activities, advances in science and technology, and stakeholder interests.

This multi-faceted analysis reflected a broad spectrum of managerial and technical input and involvement, considering the full range of issues and activities from Departmental Performance Reports to discussions at Environmental Officers' Workshops.

## Review of SDS 2000 Goals, Objectives and Targets

Defence SDS 2000 committed to 21 targets in support of the following goals:

- ✦ protection of the health of our ecosystems;
- ✦ protection of human health and the environment;
- ✦ protection of the atmosphere; and,
- ✦ integration of environmental considerations into Defence management systems, processes and activities.

The Defence SDS targets have "made a difference" in integrating sustainable development principles into the corporate culture. For example, the target to eliminate the use of pesticides for cosmetic lawn care purposes not only addresses a growing public concern about pesticides but will also contribute to substantive and meaningful progress in sustainable landscape management. Similarly, the emphasis on targeted reductions in treated water consumption have resulted in an integrated awareness of conservation techniques at all levels of the organisation.

The number of targets in SDS 2000 proved to be manageable, and the targets were, by and large, measurable, affordable, and achievable despite continuing resource constraints. Nevertheless, the targets associated with effluents, storage

tanks and contaminated sites continue to be a challenge. This challenge – and others that are discussed in the Issue Scan – have been recognised and brought to the attention of senior management and were taken into consideration in the development of Defence SDS 2003.



### **Influence on Other Planning Documents and Strategies**

While the Defence environmental policy is now well-entrenched in environmental management systems at all levels, our internal assessment suggests that there is a need to better situate the principles of sustainable development with other Defence programs and plans.

In particular, there is a need to more closely integrate the SDS implementation with strategic direction and business planning at all levels. This would facilitate the balancing of environmental commitments against other priorities facing the Department and reinforce associated responsibilities and accountabilities.

Steps taken to address this need include:

- ✦ ensuring a high level of visibility for the SDS via the annual Reports on Plans and Priorities and Departmental Performance Reports;

- ✦ the provision of functional planning guidance by the Assistant Deputy Minister (Infrastructure and Environment);
- ✦ an intradepartmental Infrastructure and Environment Oversight Committee, chaired by the Assistant Deputy Minister (Infrastructure and Environment), to review and consider strategic realty asset and environmental management matters of the Department and the Canadian Forces; and,
- ✦ Assistant Deputy Minister (Infrastructure and Environment) conferences and training initiatives.

### **Findings from Audits, Reviews and Self-Assessments**

The Commissioner of the Environment and Sustainable Development noted that "departments (including Defence) have demonstrated that a systematic approach to managing Sustainable Development is possible." The next challenge, as the Commissioner stated in her report, is to ensure that (Sustainable Development) "management systems (are) operating at all organizational levels and all sites."

Defence will address this challenge:

- ✦ through the aforementioned Infrastructure and Environment Oversight Committee as well as continued conferences and training;
- ✦ as part of the national Environmental Management Systems (EMS) process, regular environmental compliance and oversight reviews of the Command and Group Principal environmental management systems; and,
- ✦ with the successful implementation of EMS across the organisation and regular internal environmental audits and reviews at the appropriate levels and sites.

In the course of Defence SDS 2003, efforts will continue to focus on:

- ✦ harmonizing performance indicators as closely as possible with operational practices;
- ✦ issuing national technical guidance for implementing and reporting on targets as early as possible in the SDS planning cycle;
- ✦ linking performance measurement and reporting to change and corrective action;
- ✦ closer integration of SDS reporting with the business planning performance measurement and reporting at all levels;
- ✦ fostering corrective action through the chain of command rather than through technical channels; and,
- ✦ promoting better communications and feedback.

### Changing Circumstances

Legislative changes can have a significant impact on the sustainable development strategies. As a matter of policy, Defence is committed to meet or exceed the letter and spirit of all federal environmental laws. As a result, new laws or regulations that come into effect between strategies result in associated targets being removed, since regulatory compliance is implicit in the routine course of Defence activities. For example, the SDS 2000 target to "initiate plans that protect species at risk and their habitats on DND-owned or leased property" does not appear in SDS 2003 because of the legislated requirement for these plans under the Species at Risk Act (SARA). Other legislative developments with potential impacts on SDS 2003 are discussed in more detail in the Issue Scan.

In October 2001, the Defence Management Committee directed Commands and Group Principals to use business planning for routine environmental issues. At the same time, the Committee recognised that certain major projects are beyond the scope of local business

planning and must be managed corporately. This development reflects a natural progression in the Defence environmental program whereby the environmental agenda is moving away from its early reliance on central funding and control towards a framework that recognizes the responsibility and accountability of managers at all levels.

### Is SDS 2000 a good basis for SDS 2003?

SDS 2000 promoted the integration of sustainable development principles into day-to-day Defence activities by turning talk into action with targets that are meaningful, measurable, and achievable. With very few exceptions, the SDS targets were chosen to stimulate change in areas not governed by regulation. Several targets areas continue to be addressed in SDS 2003 either because they require the profile afforded by inclusion in the document to promote their ultimate integration into "business as usual" or because they are priority areas for the Canadian government. Other SDS 2000 targets have been overtaken by events such as new legislation or have been integrated into normal operational practice.

SDS 2000 was designed as both a strategic document and an effective accountability tool. There are areas for improvement, as discussed, but overall SDS 2000 provides a solid foundation upon which to advance the ongoing integration of sustainable development principles and practices within Defence.



# Issue Scan

In her 2002 annual report, the Commissioner of the Environment and Sustainable Development described the global sustainable development challenge as follows:

“Governments all over the world are trying to achieve a better quality of life for their citizens, now and for generations to come. This means ensuring the health of the natural environment - the air, water, land, and ecosystems on which we depend. It also means ensuring access to health, education, and social services as well as extending the benefits of economic prosperity to a broader segment of the population. The challenge is to find a way to do this without diminishing the availability of our resources for the future.”

Defence has always considered the environmental, social, and economic dimensions of sustainable development in defining the Department's contribution to the sustainability legacy. This process required that Defence identify those aspects in which it could – and should – make measurable progress consistent with its mandate. Invariably, the conclusion has been that the emphasis of the Defence SDS be on the environmental dimension.

In discharging its mission to defend Canada and Canadian interests and values while contributing to international peace and security, Defence helps to provide for a world in which sustainable development principles and values can be recognized and promoted. Consistent with the limits of its mandate, Defence can only affect those aspects of its activities that it controls directly. It is in the environmental dimension, through the responsible management of the assets with which it is explicitly entrusted, that Defence can have the greatest direct and positive impact on the sustainability legacy.



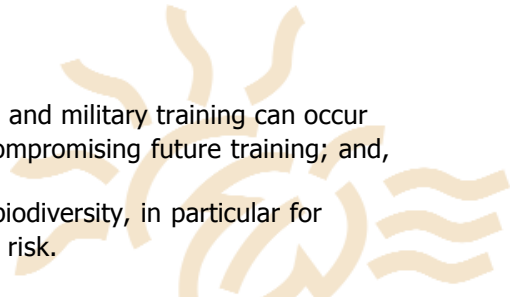
Preparation for Defence SDS 2003 included a review of the issues that underlay the previous strategies. This review included an:

- ✦ analysis of progress towards existing goals and objectives;
- ✦ evaluation of their continuing relevance; and,
- ✦ assessment of the potential impacts of new and emerging legislation.

The review also took into account the findings of a strategic level risk assessment of the major environmental pressures facing the Department.

The Department confirmed the continued relevance of the issues that have been the focus of the Defence SDS since 1997. These issues are:

- ✦ Ecosystems;
- ✦ Pollution Prevention;



- ✦ Climate Change, Ozone Depletion and Air Quality; and,
- ✦ Managing for Sustainable Development.

In some instances, activities that have been the subject of targets in past strategies are now integrated into routine operations to the point where further reductions are no longer feasible. Nonetheless, we will continue to report on these commitments since they remain government priorities (see Commitments to Continual Improvement).

### Ecosystems

Defence is entrusted with the management of approximately two million hectares of land. Navy, Army and Air operations and training routinely take place over large areas of land, sea, and airspace within Canada and beyond.

Acknowledging the potential impact of its activities on these areas, protecting the health of our ecosystems has been a goal of the Defence SDS from the outset. In SDS 2003, Defence will further this goal through commitments to:

- ✦ Sustainable use of military training areas;
- ✦ Plan and conduct military and non-military activities on Defence land and marine training areas such that adverse impacts are

minimized and military training can occur without compromising future training; and,

- ✦ Preserve biodiversity, in particular for species at risk.

These are long-term objectives that will almost certainly be reflected in future strategies. Notwithstanding the continuing relevance of these objectives, factors such as progress in meeting past targets and developments in federal legislation have led to changes in the targets for SDS 2003.

First and foremost among these developments is the Species at Risk Act (SARA). In anticipation of SARA, Defence included a target in SDS 2000 to initiate plans to protect species at risk and their habitats for DND-owned or leased property. With the proclamation of SARA in June 2003, these plans fall within legislated requirements and therefore will not be targeted in SDS 2003, although continued positive results are anticipated.

Although not directly affected by legislative changes, the SDS 2000 targets that addressed Integrated Pest Management (IPM) and the use of pesticides for cosmetic lawn care purposes have been integrated within the Defence environmental program. IPM plans are being developed and implemented at Bases and Wings and appropriate internal directives established. A similar internal directive has been issued for cosmetic lawn care. These issues no longer require the special profile of SDS targets.

Developing and implementing the concept of sustainable use of military training areas is a major challenge, a challenge with almost as many dimensions as there are training areas, each with its unique environmental characteristics. Training area management plans were an important step in identifying and alleviating some immediate environmental stresses. Given that training is key to the Defence mandate and that military training areas are indispensable to training, Defence must develop practical and affordable measures to ensure the sustainable use of these assets both



from the operational and ecosystem perspectives.

### Pollution Prevention

Pollution prevention is a cornerstone of Defence's Code of Environmental Stewardship. In SDS 2003, Defence commits to:

- ✦ Manage hazardous materials responsibly;
- ✦ Minimize the sources for introducing pollutants into the natural environment;
- ✦ Ensure appropriate management of potential pollutants;
- ✦ Minimize the consumption of non-renewable resources;
- ✦ Maximize opportunities to reduce, reuse or recycle consumable materials and packaging; and,
- ✦ Maximize pollution prevention opportunities.

Although these objectives are ongoing from previous strategies, SDS 2003 introduces several changes to the targets.

Revisions to the National Pollutant Release Inventory (NPRI) have led to changes to targets that deal with hazardous materials and wastes, reflecting a more integrated approach to pollution prevention. The hazardous material management plans that were developed and implemented in SDS 2000 will prove their worth in supporting the revised targets. In addition, a new target has been introduced to address waste fuels, one of the largest components of the Defence hazardous waste stream.

Contaminated sites are still a Defence priority. For SDS 2003 and beyond, Defence will emphasise reduction of the Department's contaminated sites liability.

Polychlorinated biphenyls destruction has been a Defence SDS target since 1997. This requirement is now fully integrated within the day-to-day environmental program and

anticipated amendments to regulations associated with this issue will govern these activities in future.

Bringing fuel storage tanks into conformity has also been a Defence SDS target since 1997. Anticipated regulatory changes will require compliance. Consequently, this activity falls within legislated requirements and therefore will not be targeted in SDS 2003.

For SDS 2000, the Air Force through the aviation Petroleum Oils and Lubricants (POL) Project, took an innovative approach to minimize the risks associated with fuel storage tanks, namely, to reduce aviation fuel storage capacity by 30%. Business plans were developed and the implementation of these plans will carry over into SDS 2003. At the same time, Defence's Material Group through the POL Review has continued to build on this initiative to minimize the liability associated with fuel storage and distribution across Defence as a whole.

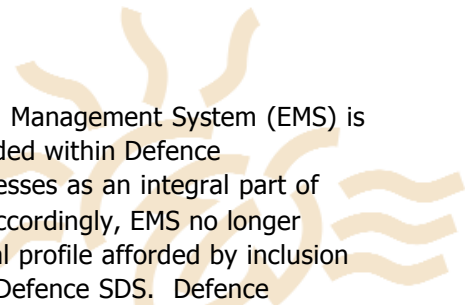
### Climate Change, Ozone Depletion and Air Quality

As the largest federal department, Defence efforts with regard to ozone depletion and climate change are key components in helping to fulfill the Federal Government's commitments under the Montreal and Kyoto Protocols.

With its large fleet of vehicles, ships and aircraft, its extensive infrastructure, the scope and nature of its training, and the wide range and volume of energy and materials that it consumes, Defence has a major role to play in contributing to the federal government's actions to meet this challenge.

*“On a global scale, the problem of climate change is creating new health and environmental risks and threatens to become the defining challenge for generations to come.”* Speech from the Throne 2002





In SDS 2003, Defence commits to:

- ✦ Reduce the impact of releases and emissions on air quality; and,
- ✦ Minimize the introduction of greenhouse gases and ozone depleting substances into the environment.

As a major part of this effort, Defence committed in SDS 2000 to develop a national air emissions strategy. The Defence air emissions strategy focuses on the four main emission sources within Defence: central heating plants; paint facilities; waste incinerators; and fleet maintenance facilities. Over the next three years, the emphasis of this strategy will be to implement periodic emissions testing based on applicable guidelines and standards.

Defence efforts to reduce greenhouse gas emissions by 2010 in accordance with our Federal "House-in-Order" allocation are on-track, and this target continues in Defence SDS 2003. Initiatives to minimize the environmental risk associated with halocarbons also continue in Defence SDS 2003.

### **Managing for Sustainable Development**

As an indication of the importance that Defence places on the integration of environmental considerations into Defence management systems, the title of this issue has been changed from "Stewardship" to "Managing for Sustainable Development" to better reflect the emphasis on influencing management processes.

In SDS 2003, Defence commits to:

- ✦ Incorporate environmental considerations into life cycle management processes;
- ✦ Promote environmentally responsible design, commissioning, operation and maintenance, decommissioning and demolition of infrastructure; and,
- ✦ Promote the procurement of environmentally responsible goods and services.

The Environmental Management System (EMS) is now firmly embedded within Defence management processes as an integral part of doing business. Accordingly, EMS no longer requires the special profile afforded by inclusion as a target in the Defence SDS. Defence experience in this area has led to requests from several European nations for bilateral assistance to their respective efforts to implement environmental management within their militaries. In addition, Defence co-chaired an international NATO Committee on the Challenges of Modern Society workshop on EMS in Vyskov, the Czech Republic, in October 2002.

Efforts to promulgate a Defence Green Procurement Policy are progressing in line with developments in Treasury Board Green Procurement Policy. The objective of green procurement is to ensure procurement of goods and services that meet not only functional, technical and financial requirements, but address environmental considerations. The Materiel Group has also nominated a DND/CF Green Procurement Champion and co-chairs the Sustainable Development in Government Operations Green Procurement Task Group which has been established to coordinate and provide direction on greening procurement government-wide.

Sustainable building has been identified as a government priority. Many of the elements of sustainable building are being incorporated within the range of best practices available to infrastructure planners. Defence co-chairs the Sustainable Development in Government Operations Task Group on Sustainable Real Property. The special profile afforded by inclusion as a target in the Defence SDS will accelerate the integration of the sustainable (green) building concept into normal operations.



# Goals, Objectives and Targets

Consistent with the Guide to Green Government, Defence SDS 2003 is based on a hierarchy of commitments. These commitments are framed as goals, objectives, and targets. Goals provide the long-term strategic direction for the SDS. Objectives provide a more precise description of the results that Defence is pursuing. Targets describe the specific, measurable outcomes that Defence commits to achieve within a stated time frame.

Integrating environmental with economic considerations in decision-making means that affordability was a concern throughout the internal consultations from which consensus was achieved on the targets. To this end, SDS development was conducted concurrent with the business planning process.



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

## Commitments to Continual Improvement

For SDS 2003, Defence adopted an innovative approach to certain "traditional" SDS issues. For these issues, Defence is introducing the concept of "Commitments to Continual Improvement."

The commitments, described in Table 2, represent issues that were formerly SDS targets but that have since been integrated into routine day-to-day operations and decision-making. Because these issues remain subjects of interdepartmental or "horizontal" interest, it is desirable to maintain their visibility through the environmental reporting component to ensure solid integration of sustainable development principles into the business of defence and demonstrate our long-term commitment to continual improvement.

### Goose Bay Low Level Training Area receives ISO EMS Certification

*Flying training at the Goose Bay Low Level Training Area (LLTA) averages approximately 5,000 low level flights per season (March to November) at altitudes as low as 100 feet. Defence has recognized the potential for adverse effects arising from this activity and the resulting need for an environmental management system to minimize the risk and severity of those impacts.*

*The Canadian General Standards Board certified the low-level flying activity at the Goose Bay LLTA in 2003 to the International Organisation for Standardisation ("ISO") 14001 standard. The low-level flying activity at the Goose Bay LLTA is the first air force activity to receive this certification and is one of a very select group of military training programs in the world to do so. This achievement confirms Defence's commitment to conduct foreign military training in an environmentally responsible manner.*



# Action Plan

The action plan for the Defence SDS is based on a hierarchy of strategic and operational direction through the Defence chain of command.

At the highest level, broad strategic commitment to the development and implementation of the SDS is provided through the Report on Plans and Priorities and the Defence Plan. This direction is complemented by horizontal planning guidance provided by the Assistant Deputy Minister (Infrastructure and Environment) in the course of regular oversight meetings, training, conferences and presentations.

The Assistant Deputy Minister (Infrastructure and Environment) provides oversight and advice, establishes departmental performance measures, monitors the implementation of the SDS by the chain of command, and acts as the focal point for coordinating efforts within Defence and with

other Departments and stakeholders. In addition, the Assistant Deputy Minister (Infrastructure and Environment) ensures that detailed documents containing technical guidance and direction, including reporting requirements, are prepared for each SDS target.

Implementation of the SDS is a function of the chain of command. Commanders and senior managers are responsible and accountable for ensuring that the necessary direction, resources, and action plans required to implement the SDS are reflected in all levels of business plans and for reporting on targets within their areas of responsibility.

Considerations supporting implementation of sustainable development actions as well as common steps for achieving individual targets are detailed in Table 3.



## Osprey nest relocation: Stewardship in action

**Nest translocation date:** 24 September 2003

**Translocation duration:** 09:30-13:15

**Weather:** clear sky in morning; thin, broken overcast in afternoon; light breeze; 20° C; no precipitation

The nesting platform was manufactured by Construction Engineering (CE) and was inspected by professional biologists prior to nest placement. The materials and

workmanship were in accordance with the specifications provided by the subject experts. The nest was secured and then lifted by crane from the original location, intact with a negligible loss of sticks. The nest was lowered directly onto the nesting platform. A few Douglas-fir branches were added to the periphery of the nest to provide added structural stability. Several trout carcasses were placed back into the nest. The nest and platform

were raised by crane onto the new pole. The platform was bolted to the cross-beams by CE Electrician workers.

The only osprey sighted near the nest site was the juvenile with the injured leg. It first appeared at 12:05, after the nest had been taken down. It flew over the work site, calling. It then perched in a nearby Douglas-fir and flew back over the site about 30 minutes later. At 13:23 the osprey circled twice over the new nest then settled on the power pole where the nest was originally located. It remained perched there until 14:30, when it flew to the new nest site, landed, and began feeding on the trout carcasses about 10 minutes later.

# Measurement, Analysis and Reporting of Performance

The measurement, analysis and reporting framework for Defence SDS 2003 is an integral component of the Department's overall performance measurement process.

The targets and commitments in Tables 1 and 2 are the key indicators upon which the Department relies to measure and report its progress in meeting its sustainable development commitments.

## Measurement

Performance indicators have been identified for each of the targets in Table 1.

For the commitments to continual improvement, Table 2 describes the areas on which Defence will report.

## Analysis

The Assistant Deputy Minister (Infrastructure and Environment) 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 are being met;
- ✦ evaluate the ongoing effectiveness of the environmental management system;
- ✦ identify whether the needs and expectations of Defence stakeholders are being met; and,
- ✦ provide early warning of emerging problems or deficiencies in certain areas.

It is essential that the chain of command at all levels within Defence 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 as an integral part of the annual Departmental Performance Report.





## Table 1 – Targets, Indicators and Supporting Actions

<b>ISSUE</b>	Ecosystems
<b>GOAL</b>	Protect the health of our ecosystems
<b>OBJECTIVES</b>	<ul style="list-style-type: none"> <li>✦ Sustainable use of military training areas</li> <li>✦ Plan and conduct military and non-military activities on DND/CF land and marine training areas such that adverse impacts on habitats are minimized and military training can occur without compromising future training</li> <li>✦ Preserve biodiversity, in particular for species at risk</li> </ul>

TARGET	INDICATOR(S)	SUPPORTING ACTION(S)
A.1. Measure the <b>sustainability of military training areas</b> by 31 March 2010	<ul style="list-style-type: none"> <li>✦ Develop indicator model for land-based training areas by 31 March 2005</li> <li>✦ Validate indicator model for land-based training areas by 31 March 2006</li> <li>✦ Develop indicator model for maritime training areas by 31 March 2006</li> <li>✦ Validate indicator model for maritime training areas by 31 March 2007</li> <li>✦ Develop indicators for 20% of affected land-based properties by 31 March 2007</li> <li>✦ Develop indicators for remaining affected properties by 31 March 2009</li> <li>✦ Report on the measure of sustainability for all affected properties by 31 March 2010</li> </ul>	<ul style="list-style-type: none"> <li>✦ Assistant Deputy Minister (Infrastructure and Environment) to lead</li> <li>✦ Develop criteria to establish the list of affected properties</li> <li>✦ Develop and validate indicator model</li> <li>✦ Implement indicator model on affected properties</li> <li>✦ Report on sustainability</li> </ul>

**Table 1 – Continued**

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

TARGET	INDICATOR(S)	SUPPORTING ACTION(S)
B.1. Eliminate or reduce 15% of specified nationally procured <b>high-risk hazardous materials</b> from use by 31 March 2007 from a baseline of 31 March 2004	<ul style="list-style-type: none"> <li>* Percentage of specified nationally procured high-risk hazardous materials reduced or eliminated from use</li> </ul>	<ul style="list-style-type: none"> <li>* Assistant Deputy Minister (Materiel) to lead</li> <li>* Evaluation tool to be refined and integrated with the departmental Hazardous Materials Reference Application by 31 March 2004</li> <li>* Communicate the list of specified nationally procured high-risk hazardous materials by 1 April 2004</li> </ul>
B.2. Reduce the quantity of <b>waste fuel</b> disposed of by 10% by 31 March 2007 from 2003/2004	<ul style="list-style-type: none"> <li>* Percentage reduction in the quantity of waste fuel</li> </ul>	<ul style="list-style-type: none"> <li>* Determine baseline information based on waste disposal manifests</li> <li>* Implement procedures to reduce the quantity of waste fuel sent for disposal</li> </ul>
B.3. Reduce the long-term impact of releases to the environment of specified <b>NPRI substances</b> by 31 March 2007 by: <ul style="list-style-type: none"> <li>* increasing the recovery of lead by 5%</li> <li>* increasing the recovery of ethylene glycol by 10%</li> <li>* reducing the use of dichloromethane by 25% from 2003/2004</li> </ul>	<ul style="list-style-type: none"> <li>* Percentage increase in lead recovery</li> <li>* Percentage increase in ethylene glycol recovery</li> <li>* Percentage reduction in dichloromethane use</li> </ul>	<ul style="list-style-type: none"> <li>* Determine baseline information</li> <li>* Implement procedures to increase the recovery of substances</li> <li>* Improve tracking of scrap metals</li> <li>* Increase emphasis on training area level one clearances</li> </ul>
B.4. Reduce the <b>contaminated sites liability</b> by 4% per year	<ul style="list-style-type: none"> <li>* Percentage reduction in the contaminated sites liability</li> </ul>	<ul style="list-style-type: none"> <li>* Assistant Deputy Minister (Infrastructure and Environment) to lead</li> <li>* Develop a prioritized departmental list of contaminated sites</li> <li>* Implement action plan to address sites in order of priority</li> <li>* Update departmental management plans and departmental database (ECONET) including associated liabilities annually</li> </ul>

**Table 1 – Continued**

TARGET	INDICATOR(S)	SUPPORTING ACTION(S)
B.5. Minimize the environmental liability associated with petroleum <b>fuel storage</b> infrastructure and distribution assets by 31 March 2007	<ul style="list-style-type: none"> <li>✦ Complete Petroleum Fuel Storage Capacity Optimization Study</li> <li>✦ Percentage of site-specific business cases developed</li> </ul>	<ul style="list-style-type: none"> <li>✦ Assistant Deputy Minister (Materiel) to lead</li> <li>✦ Establish POL reduction program</li> <li>✦ Develop list of affected sites</li> <li>✦ Undertake Petroleum Fuel Storage Capacity Optimization Study</li> <li>✦ Develop site-specific business cases</li> </ul>
B.6. Minimize the environmental liability associated with <b>aviation fuel storage capacity</b> by 31 March 2007	<ul style="list-style-type: none"> <li>✦ Percentage of Wings that achieved study recommendations</li> </ul>	<ul style="list-style-type: none"> <li>✦ Air Command to lead</li> <li>✦ Implement recommendations of the 2002 CAS Aviation POL Fuel Infrastructure Reduction Study</li> </ul>

<b>ISSUE</b>	Climate change, Ozone Depletion and Air Quality
<b>GOAL</b>	Protect the atmosphere
<b>OBJECTIVES</b>	<ul style="list-style-type: none"> <li>✦ Reduce the impact of releases and emissions on air quality</li> <li>✦ Minimize the introduction of greenhouse gases and ozone depleting substances into the environment</li> </ul>

TARGET	INDICATOR(S)	SUPPORTING ACTION(S)																						
C.1. Reduce the Ozone Depleting Potential of in-service systems and equipment using <b>halocarbons</b> by 5% by 31 March 2007 from a baseline of 31 March 2004	<ul style="list-style-type: none"> <li>✦ Total Ozone Depleting Potential of in-service systems and equipment</li> </ul>	<ul style="list-style-type: none"> <li>✦ Maintain information on in-service systems and equipment</li> <li>✦ Foster the selection and use of sustainable refrigerants and clean fire suppressant agents</li> <li>✦ Develop and implement phase-out and substitution plans</li> </ul>																						
C.2. Reduce <b>Greenhouse Gas (GHG) emissions</b> by 134.9 kilotonne carbon dioxide equivalent (kt CO <sub>2</sub> eq.) by 2010 from 1998 baseline	<ul style="list-style-type: none"> <li>✦ GHG emissions from infrastructure</li> <li>✦ GHG emissions from married quarters</li> <li>✦ GHG emissions from DND commercial vehicles</li> </ul> <p>The Department will continue to monitor:</p> <ul style="list-style-type: none"> <li>✦ GHG emissions from DND vehicles and equipment linked to National Security</li> </ul>	<ul style="list-style-type: none"> <li>✦ Commands and Group Principals will develop GHG emissions reduction action plans to achieve their individual targets</li> </ul> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">Assigned Reduction Targets (kt CO<sub>2</sub> eq.)</th> </tr> </thead> <tbody> <tr> <td>CAS</td> <td>34.2*</td> </tr> <tr> <td>CLS</td> <td>62.0*</td> </tr> <tr> <td>CMS</td> <td>2.7*</td> </tr> <tr> <td>ADM(HR Mil)</td> <td>8.7*</td> </tr> <tr> <td>ADM(Fin CS)</td> <td>7.8*</td> </tr> <tr> <td>ADM(Mat)</td> <td>-*</td> </tr> <tr> <td>Other</td> <td>0.7</td> </tr> <tr> <td>Married Quarters</td> <td>11.7*</td> </tr> <tr> <td>Vehicles</td> <td>16.9</td> </tr> <tr> <td><b>Total</b></td> <td><b>144.7**</b></td> </tr> </tbody> </table> <p>*Infrastructure reductions                      **The emissions reduction target of 144.7 kt CO<sub>2</sub> eq. provides a small contingency factor</p>	Assigned Reduction Targets (kt CO <sub>2</sub> eq.)		CAS	34.2*	CLS	62.0*	CMS	2.7*	ADM(HR Mil)	8.7*	ADM(Fin CS)	7.8*	ADM(Mat)	-*	Other	0.7	Married Quarters	11.7*	Vehicles	16.9	<b>Total</b>	<b>144.7**</b>
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**Table 1 - Continued**

<b>ISSUE</b>	Managing for Sustainable Development
<b>GOAL</b>	Fully integrate environmental considerations into Defence management systems, processes and activities
<b>OBJECTIVES</b>	<ul style="list-style-type: none"> <li>* Incorporate environmental considerations into life cycle management processes</li> <li>* Promote environmentally responsible design, commissioning, operation and maintenance, de-commissioning and demolition of infrastructure</li> <li>* Promote the procurement of environmentally responsible goods and services</li> </ul>

<b>TARGET</b>	<b>INDICATOR(S)</b>	<b>SUPPORTING ACTION(S)</b>
D.1. Integrate the " <b>green building</b> " concept into the design process	<ul style="list-style-type: none"> <li>* Percentage of eligible new construction projects incorporating the "green building" concept</li> </ul>	<ul style="list-style-type: none"> <li>* Assistant Deputy Minister (Infrastructure and Environment) to lead</li> <li>* Develop and implement departmental "green building" procedures protocol based on recognized standards</li> </ul>
D.2. Promulgate a <b>Green Procurement Policy</b> by 31 March 2005	<ul style="list-style-type: none"> <li>* Policy endorsed and promulgated at national level</li> </ul>	<ul style="list-style-type: none"> <li>* Assistant Deputy Minister (Materiel) to lead</li> <li>* Departmental Green Procurement Policy will flow from Treasury Board Secretariat Policy</li> <li>* Collaborate interdepartmentally on green procurement</li> <li>* Communicate policy</li> </ul>





## Table 2 – Commitments to Continual Improvement

COMMITMENTS TO CONTINUAL IMPROVEMENT	ENVIRONMENTAL REPORTING
I. Responsible <b>liquid effluent</b> management	<ul style="list-style-type: none"> <li>✦ Sewage treatment plant discharges</li> <li>✦ Sewage discharges into municipal systems</li> <li>✦ Storm sewer discharges</li> </ul>
II. Responsible <b>potable water</b> management	<ul style="list-style-type: none"> <li>✦ Treated water consumption/production</li> </ul>
III. Responsible <b>solid waste</b> management	<ul style="list-style-type: none"> <li>✦ Participation in local 3R (Reduce/Recycle/Reuse) initiatives</li> </ul>
IV. Minimize the environmental impact of <b>spills</b>	<ul style="list-style-type: none"> <li>✦ Volume of material spilled per year</li> <li>✦ Number of reportable spills per year</li> </ul>
V. Minimize <b>halocarbon releases</b>	<ul style="list-style-type: none"> <li>✦ Total Ozone Depleting Potential and Global Warming Potential of releases per year</li> </ul>

# Table 3 – Supporting Implementation and Common Steps

<b>Supporting implementation...</b>
<p>To support the implementation of sustainable development, Defence must:</p> <ul style="list-style-type: none"> <li>✦ 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;</li> <li>✦ ensure that personnel have the appropriate training and tools;</li> <li>✦ foster a common environmental policy and doctrine framework;</li> <li>✦ promote the exchange of environmental management information and good practices;</li> <li>✦ foster an open and transparent communications strategy with all our stakeholders, both within and external to government;</li> <li>✦ promote the demonstration of responsiveness to and respect for the environment;</li> <li>✦ integrate pollution prevention into all aspects of day-to-day operations;</li> <li>✦ use green practices, processes and procurement;</li> <li>✦ encourage a consultative approach to community relations;</li> <li>✦ protect cultural and heritage resources; and,</li> <li>✦ work with our military partners on common environmental concerns.</li> </ul>
<b>Common steps...</b>
<p>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:</p> <ul style="list-style-type: none"> <li>✦ assign responsibilities and resources;</li> <li>✦ establish and confirm the baseline;</li> <li>✦ survey the market;</li> <li>✦ research and test alternative products, processes and practices;</li> <li>✦ assess the environmental impact of the alternatives, throughout their lifecycle;</li> <li>✦ develop and validate resource implications using business case analysis;</li> <li>✦ select the preferred/logical alternative;</li> <li>✦ if required, mitigate the impacts of the selected alternative and associated processes;</li> <li>✦ develop an implementation plan and required contingency plans;</li> <li>✦ establish and confirm resource requirements;</li> <li>✦ measure, analyze, and report performance; and,</li> <li>✦ follow up with a view of continuously improving the environmental performance of the processes involved.</li> </ul>