



Defence Environmental Strategy



**A plan for ensuring
sustainable military
operations**



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DND

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Message from the Deputy Minister of National Defence

It is my privilege to present to you our way forward.

The Defence Environmental Strategy outlines the key areas of operations for the Department of National Defence and the Canadian Armed Forces to protect and be good stewards of the environment. It is a forward-looking strategy that demonstrates how we manage the environment sustainably at the Department of National Defence and the Canadian Armed Forces while assuring Canadians of our collective commitment to protecting Canada, Canadians and the values that we hold.

This strategy is unique to the context of defence. Due to the unique challenges and realities facing the Department of National Defence and the Canadian Armed Forces, we must consider a variety of existing and unique tools and options to protect and be stewards of the environment. This strategy provides the cornerstone to enable the Royal Canadian Navy, the Canadian Army and the Royal Canadian Air Force to ensure mission success through the sustainable management of the environment with which we are entrusted by the Government of Canada.

The success of the Defence Environmental Strategy will depend on the efforts of each and every single one of us at the Department of National Defence and the Canadian Armed Forces; we will accomplish this by integrating the strategy's goals and objectives into existing business planning and in our day to day activities. In the end, every gesture, whether big or small, will go a long way in contributing to reaching our objective with regards to environmental stewardship.



Message from the Chief of the Defence Staff

I took office as the Chief of the Defence Staff for the Canadian Armed Forces with a mandate to ensure sustainable operational excellence at home and abroad, maintain required Canadian Armed Forces posture and defence readiness, strengthen the defence team, and maintain defence affordability. The Defence Environmental Strategy supports the hard work that the Department of National Defence and the Canadian Armed Forces are dedicated to in working towards supporting these priorities.

Military operations and environmental protection and stewardship are not and should not be mutually exclusive. We understand there are expectations of the highest order to make sure that Canadians are protected, that we are ready to defend our fellow Canadians and our collective interests.

In fact Canadian Armed Forces personnel work hard every day to make sure we adhere to environmental compliance requirements – to be good stewards of the assets and resources that we are entrusted with. It is exemplified in the work done to remediate former Distant Early Warning (DEW) line sites, in the development of Sustainability Management Plans for Range and Training Areas and in spearheading efforts to reduce the use of hazardous materials.

We join our NATO allies in defining new ways to ensure military success while ensuring we protect those things that are valued by all Canadians: a safe place to live, which includes a clean and safe environment for ourselves and our children, now and well into the future.

The Defence Environmental Strategy puts into words the dedicated work done by the Department of National Defence and the Canadian Armed Forces in protecting the environment, while enabling the success of our mandate in all our operations. It also outlines in clear and concrete language how we are expected to positively contribute to the Department of National Defence and the Canadian Armed Forces commitment to environmental stewardship. I know I can count on your contribution to this collective effort to protect our country and our fellow Canadians.



Message from the Assistant Deputy Minister (Infrastructure and Environment)

It is a privilege for me to present the Defence Environmental Strategy for the Department of National Defence and the Canadian Armed Forces. It builds on the synergies that exist between the Canada First Defence Strategy and the Federal Sustainable Development Strategy to strengthen the way in which the Government of Canada promotes the mandate of the Department of National Defence and the Canadian Armed Forces by ensuring it is fulfilled in a manner that is environmentally sustainable.

When launching its sustainable development strategy entitled Planning for a Sustainable Future: A Federal Sustainable Development Strategy for Canada, in 2010, the Government of Canada stressed the need to balance environmental issues with economic and social considerations. As the Assistant Deputy Minister for Infrastructure and Environment, I am responsible for providing corporate leadership for the management of environmental issues. It is with this in mind that the Defence Environmental Strategy directs the Department of National Defence and the Canadian Armed Forces towards the sustainable management of its operations to meet the needs and to enable the success of Canada's military today and in the future.

The Defence Environmental Strategy showcases the significant effort that has already been made and on which the Department of National Defence and the Canadian Armed Forces will build to fulfill the Government of Canada's commitment to provide enhanced security for Canadians at home while giving assurance that it is being done in a manner that protects the environment for all Canadians now and into the future.



OUR VISION

Moving towards the transformation of Canada's military, the Defence Environmental Strategy represents a shift from simply managing environmental requirements, to effectively integrating and employing best practices through life-cycle management into workplace activities and operations at an organizational level in support of a sustainable modern military.

The vision for the Defence Environmental Strategy is to have National Defence and the Canadian Armed Forces be recognized as a leader in contributing to the sustainable development goals of Canada through the effective and innovative integration of environmental considerations into activities supporting the Defence mandate.

Canada is building a modern military

Canada's military is transforming to become more relevant, more nimble and more responsive to the challenges of the 21st century. In 2008, the Government of Canada released the Canada First Defence Strategy, a 20-year plan to rebuild the Canadian Armed Forces as a first-class, modern military—one that has the people, equipment and support it needs to carry out its vital work in Canada and around the world.

The strategy's central message is that, as the world changes—politically, economically, environmentally and culturally—Canada's military must also transform how it operates. Part of this change involves the military doing more with the resources it has, creating strategies that will bring swift and decisive action, developing predictable processes for responding to increasing and unpredictable threats, and managing its assets efficiently and effectively.

Global trends and widespread predictions about the future indicate that competition for resources could provoke conflicts at home and abroad. Canada's military may be called upon more often to provide security,

stability and humanitarian assistance. The Canada First Defence Strategy ensures that the military will be ready.

A ROLE FOR DEFENCE IN ENVIRONMENTAL STEWARDSHIP

For many years, the Government of Canada has made it a priority to manage its activities with environmental sustainability in mind. Today, the Defence Environmental Strategy along with the Federal Sustainable Development Strategy provides Defence with the direction it needs to continue to evolve as an environmentally responsible and sustainable organization.

Defence is among the federal government's largest employers and maintainers of equipment and infrastructure. Our Navy, Army and Air Force operate and train over large areas of land, sea and airspace at home and abroad. In this country alone, we are entrusted with managing approximately 2.25 million hectares of land. As such, we have a responsibility to show leadership in the realm of environmental sustainability as well as an obligation to manage our assets efficiently on behalf of Canadians.



Photo: Jennifer Rowland



Photo: Jennifer Rowland



Improving our environmental performance in four major areas

A STRATEGY THAT MOVES BEYOND COMPLIANCE

The Defence Environmental Strategy (DES) moves beyond the environmental performance reporting that government policies, regulations and laws require; it is designed to do more than protect the people, air, land and wildlife that are affected by our operations. By making environmental sustainability and compliance integral to our day-to-day decision-making, we will enable the defence mission by ensuring that critical resources are available for training and other operations. At the same, we will uncover ways to reduce our operating costs, which will strengthen the military's overall capacity to serve.

PROCUREMENT CONTRACTING AND OTHER BUSINESS SERVICES, ASSETS, RESOURCES, AND PRODUCTS & SUBSTANCES

The DES groups defence activities into four themes: Procurement Contracting and other Business Services, Assets, Resources, and Products & Substances. Within each theme, activities that have the potential to impact the environment or be impacted by changes to the environment,

were grouped and referred to as "operational categories".

Each category contains specific environmental objectives aimed at supporting military operations through actions like reducing our consumption of costly resources. It is understood that in all its activities, Defence will comply

with legislative requirements. More than that, we will endeavour to respect environmental policies and directives at all levels of government in all regions of the country.





DND Photo

AN EXAMPLE...

Integrating environment into naval activities on land and at sea.

The Royal Canadian Navy has an integrated safety and environmental management system (SEMS) in place to manage the broad range of naval activities from both a human health and safety and environment perspective. The system covers all naval shore and ship based units and is based on ISO 14001 and CSA Z1000. The SEMS is used to integrate environmental requirements in to day to day activities and verify that risks and mitigations are being considered and improved upon respectively. The navy has constantly built on the SEMS to improve its effectiveness and demonstrate progress in protecting the environment.

Improving our environmental performance in four major areas

1. MANAGING OUR PROCUREMENT, CONTRACTING AND OTHER BUSINESS SERVICES

The military requires hundreds of procurement decisions every year, buying a wide range of products and obtaining services. Defence will work to manage its procurement activities so that the business processes behind our decisions, as well as the items we procure, meet our requirements and are in line with our environmental goals.

products in the market and dispose of them in ways that protect the environment. We will communicate our environmental requirements to contractors by writing our processes into our statements of work.



Adapt and continually improve internal services and business operations to minimize their environmental footprints



Ensure that real property transactions use environmental best practices

HOW WE WILL DO IT...



Integrate environmental considerations into our procurement process, from planning through to final disposal

Our work will follow Government of Canada policies on green procurement. When we procure goods for example, we will work to find the least hazardous

Sometimes the military needs to secure additional property—and sometimes we need to rent or sell. When we acquire property, we will consider its environmental condition before making the transaction. When we dispose of property, we will be environmentally diligent, including disclosing everything we know about the property's environmental status.

When Defence develops policies and procedures to ensure its operations are effective we will determine whether the changes have environmental implications. If so, we will work to ensure people, property and the environment are managed according to best practices.

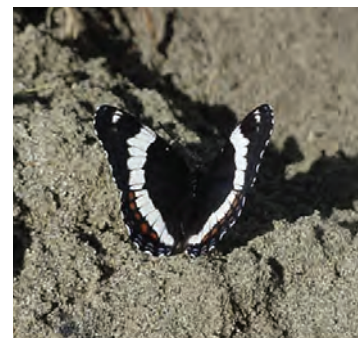


Photo: Jennifer Rowland

A CASE IN POINT...

FROM BARRACKS TO QUIET SUBURBS

When Defence declared Griesbach Barracks in Edmonton Alberta as surplus, Assistant Deputy Minister Infrastructure and the Environment worked with the Canada Lands Company to redevelop the property. In accordance with the Military's environmental standards, the partners undertook a full analysis of the property's condition, including identifying hazardous materials in buildings, cleaning up contaminated sites and identifying buildings with heritage value. Today, the former military barracks is the site of the Village at Griesbach, a residential neighbourhood that continues to honour the site's military heritage.



LESSONS LEARNED...

Using sound science to manage environmental risks

The Canadian Army Range and Training Area Contaminant Management Program is designed primarily to manage, reduce and eliminate risks to the Army presented by the continued use of live-fire munitions. To manage the potential contaminants on ranges and training areas, the Army is developing new policies and techniques based on sound science. These policies will enable the military to continue training and, at the same time, reduce environmental impacts on their training areas.

Improving our environmental performance in four major areas

2. PROTECTING OUR ASSETS

Defence is the custodian of a huge volume of assets. These include vast tracts of land as well as built assets such as equipment, buildings, fleets and military bases. Our goal is to enable Canadian military operations by managing these assets with care and attention. We will ensure our natural assets remain available to personnel for training purposes and that they are sustainable now and into the future. We will manage our built assets efficiently, making sure they are durable and that they consume no more resources than needed.

HOW WE WILL DO IT...



Manage electrical and electronic equipment—from

cradle to grave—to prevent the generation of waste

As technology advances at an increasingly rapid pace, surplus electronics become plentiful. Meanwhile, a major environmental issue with electronics is how and where to dispose of them. When they end up in landfill, hazardous materials find their way into the environment.

We will work to prevent these consequences by repurposing and recycling electronics, including donating computers to school and other parties.



Construct, retrofit and dispose of facilities in a manner that supports military readiness and reduces our environmental footprint

We will work to construct buildings that consume fewer resources and that optimize the use of space, while still meeting our needs. We will expect our demolition contractors to develop comprehensive waste-management plans that salvage as much as possible from old buildings—and dispose safely of what they cannot salvage.



Manage Defence establishments, and training

and operating areas so that we minimize any effects on the environment—while ensuring military readiness

We will continue to manage these areas in accordance with the law and look for ways to lessen any detrimental impact on land, waterways and wildlife making these areas more sustainable both from an operational and environmental perspective.





Courtesy of Combat Camera

Improving our environmental performance in four major areas

2. PROTECTING OUR ASSETS (CONTINUED)

INVESTIGATING...

Camps that are more sustainable for deployed operations

Defence Research and Development Canada and the Canadian Joint Operations Command are currently investigating power and energy technologies to reduce significantly or eliminate fossil fuel consumption for deployed camps. Areas being investigated include:

- Thermal energy recovery, storage and distribution;
- Variable speed drive electrical generators; and
- Electrical energy storage.



Focus on using alternative energy sources where possible to power the commercial fleet

Although not critical to military functions, our commercial fleets are key to our operations. By integrating more alternative-fuel vehicles we will reduce our environmental footprint and still get the job done.



Manage in the most sustainable way possible equipment critical to achieving military missions

We will procure and use military equipment that is as energy efficient as possible, ultimately reducing costs. This goal encompasses a wide range of strategies such as opting to use alternative fuels when we can, to help us become more sustainable.



Ensure that ammunition and explosives are safe and suitable for use and that we manage them to reduce Defence's environmental footprint

Defence uses a great deal of ammunition and explosives and they come with unique environmental issues. As an example, when ammunition expires, we must dispose of it in ways that do not harm the environment. For example, disposing of it in an incinerator could pollute the air. We will find ways to mitigate these issues.



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LESSONS LEARNED...

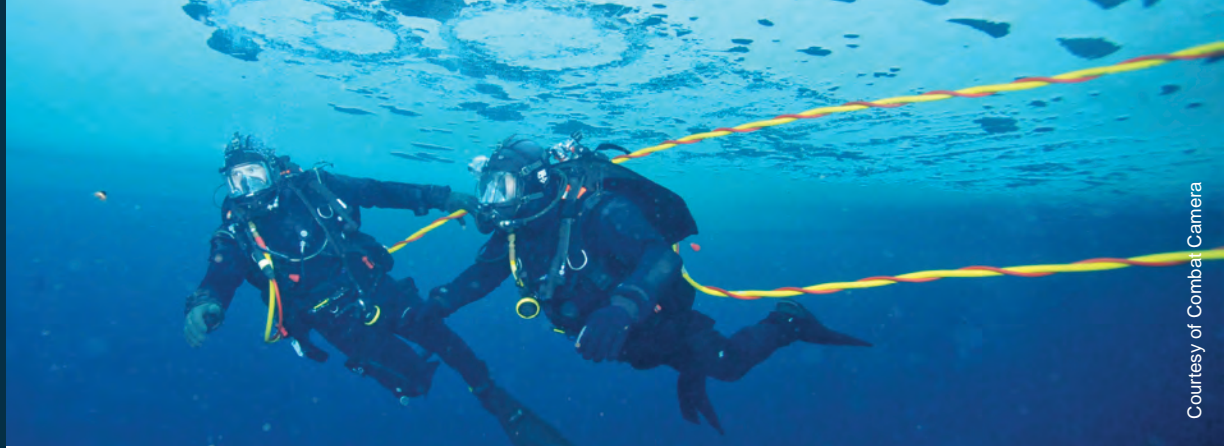
A more efficient Air Force infrastructure

The Royal Canadian Air Force established the Air Force Sustainability Office in 2010. It has launched several initiatives through this office to improve the efficiency of the Air Force's infrastructure. Initiatives include:

- a utility metering program for all heated buildings over 500 square metres to monitor and analyze energy consumption
- facility condition assessments to support better capital planning
- energy and sustainability audits
- the development of promotional and training materials to support local energy conservation programs at Air Force properties



Courtesy of Combat Camera



Courtesy of Combat Camera

Improving our environmental performance in four major areas

3. IMPROVING OUR USE OF RESOURCES

The Defence team requires a great deal of resources to support its activities: energy, water and a wide range of items that will eventually end up as waste. We aim to manage these resources as wisely as possible for the benefit of all Canadians—and also to increase their availability for military purposes. We will conserve and manage our vital resources in a manner that reduces Defence's environmental footprint.

HOW WE WILL DO IT...



Optimize the way we use energy and reduce our dependency on conventional energy sources

There are several ways to reduce energy use. In buildings for instance, one is to make major structural improvements. Another is for the people that work there to make day-to-day choices that support energy efficiency. Throughout Defence, we will train personnel to make wiser choices about energy consumption.



Change our behaviour to ensure we have access to a continuous supply of safe water—and that we use as little water as possible

Defence needs to build a culture that is more conscious of water use. This requires people to behave differently, which can be the most profound change to bring about in an organization.



Work harder to reduce, re-use and recycle the solid waste that our operations generate

Defence generates a great deal of waste; many of us must to do a better job of reducing, reusing and recycling. This can be as simple as taking a minute to sort the recycling into the right bin and, as a result, reduce what we send to landfill.



Photo: Col Claude Wauthier





Improving our environmental performance in four major areas

LESSONS LEARNED...

Converting to sustainable hydraulic fluids

The mineral hydraulic fluids that we use in our aircraft fleets are well known to be harmful to the environment. Departments of defence around the world—including the US, the UK and Australia—have begun a transition away from such products and toward less harmful, synthetic hydraulic fluids. Canada's military has joined the transition. Over the next few years the Assistant Deputy Minister Materiel will convert 13 aircraft fleets from mineral hydraulic fluids to synthetic ones to improve our operability with our military allies.

4. HANDLING OUR PRODUCTS AND SUBSTANCES

Defence requires a range of modern substances and products to carry out its activities. We have a responsibility to manage such substances and products in ways that protect the safety of personnel and environment. For example, it only makes sense when we are working with potentially hazardous substances to reduce the amount we use, find alternatives or eliminate the substances altogether (provided we can do so and still carry out our work).

HOW WE WILL DO IT...



Manage all hazardous materials and chemical substances with care from the moment they are purchased until we dispose of them, and reduce their use where possible

Defence uses a high volume of hazardous materials and chemicals across Canada that help us in our operations. We will make it a priority to search for materials that are less hazardous and that still meet our needs. We will also keep a close eye on domestic and international laws and regulations to make sure we do not use hazardous materials not permitted in other countries.



Handle petroleum, oil and lubricants and their infrastructure with care, and adopt pollution prevention practices.

Fuel availability is essential to our readiness. As a result, we own thousands of storage tanks across the country. We will continue to manage these substances and the infrastructure diligently. To increase our fuel security, reduce our dependence and reduce our environmental footprint, we will look into using alternative and less hazardous fuels and lubricants.



Manage halocarbon and ozone-depleting substances with care.

Ozone-depleting substances are essential to the operation of refrigeration systems, fire suppression systems in planes, air conditioning units in tanks and much more. These substances are known to pose a hazard to the environment and, as a result, legislation is phasing them out. Eventually, they will become extremely expensive to procure. We will work to eliminate our dependence on such substances to ensure that our equipment continues to meet our needs.



Ensure that our use of ionizing radiation sources minimizes risks to human health and the environment.

Our goal in this respect is to ensure ionizing radiation is used in ways that cannot harm human health or the environment.



Manage and treat all wastewater from defence establishments before it is discharged to the environment.

Some of our bases have their own wastewater treatment plants while others are connected to municipal wastewater services. Either way, before we discharge wastewater, we have a responsibility to ensure it is clean enough to meet applicable legislation. We will also look at ways to maximize our reuse of wastewater.



The Department of National Defence and the Canadian Armed Forces will continue to review and report aspects of implementation of the Defence Environmental strategy.

Further information can be found at: www.forces.gc.ca



Courtesy of Combat Camera

The path forward

This publication is just the start of our conversation with personnel and Canadians about how we intend to implement the Defence Environmental Strategy. In the coming months, we will work to define the precise roles and responsibilities of each DND organization for realizing its goals and objectives for each of the operational categories within our four themes.

We will develop detailed plans about how we can further integrate environment considerations into Canada's military operations. And we will define measureable performance-management criteria for continuously improving the Defence Environmental Strategy, its themes and operational categories.

Canada's military will continue to evolve to respond to changing domestic and global circumstances. By implementing the Defence Environmental Strategy, we will support the transformation of Canada's military through the Canada First Defence Strategy to efficiently and effectively integrate environmental considerations into Canada's military to maintain sustainable military operations.

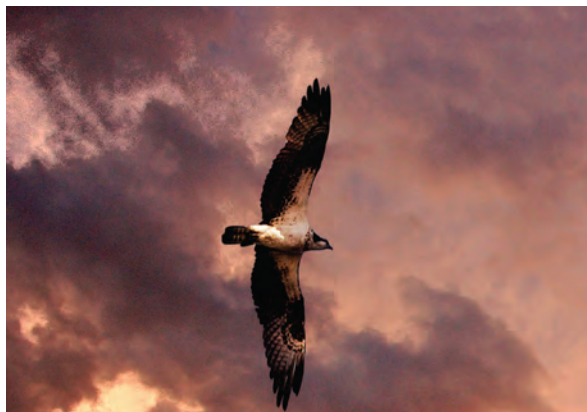


Photo: MWO/Adjum Christian Drouin

