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Evaluation of the Environment, Sustainability and Protection Program



1258-3-047 ADM(RS)
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Canada

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Acronyms

AAFC	Agriculture and Agri-Food Canada	FY	Fiscal Year
ADM(IE)	Assistant Deputy Minister (Infrastructure and Environment)	GC	Government of Canada
ADM(Mat)	Assistant Deputy Minister (Materiel)	GHG	Greenhouse Gas
ADM(RS)	Assistant Deputy Minister (Review Services)	HR	Human Resources
ARA	Accountability, Responsibility and Authority	IAA	<i>Impact Assessment Act</i>
CAF	Canadian Armed Forces	ISO	International Organization for Standardization
CANSOFCOM	Canadian Special Operations Forces Command	L1	Level 1
CEPA	<i>Canadian Environmental Protection Act</i>	NRC	National Resources Canada
CFB	Canadian Forces Base	NRCC	National Research Council Canada
CFIA	Canadian Food Inspection Agency	OCI	Office of Collateral Interest
CJOC	Canadian Joint Operations Command	OECM	Other Effective Conservation Measures
CSC	Correctional Service of Canada	OPI	Office of Primary Interest
DEES	Defence Energy and Environment Strategy	PC	Parks Canada
DEMC	Defence Environmental Management Committee	PSPC	Public Services and Procurement Canada
DESM	Director Environment and Sustainable Management	RCMP	Royal Canadian Mounted Police
DGESM	Director General Environment and Sustainable Management	RP	Real Property
DND	Department of National Defence	RTA	Range and Training Area
DRMIS	Defence Resource Management Information System	RTASS	Range and Training Area Sustainment Summary
ECCC	Environment and Climate Change Canada	SARA	<i>Species at Risk Act</i>
EMS	Environmental Management System	SSE	<i>Strong, Secure, Engaged</i>
Env O	Environment Officer	TBS	Treasury Board Secretariat
ESPP	Environment, Sustainability and Protection Program	TC	Transport Canada
FA	<i>Fisheries Act</i>	UXO	Unexploded Explosive Ordnance
FSDS	Federal Sustainable Development Strategy		

Executive Summary

This report presents the results of the evaluation of the Environmental Protection and Sustainability program segment (6.6.3) within the department's Environment Sustainability and Protection Program (ESPP), during Fiscal Year (FY) 2020/21 by Assistant Deputy Minister (Review Services) (ADM(RS)). The evaluation was conducted in compliance with the Treasury Board [Policy on Results](#) and assesses the program over a five-year period, from Assistant Deputy Minister (Infrastructure and Environment)'s (ADM(IE)) restructuration from 2016/17 to 2020/21.

Program Description

ESPP's primary objective is to ensure Defence activities are conducted in an environmentally responsible and sustainable manner. The program provides direction and guidance to the Defence Team regarding environmental sustainability and protection activities, and manages environmental policies, frameworks, strategies and plans for environmental compliance and sustainability across Defence activities.

Evaluation Scope

The evaluation examined relevance, effectiveness and efficiency of the program. The evaluation focused on assessing the extent to which ESPP supports the Department in meeting its environmental statutory obligations and policy commitments related to Greenhouse Gas (GHG) emission reduction. The evaluation also examined key aspects of efficiency, including the extent to which the program enables a cohesive, integrated Department of National Defence/Canadian Armed Forces (DND/CAF) approach to environmental sustainability and protection.

Summary of Findings

Relevance

There is an ongoing and demonstrable need for the departmental environmental management that ESPP supports. The program's activities align with governmental priorities related to environmental sustainability and protection.

Effectiveness

ESPP has made notable progress towards achieving its outcomes since 2016. The program effectively promotes environmental and operational sustainability, and helps ensure environmental compliance with statutory obligations via its directives, guidance and support. The program has made significant strides in the policy domain, including the development of the 2020-23 Defence Energy and Environment Strategy (DEES), and is on track to meet the 40% GHG reduction target by 2025. Opportunities for improvement include the need for further guidance regarding how Defence will operationalize 2050 GHG policy commitments and a more proactive approach for ensuring compliance with statutory obligations.

Efficiency

While ESPP has enabled a more cohesive, departmental approach to environmental sustainability and protection, the DND/CAF model remains fragmented. Gaps in communication and program guidance were identified, as well as a lack of understanding of roles/Accountabilities, Responsibilities and Authorities (ARA) among environmental stakeholders.

The program's governance and accountability is limited by the absence of an ADM(IE) Environmental Management Framework and a systematic monitoring of compliance with statutory obligations. Finally, although ESPP has made progress towards strategic resource allocation, further prioritization of environmental aspects is needed to fulfill evolving environmental commitments.

See [Annex A](#) for a complete list of findings and recommendations.

Overall Conclusions

The ESPP remains relevant and has shown progress in achieving its outcomes since 2016. The program effectively promotes environmental and operational sustainability, and helps ensure environmental compliance with statutory obligations via its directives, guidance and support. The 2025 GHG emission reduction policy target is also on track to be met. However, a more proactive, integrated, risk-based approach to environmental sustainability and protection is needed moving forward.

Program Profile – Description

The Environmental Protection and Sustainability program (6.6) conducts activities to establish sound and responsible strategic direction to the Defence Team regarding sustainable activities including environmental compliance to legislation and regulations, contaminated sites management, and activities that support the government's environmental and low-carbon policy agenda.

Environmental Protection and Sustainability (6.6.3) is a component of the ESPP, which is delivered by the **Director Environment and Sustainable Management (DESM)** within ADM(IE). The primary objective is **to ensure Defence activities are conducted in an environmentally responsible and sustainable manner**.

The program provides direction and guidance to the Defence Team regarding environmental sustainability and protection activities, and manages environmental policies, frameworks, strategies and plans for environmental compliance to legislation and regulations, and sustainability across Defence establishments and operations.

See [Annex B](#) for evaluation scope and [Annex C](#) for additional information regarding key program activities.



Over one hundred environmental laws and regulations are applicable to the Department's establishments and operations



In 2016, ADM(IE)'s Real Property (RP) function was centralized; however, the environment function remained distributed across Level 1s (L1) with the functional authority being under ADM(IE). The personnel and resources remained with L1s. Since then, DESM has worked to reconsolidate the environmental function, focusing on the department's RP portfolio.

The program has been working on developing an ADM(IE) Environmental Control Framework, also referred to as an Environmental Management System (EMS), in accordance with the International Organization for Standardization (ISO) 14001. The EMS includes integrated procedures and processes for governance, policy, planning, training, monitoring and reporting on environmental performance. The goals of the EMS are to increase compliance with legislation and regulations and apply a systematic, planned approach to managing the program.

Program Profile – Stakeholders

Governance

ADM(IE) is the functional authority for environmental matters within DND/CAF, and is responsible for providing guidance, advice and oversight for environmental protection and stewardship, including national-level environmental issues, objectives and targets. The following groups support ADM(IE) in executing these responsibilities:

Director General Environment and Sustainable Management (DGESM)

DGESM is situated within ADM(IE) and serves as the primary office for activities related to the Department's environmental strategy and programs. DGESM provides support and expertise to environmental programs and projects within Defence. DGESM provides direction and management advice, oversight and related professional services in environmental protection and stewardship.

Director Environment and Sustainable Management (DESM)

(DESM) is one of DGESM's directorates and is most directly involved in delivering the program.



ADM(IE) L2s

Various groups within ADM(IE)'s RP portfolio were identified as key stakeholders, including RP Operations which plays a key role in implementing halocarbon statutory obligations, as well as Director Architecture and Engineering Services and Director Portfolio Requirements, which is heavily involved with GHG emission reduction.

Other L1s

A number of L1s have functions that impact the varying levels of environmental impact. In addition to the CAF (discussed in the next section), this includes Military Personnel Command, Assistant Deputy Minister (Defence Research and Development Canada), Assistant Deputy Minister (Materiel) (ADM(Mat)), Canadian Forces Housing Authority, Canadian Joint Operations Command (CJOC) and Canadian Special Operations Forces Command (CANSOFCOM). These L1s are responsible for implementing directives issued by the program, as well as for providing information/advice to DESM on environmental matters.

Chaired by DGESM, the **Defence Environmental Management Committee (DEMC)** is the departmental L1 committee dedicated to environment. This forum promotes engagement and communication across L1s, focusing on strategic elements and environmental performance. The goal is to support environmental strategic planning, implementation and monitoring of Defence environmental protection and stewardship activities. DEMC is composed of senior environmental personnel from the L1 organizations previously referenced.

CAF Environmental Functions

Environment Officers (Env Os)

Environment Officers provide advice and support to the Base, Wing or Establishment Commander. "Env O" is used as a generic title that encompasses different nomenclature used across the Department, such as Base, Wing, Formation Env O, to refer to personnel providing this function. Env Os are the environmental authority at the local (base/wing/formation garrison) level, responsible to their respective L1 chain of command and responsive to ADM(IE)/CF RP Operations Groups.

CAF Heads of Env Os

CAF Heads of Env Os provide direction/guidance to Env Os in their respective environments (air/navy/land) and advice to Defense Establishment Commanders on local environmental matters. They are also DEMC members.

The program interacts with external stakeholders, notably regulators such as Environment and Climate Change Canada (ECCC), Fisheries and Oceans Canada and the Impact Assessment Agency, as well as Treasury Board Secretariat (TBS). ECCC is responsible for the enforcement aspects. Discretionary items such as policy are issued by TBS through the Greening Government Strategy.

 FINDING 1: There is an ongoing and demonstrable need for ESPP. The program supports Defence needs for effective environmental management, which supports CAF operational readiness, meeting statutory obligations, policy commitments and responsible stewardship.

Need for Environmental Sustainability and Protection

All stakeholders interviewed agreed that there is a need for ESPP. Many described the program as key for addressing legal requirements and policy commitments from a **departmental perspective**.

"Having an overarching functional authority truly keeps us in our areas of expertise, aligned with our L1s, and makes sure we do things consistently." – L1 interviewee



The 2017 Office of the Auditor General's Report identified the need for DND to assess how climate change could impact its areas of responsibility. ESPP supports the organization in addressing these challenges via the [Defence Energy and Environment Strategy \(DEES\) 2020-2023](#):

- Target 10 - develop an adaptation risk assessment framework and assess DND program as well as priority-based critical infrastructure by 2023
- Target 11 – assess the impacts of climate change on Royal Canadian Navy, Canadian Army and Royal Canadian Air Force activities by 2023.

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CAF Operational Readiness

ESPP supports CAF operational readiness by minimizing environmental and non-compliance impacts on operations. ECCC has the authority as enforcement officer to stop non-compliant activities and impact operations. Corresponding financial penalties, which are cumulative across the organization, divert resources away from operations. A \$175,000 penalty levied on DND in 2020, for improper storage tank management in Canadian Forces Base (CFB) Cold Lake, represents the largest fine imposed on a federal department in at least the last 10 years. In addition to the monetary amount, DND was required to undertake a compliance audit, address the recommendations, and work to integrate environment into decision making at CFB Cold Lake.

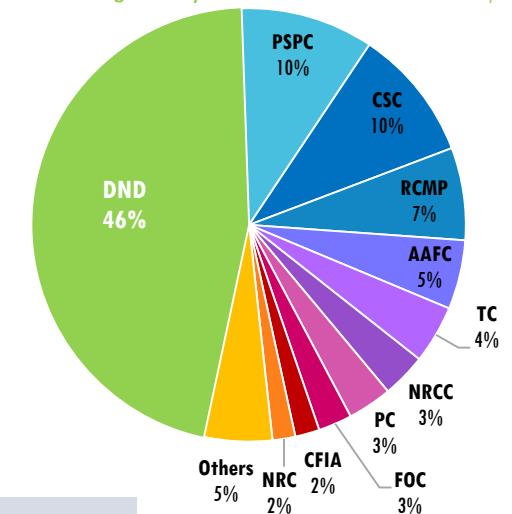
Environmental issues are acknowledged as an emerging security challenge, globally as well as for Defence. Documentation highlights a number of security challenges that climate change is expected to bring, including increases in humanitarian crises and growing activity in the Arctic.

Environmental Sustainability

Document review and interviewees indicate that Defence has a **significant environmental footprint**, the largest in the Government of Canada (GC), therefore an important stewardship role to play. Defence is among the federal government's **largest employers and maintainers of equipment and RP** in Canada. In Canada alone, Defence is entrusted with managing approximately 2.1 million hectares of land and 20,000 buildings.

The Department is also the **largest user of energy and largest emitter of GHGs** in the GC.

DND and Federal GHG emissions from buildings, infrastructure and light duty commercial fleet FY 2019/20





FINDING 2: ESPP aligns with federal and departmental priorities related to environmental sustainability and protection.

Alignment with federal government priorities

Environmental sustainability and protection is a key federal government priority. "Promoting a cleaner environment" is one of the four main priorities in the 2020 Speech from the Throne, and Budget 2021 acknowledges climate change as a key challenge to be addressed.

ESPP supports this by developing, implementing and monitoring the DEES, whose targets align with the federal government's policy agenda. The program recently developed the DEES 2020-23 strategy. Though not being tracked systematically, program staff indicate a number of federal targets are incorporated due to resource constraints; as such only those that are deemed a priority and feasible are included.

TBS's 2020 [Greening Government Strategy](#) sets a target to reduce GHG emissions from federal infrastructure and operations by 40% by 2025 and net zero and 90% by 2050 relative to 2005 levels. The strategy includes actions on adapting to climate change, transitioning to clean energy, and integrating greening across government procurement. The strategy also supports [Federal Sustainable Development Strategy \(FSDS\)](#) targets related to [climate action](#), [clean growth](#) and [clean energy](#). The 2020-2023 DEES is aligned with FSDS and federal targets to reduce GHG emissions, and strives to fulfill four key objectives: (1) energy efficiency; (2) climate change; (3) sustainable RP; and (4) green procurement.

Further information on alignment of the DEES 2020-2023 with the federal policy agenda can be found here: [Alignment between DEES 2020-23 and federal policy agenda](#).

Alignment with departmental roles/priorities

Environment sustainability and protection is also a priority for Defence, as is reflected in Canada's defence policy: *Strong, Secure, Engaged* (SSE) and the 2021 Minister's Mandate letter.

DEES targets align with the following SSE initiatives:

SSE initiative	DEES 2020-2023 targets
#101 Reduce GHG emissions by 40% from 2005 levels by 2025 <i>Targeting emissions from infrastructure and commercial light-duty fleet</i>	Reduce GHG emissions 40% from 2005 levels by 2025 <i>Targeting emissions from infrastructure and commercial light-duty fleet</i>
#102 Examine alternative energy options and their potential use for operations	Develop a strategy by 2023 for aviation fuels that supports the GC's goal of achieving net-zero GHG emissions by 2050 Complete baseline energy and fuel usage evaluations for select marine vessels by 2023

The program supports the department's responsibility to comply with federal legislation [e.g., *Canadian Environmental Protection Act* (CEPA), *Impact Assessment Act* (IAA), *Species at Risk Act* (SARA), *Fisheries Act* (FA), etc.] by issuing environmental directives/manuals and providing guidance and expertise.

ESPP clearly aligns with DND's Core Responsibility of Sustainable Bases, Information Technology Systems and Infrastructure, which aims to "develop and manage modern, operational and sustainable bases and infrastructure," including to "contribute to the achievement of federal environmental targets."



FINDING 3: Progress has been made towards the 2025 GHG emissions target, and is currently on track to being met. However, resources are not aligned with 2050 GHG policy commitments; challenges with competing environmental priorities were identified, as well as potential gaps in policy support or communication thereof.

Policy Support

The program has made significant strides in the policy domain, including the development of the 2020-23 DEES. Given its prominence as a key federal government priority, the evaluation focused on GHG emission reduction. As shown in the following graph, progress has been made towards the target of reducing GHG emissions by 40% from the 2005 baseline, and the department is on track to meet this target by 2025 according to program staff.

However, many interviewees noted the need for further direction on implementing 2050 GHG policy commitments, and highlighted the following challenges:

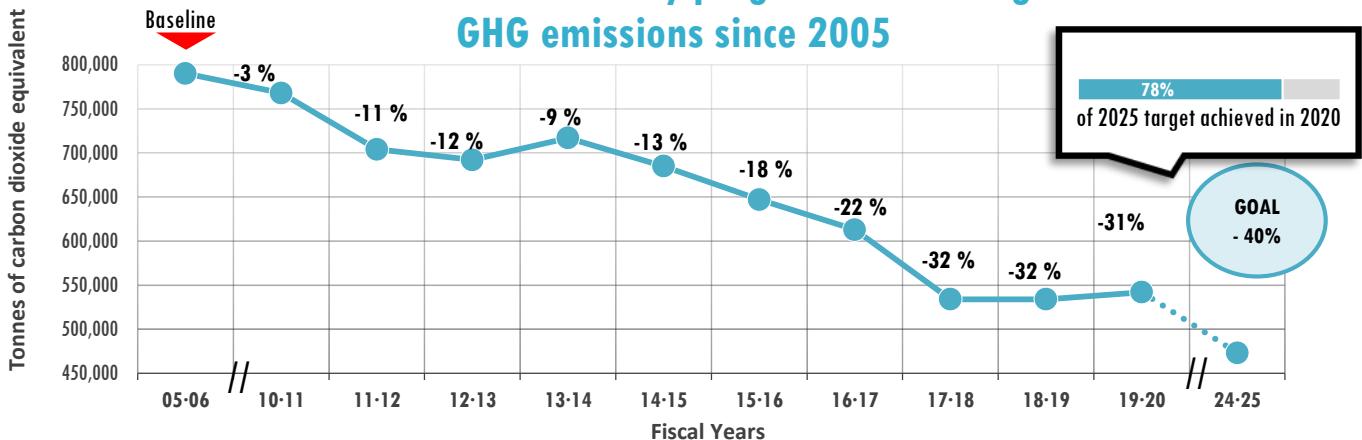
Department not well positioned to meet 2050 GHG targets

Resources and Competing Priorities

Documents indicated challenges due to lack of resources, Human Resources (HR) capacity and funding to achieve net-zero GHG emissions and 90% reduction from 2005 by 2050. Recent (2021) program documentation identifies a 37% gap in meeting these targets by 2050, noting an incremental investment of \$5-10 billion would be required to close the emissions reductions gap - using measures such as ongoing carbon management, major projects/retrofits and energy conservation measures - in addition to planned/funded GHG reduction initiatives. A pathway has not yet been established outlining how this gap will be closed by 2050.

Many interviewees noted resource challenges in meeting GHG policy commitments, at times leading to challenges with prioritization of environmental compliance versus policy commitments.

Documentation highlighted challenges including risks due to competing priorities, potential need for increased TBS-DND consultation on the Greening Government strategy, as well as pressure to meet other voluntary commitments, such as DND's participation in Other Effective Conservation Measures (OECM).



The department recently adjusted its 40% GHG emission target to be met by 2025, 5 years ahead of its initial target of 2030, to align with the 2020 TBS Greening Government Strategy.

OECM relates to Canada's international commitment to conserve 25% of land mass and inland waters by 2025 through the establishment of protected areas and recognition of OECM. DND has been approached by ECCC to identify land for potential recognition as OECM. The program has been working with L1s to identify appropriate locations.



See [Recommendations 1 and 2](#)



FINDING 4: ESPP has made progress towards ensuring legal compliance via its directives and corresponding support. However, there are persistent gaps in records management, particularly for the Canadian Environmental Protection Act (1999) and its regulations. A proactive, risk-based approach has not been fully established to set priorities and objectives.

Progress towards ensuring legal compliance

The program promotes compliance with statutory obligations via various directives (e.g., ED 4003-05, ED 4003-1/2003, ED 4003-3) and corresponding support (e.g., site-level compliance audits, facilitating L1 working groups). The program also tracks historical environmental enforcement data and discusses this with L1s in DEMC meetings.

82% of interviewees indicated ESPP has made progress in enabling the CAF to meet its environmental statutory obligations.

Interviewees described a culture shift towards environmental due diligence and understanding that compliance supports seamless operations.

Gaps in Records Management

Due diligence, the only legal defence for environmental law, is heavily reliant on good records management.

Compliance issues persist, particularly in the area of CEPA, such as halocarbon and storage tank system management.

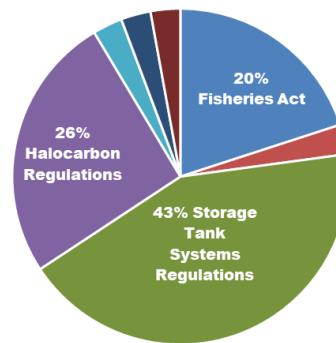
Compliance data also demonstrated some issues with data entered incorrectly or not up-to-date. The Defence Resource Management Information System (DRMIS) was not being used consistently, and corresponding data is difficult to leverage for compliance monitoring purposes.

Work Underway

Improvements are being piloted to increase the use of DRMIS, Defence's official repository for equipment management, and the updated Halocarbon Management Directive, July 2021, reminds users that DRMIS record keeping is mandatory. The program is encouraged to continue its efforts in this regard, and to work towards streamlining compliance data for monitoring purposes.

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ECCC environmental enforcement actions taken against DND/CAF, 2010 to 2020



Current approach to compliance

Evaluation evidence indicates the program's approach to compliance is primarily "reactive." There is an incomplete formal, horizontal risk-based control framework (an EMS) in place to support a proactive approach to compliance. The program is not systematically receiving compliance performance information from L1s, nor has an overall measure or set of metrics related to compliance status been established. Some interviewees (5/17) noted that an absence of compliance verification system or compliance tracking has led to non-compliance.

Key challenges highlighted by interviewees included resources and challenges meeting all regulatory obligations due to the need to prioritize certain environmental considerations over others. Though not tracked systematically, ESPP notes that L1 resource constraints lead to compliance funding competing with other priorities. Resource challenges were identified at the ESPP level, wherein a limited number of program staff are available to support the organization in meeting 100+ statutory obligations. Compliance data/records management issues (discussed previously) also limit the program's ability to make strategic decisions regarding where Defence should focus its efforts, as ESPP is currently unable to collect, analyze or report on compliance data/information. Evaluation evidence indicates that the department is receiving increased attention from ECCC on lack of follow-up from previous non-compliances.

Skills and training gaps were identified by L1 interviewees (8/17). Examples included the need for more formal environmental training and environmental responsibilities-specific training. Program staff also note that the environmental community needs further knowledge and experience with building systems and equipment, engineered works and related skill sets. Program management recognizes this, and has engaged Assistant Deputy Minister (Human Resources – Civilian) to develop a learning roadmap for the environmental community.



See [Recommendation 2](#)



FINDING 5: ESPP promotes environmental and operational sustainability at the operational level via its directives, guidance and support. While environmental issues could be further considered when planning and executing RP/infrastructure and military activities, there have not been significant impacts on operational sustainability to date.

Environmental Sustainability

Environmental considerations are taken into account via ESPP communication, training, guidance documents/tools and promulgation of environmental directives and policy requirements (e.g., Environmental Impact Assessment Directive, Environmental Assessment manual).

Most interviewees described the use of environmental policies and directives when planning for activities. When asked how effective departmental environmental policies and directives have been in allowing environmentally sustainable training areas and operations at their location, most survey responses (67%) were positive or neutral, suggesting ESPP is having some impact.

Evaluation evidence indicates there may be room for improvement in considering environmental issues when planning and executing RP/infrastructure and military activities. Examples were identified where DND proposals are being stalled by TBS, which is requesting further information on how the department will achieve 2050 net zero GHG emissions. While most survey respondents ($n = 49$) indicated that environmental issues were being adequately considered, a notable percentage (20% to 29%) indicated that environmental issues were “rarely” or “occasionally” being considered.

Survey responses on extent to which environmental issues are being adequately considered



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Effectiveness

Operational Sustainability

Evaluation evidence indicates that statutory and policy requirements are not considered limiting to military activities.

Most survey respondents indicate that policy requirements and statutory requirement are never or rarely considered limiting to military activities.

63% of survey respondents said military training and operations got cancelled or delayed never or once a year due to environmental considerations.

According to the 2020 Canadian Army Range and Training Area Sustainment Summary (RTASS) report, the environmental condition of most army RTAs did not pose a significant threat to the Army's force generation activities.

Over half of interviewees (53%) indicated that environmental issues/considerations have impacted the functioning of DND/CAF activities to some degree; however, the majority were not considered to have significantly impacted operations. Examples included RTA closures, facility relocation expenses, transportation costs for recertification of military staff offsite and construction delays.

Required under the *Impact Assessment Act (IAA)*, an **Environmental Impact Assessment** is a process that systematically analyzes a project, activity, policy, plan or program to identify any potential effects to the environment that could reasonably be expected were the initiative to be implemented. The objective is to identify these effects early in the planning process so that measures can be incorporated into planning and implementation to avoid or minimize these effects. Various environmental aspects, such as impacts on climate change, biodiversity and vegetation/soils, are taken into consideration.



See [Recommendation 1](#)



FINDING 6: Despite impacts of the 2016 restructuring, the program has enabled a more cohesive DND/CAF approach to environmental sustainability and protection; however, there are opportunities for further integration.

2016 restructuring challenges

Many interviewees (10/17) noted that the 2016 restructuring of ADM(IE) had negative impacts on environment and sustainability, a key one being lack of clarity in L1 responsibilities. Documentation identified other challenges, including accountability of Env Os to L1s and ADM(IE), and ADM(IE) liability for other L1 non-compliance.

Despite progress towards a more cohesive approach, the DND/CAF model remains fragmented

While there is evidence ESPP has contributed to a more integrated approach, the DND/CAF model still lacks cohesion. Key related areas for improvement are outlined in the following section.



Lack of understanding of roles/ARAs

ESPP has made [progress in clarifying roles and responsibilities](#) at both the strategic and operational level. Key accomplishments include the Concept of Operations – Environmental Support to DND for Real Property Management (2016), annual Functional Planning Guidance, DEMC Terms of Reference enhancements in 2020, and L0 EMS drafting.

However, most interviewees described [challenges related to the roles and ARAs](#) for ESPP stakeholders, particularly with regards to [responsibility clarity](#). Similar challenges were identified in ADM(IE)'s 2021 environmental summary audit, where end to end responsibilities for compliance were identified as being unclear.

Clarity of environmental stakeholder roles was identified as **one of the top five areas for improvement** in survey comments.

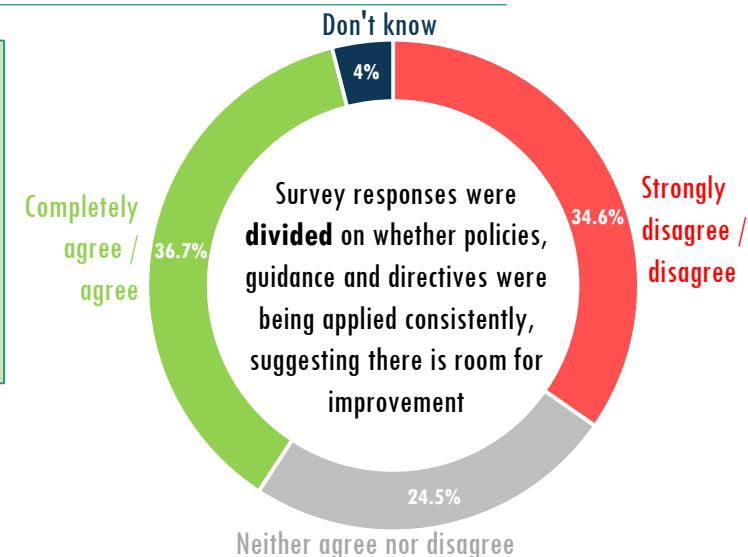


Gaps in communication and guidance

ESPP has demonstrated efforts to improve communication (e.g., GC Collaboration platform), which have supported further integration. However, there is a [need for increased communication/information sharing](#). Examples were also identified wherein separate environmental directives and guidance documents were developed by L1s in similar, cross-cutting areas to ESPP, signalling potential overlap or duplication.

67% of survey comments noted [limitations of guidance documents](#). Key themes included accessibility, timeliness, unclear chain of communication and clarity of roles and responsibilities.

Some interviewees noted that challenges with roles and ARAs were related to poor communication between environment stakeholders; some describing the [need for updated directives or guidelines](#), and more efficient communication of those directives.



See [Recommendations 1 and 2](#)



FINDING 7: The program's governance and accountability is impacted by the absence of an ADM(IE) Environmental Management Framework and the need for more systematic monitoring of compliance with statutory obligations.

Governance and Accountability

Documents demonstrated evidence of program oversight, direction and guidance through ARA documents, Environmental Directives, Memorandums of Understanding, training/guidance documents (e.g., SEA Guide) and continued strategic and planning meetings (including DEMC meetings).

Although ESPP advises L1s to prioritize (and allocate adequate resources to) specific statutory obligations in its Functional Planning Guidance, L1 interviewees identified the **need for further guidance on prioritization of environmental obligations/commitments**, and there is **no formal mechanism** in place for monitoring L1 alignment/implementation.

ADM(IE) Environmental Management Framework (EMS)

The **need for a more standardized EMS** was highlighted by interviewees as well as documentation. The program has developed a draft but has not yet finalized it due to capacity and resource challenges.

Planning was noted as the largest gap in ADM(IE)'s EMS implementation in the 2021 environmental summary audit report, which highlighted the **need for a horizontal risk assessment** to identify which environment aspects require priority attention.

The program has developed various guidance in the interim to begin addressing audit recommendations and is building in EMS elements based on an EMS "Blueprint."

41% of interviewees described the need for a **more formalized environment delivery model/management practices**.

Monitoring Legal Compliance

While policy performance information is routinely collected and reported as part of the DEES and sent to TBS, there is currently **no mechanism in place for systematically monitoring the department's performance as it relates to legal compliance**.

With environment being a shared responsibility, ESPP's success hinges on the compliance of other L1s. As such, the program **needs to work with L1s to collect the required compliance performance information** across the department. This systematic monitoring of departmental compliance would support evidence-based decision making and program improvements, and provide senior management visibility on the state of compliance within the department.

Work underway

The 2021 environmental summary audit recommended that ESPP develop metrics and a compliance status dashboard, and emphasized tracking of compliance status for senior management visibility and action plan escalation, as required. The findings from this evaluation support this recommendation. As part of this, the program is encouraged to consider monitoring L1 alignment with guidance issued by ESPP regarding allocation resources to priority environmental aspects, as well as L1 follow-up on non-compliance.



See [Recommendation 2](#)

FINDING 8: The program has made progress towards strategic resource allocation; however, further prioritization of environmental aspects is needed to fulfill evolving environmental commitments.

Resource allocation

Documentation and interview evidence suggests ESPP may be underfunded considering its suite of responsibilities, thus increasing the importance of strategic allocation of available resources.

Evaluation evidence identified the **need for a more strategic, risk-based approach**. Explanations for gaps between planned versus actual expenditures from FY 2019/20 to FY 2020/21 highlight the need for a more strategic approach. More specifically:

- Up until recently, there was no plan in place to allocate ESPP resources accordingly;
- The program has primarily been in reactive, issues management mode (as noted previously on slide 10);
- There is **not currently a formalized risk-based approach in place for prioritization of environmental aspects** to inform resource allocation; and
- An infusion of \$2.6 million to ESPP in FY 2020/21, to top up the \$1 million existing allocation, has relied on contracting as a solution to compensate for a limited Salary and Wage Envelope.



Progress towards strategic resource allocation

ESPP has recently made progress in this regard. Examples include developing annual DESM Work Plans identifying priority work for program staff, and planning related training for staff (e.g., project management).

Prioritization of environmental commitments

While the focus is primarily on addressing legal requirements, ESPP fulfills policy commitments to the extent possible. This has become **more challenging given increased federal policy commitments (e.g., upcoming climate change proposals)**, which have not come with dedicated funding. Defence's ability to meet statutory obligations is competing for limited funds with policy requirements.



See [Recommendation 2](#)

Conclusions

There is a demonstrable need for ESPP, and the program aligns with governmental priorities. The program supports environmental and operational sustainability, including compliance with statutory obligations, via its directives, guidance and support. The 2025 GHG emission target is on track to be met; however, the department is not well positioned to meet its 2050 GHG targets. The evaluation also highlighted the need for a more proactive, integrated, risk-based approach to environmental sustainability and protection. To support ESPP effectiveness and efficiency moving forward, this evaluation has made recommendations in the following areas:

There is a need to address stakeholders' lack of understanding of roles/ARAs, as well as identified gaps in communication and policy support/guidance, to ensure a more cohesive, efficient approach to environmental sustainability and protection.

The environmental community also requires further guidance and direction as to how the department will operationalize its 2050 GHG policy commitments, with identified concerns regarding resource constraints and competing priorities being taken into consideration, to ensure success in the future.

Continued efforts towards a more strategic, integrated approach to environmental sustainability and protection are encouraged. Given the plethora of environmental commitments and resource challenges identified in the evaluation, the program is encouraged to identify which environmental aspects require priority attention and communicate this to the environmental community, which identified a need for further guidance in this area.

The program is well-positioned for this, as a DND L0 risk assessment is planned for FY 2021/22 – a recommendation from the 2021 environmental summary audit that this evaluation supports – that will examine legal, materiality, reputation and environmental impact across the organization to set planning priorities and objectives.

ESPP is also encouraged to finalize and implement the L0 EMS to further establish a whole-of-DND approach to environmental sustainability and protection.

Annex A – Key Findings and Recommendations

 KEY FINDING	 RECOMMENDATION
RELEVANCE	
EFFECTIVENESS	
1. There is an ongoing and demonstrable need for ESPP. The program supports Defence needs for effective environmental management, which supports CAF operational readiness, meeting statutory obligations, policy commitments and responsible stewardship.	
2. ESPP aligns with federal and departmental priorities related to environmental sustainability and protection.	
3. Progress has been made towards the 2025 GHG emissions target, and is currently on track to being met. However, resources are not aligned with 2050 GHG policy commitments; challenges with competing environmental priorities were identified, as well as potential gaps in policy support or communication thereof.	<ul style="list-style-type: none"> 1. Explore options to address issues impacting understanding of roles/ARAs and identified gaps in communication and policy support/guidance. 2. Finalize and implement ADM(IE)'s Environmental Management Framework, and leverage the results of the 2021-22 LO environmental risk assessment to further identify and communicate priority environmental aspects.
4. ESPP has made progress towards ensuring legal compliance via its directives and corresponding support. However, there are persistent gaps in records management, particularly for the Canadian Environmental Protection Act (1999) and its regulations. A proactive, risk-based approach has not been fully established to set priorities and objectives.	See recommendation 2.
5. ESPP is promoting environmental and operational sustainability at the operational level via its directives, guidance and support. While environmental issues could be further considered when planning and executing RP/infrastructure and military activities, there have not been significant impacts on operational sustainability to date.	See recommendation 1.

Annex A – Key Findings and Recommendations (continued)

 KEY FINDING	 RECOMMENDATION
EFFICIENCY	
<p>6. Despite impacts of the 2016 restructuring, the program has enabled a more cohesive DND/CAF approach to environmental sustainability and protection; however, there are opportunities for further integration.</p> <ul style="list-style-type: none"> ➤ More specifically, there is a lack of understanding of roles/ARAs among environmental stakeholders. Gaps in communication and program guidance were also identified. 	See recommendations 1 and 2.
7. The program's governance and accountability is impacted by the absence of an ADM(IE) Environmental Management Framework and the need for more systematic monitoring of compliance with statutory obligations.	See recommendation 2.
8. The program has made progress towards strategic resource allocation; however, further prioritization of environmental aspects is needed to fulfill evolving environmental commitments.	See recommendation 2.

Annex B – Management Action Plan

ADM(RS) Recommendation



1. Explore options to address issues impacting understanding of roles/ARAs and identified gaps in communication and policy support/guidance.

Management Action

ADM(IE) accepts the recommendation and recognizes the need for improved alignment of resources with accountabilities and responsibilities. Though most environmental risks are attributable to ADM(IE) as custodian and RP operator, environment remains a shared responsibility with L1s. RP is consolidated under ADM(IE) while the base level environmental authorities report to the L1 chains of command. With increasing pressure and demand for improved environmental performance, this distributed model of environmental leadership will be re-evaluated. ADM(IE) will:

1. Better delineate environmental roles and responsibilities between ADM(IE) and L1 operators through improved communications and governance – target date December 2022.
2. Prioritize the implementation of recommendations resulting from a comprehensive review of the environment function, undertaken with the Chief Financial Officer, to ensure better alignment of mandate, risks and resources – September 2022.
3. Update DAOD 4003-0 Environmental Protection and Stewardship to clarify areas of ADM(IE)'s policy authority, leadership and oversight – March 2023

Closure: This Management Action Plan will be considered closed once renewed environmental ARA's are broadly communicated to senior management and other L1 stakeholders via dedicated communications products and/or through renewed governance.

OPI: ADM(IE)

OCI: CFO

Target Date: March 31, 2023

Annex B – Management Action Plan

ADM(RS) Recommendation



2. Finalize and implement ADM(IE)'s Environmental Management Framework, and leverage the results of the 2021-22 L0 environmental risk assessment to further identify and communicate priority environmental aspects.

Management Action

ADM(IE) accepts the recommendation and is committed to enhance and finalize the Environmental Management Framework to manage the Program's performance.

1. Formalize an environmental risk assessment methodology, in alignment with the Defence Enterprise Risk Management Guideline, and assess horizontal (L0) environmental risks for the Program – December 2022.
2. Set risk-based priorities, objectives and performance metrics for the Program – March 2023.
3. Enhance the existing Environmental Management Framework direction and procedures to enable effective oversight and performance reporting on the Program – March 2024.

Closure: This Management Action Plan will be considered closed once renewed Environmental Management Framework improvements are realized and communicated to senior management.

OPI: ADM(IE)

Target Date: March 31, 2024

Annex C – Evaluation Scope

Scope

The evaluation examined relevance, effectiveness and efficiency of the program. Given the organizational changes that came with ADM(IE)'s restructuring in 2016, the evaluation covers the 4-year period from FY 2016/17 to FY 2019/20.

Evaluation scope was developed in consultation with DGESM and DESM, and assessed the immediate outcomes from the Environmental Protection and Sustainability component of the Environmental Sustainability and Protection Program Logic Model ([see Annex E](#)). More specifically, the evaluation focused on the program's performance as it relates to halocarbon statutory obligations and GHG policy commitments. These areas (referred to by the program as "environmental aspects") were chosen due to their alignment with Defence and federal government obligations and commitment priorities.

The evaluation also examined key aspects of efficiency, including the extent to which the program enables a cohesive, integrated DND/CAF approach to environmental sustainability and protection.

The Management of Contaminated Sites (6.6.1) and Management of Unexploded Explosive Ordnance (6.6.2) were not included in the scope.

ADM(IE)'s 2021 environmental summary audit

A key source of information for this evaluation was the third-party audit conducted in 2021 for ADM(IE) of its draft LO EMS. A gap/maturity analysis was conducted of ADM(IE)'s EMS against conformance to ISO 14001: 2015. The audit also conducted environmental compliance audits at National Defence Headquarters as well as its Wings, Bases and Special Operation Forces Centres to gain an understanding of its current state of environmental compliance. It examined environmental compliance overall, as well as halocarbons and storage tank systems specifically.

Findings and recommendations from this audit have been incorporated into this evaluation where applicable.



Photo: Bombardier Albert Law, Canadian Armed Forces photo

Annex D – Program Profile - Key Activities

Key ESPP activities include the following:

1. Management and promotion of sustainable wing, base and formation garrisons, including RTAs

Provides guidance, expertise and support for a variety of environmental aspects (e.g., GHG and energy use, adaptation to climate change, reducing plastics use, managing invasive and alien species, natural resources, environmental aspects of hazardous product acquisition, disposition and spill response, green procurement and emissions to soil, water and the atmosphere).

2. Management of environmental policies, frameworks, strategies and plans for environmental compliance and sustainability across Defence activities

Reviews, develops, implements and monitors DND and CAF energy and environmental policies, frameworks, strategies and plans. This includes leading the strategic coordination of environmental commitments such as the DEES and Defence's contribution to the Federal Sustainable Development Strategy and Greening Government Strategy.

3. Legislative and regulatory compliance

Issues departmental directives; responds to federal consultation on proposed changes to environmental legislation; ensures regulatory reporting requirements are met, and monitors compliance to legislation such as the CEPA, the *Canadian Environmental Assessment Act* and SARA.



Examples of ESPP-issued directives

- ED 4003-5, Halocarbon Management Plan
- ED 4003-1/2003, Spill Reporting
- ED 4003-3, Responding to Environmental Enforcement
- ED 4003-9, Hazardous Materials Management Plan

Annex E – Methodology and Limitations

Data Collection Methods

The lines of evidence collected through the conduct phase of the evaluation were triangulated with each other and verified with program officials where required to ensure validity. The research methodology used in the scoping and conduct of the evaluations are as follows:



Key Informant Interviews

The evaluation team worked with ESPP to identify key interviewees and receive feedback on interview guides. A total of 17 interviews (18 interviewees) were conducted with the following stakeholder groups. Recognizing that RP accounts for the bulk of DND's environment footprint (military equipment accounting for a smaller portion) and given their level of involvement in halocarbon and GHG emission reduction (both focal points of the evaluation), additional in-depth interviews were conducted with this group.

Key Informant Interviews (17 interviews total)

Internal to ADM(IE):

ADM(IE) Environment and Sustainment Management	n=2
ADM(IE) Real Property Operations	n=4
ADM(IE) Portfolio Requirements	n=1
ADM(IE) Architecture and Engineering Services	n=1
DESM Environment Managers	n=3

External to ADM(IE):

CAF Heads of Environment Officers	n=3
CANSOFCOM	n=1
CJOC	n=1
Canadian Forces Legal Advisory Services	n=1
L1 Environmental Advisor ADM(Mat)	n=1



Online Survey

To gain further insight regarding the program's impact at the tactical level, a bilingual web-based survey was created for Env Os. The survey was designed in consultation with ESPP staff and CAF Heads of Env Os. This online survey was distributed by email by the Heads of Env Os of each of the three CAF elements and was live for three weeks (from April 26th to May 14th, 2021). Subsequent to the initial launch email, two reminder emails were sent by CAF Heads of Env Os to ensure a satisfactory response rate. Overall, there was a strong estimated response rate of ~ 38% (49/130). Of note, there was a low estimated response rate (22%) for the air environment, which the evaluation team considering when analyzing the data.



Document Review

A preliminary review of foundational documents was conducted during the planning phase of the evaluation to ascertain a fulsome understanding of the program to inform the development of the scope, logic model and evaluation matrix. An official Request for Information was then submitted to ESPP to obtain all pertinent documentation that would assist in the program assessment. The evaluation team reviewed over 100 documents related to the program. A key document was ADM(IE)'s 2021 environmental summary audit, which is described in more detail in [Annex B](#).



Data Analysis

A review of financial and HR data was conducted to assess the efficiency of the program. The evaluation team also reviewed performance-related data, including historical environmental compliance data and halocarbon-related data extracts from DRIMS.



Direct Observation

A member of the evaluation team attended the March 25, 2021 MS Teams DEMC Meeting to observe the interactions between the program and L1s, as well as to obtain additional information/evidence pertaining to the areas examined in the evaluation.

Annex E – Continued

Evaluation Limitations

The limitations encountered by the evaluation and mitigation strategies employed in the evaluation process are outlined in the following table.

Limitations	Mitigation Strategies
The ESPP involves multiple ADM(IE) stakeholders, the CAF, other DND groups, and other federal government departments. Therefore a DESM-focused evaluation may not capture all aspects of relevance, effectiveness and efficiency.	The evaluation team designed the evaluation to focus primarily on the achievement of outcomes prioritized by DESM, and suggested recommendations within the program's scope of influence.
Limited time and resources for this evaluation.	An appropriate and reasonable evaluation scope was established in collaboration with program staff in the early stages of the evaluation process, and adjusted throughout the course of the evaluation as required in consultation with program staff, in order to produce timely and quality-focused findings and recommendations.
Lack of or limited performance data/information available, and absence of a standardized and/or documented ADM(IE) EMS.	The evaluation team relied as needed on multiple other lines of evidence to inform the findings and recommendations.
There is a potential risk that the evidence related to certain evaluation questions may be largely perception-based.	The evaluation team mitigated this limitation by using multiple sources to inform evaluation findings, supplementing data from key informant interviews with evidence from document review, performance data review and financial data analysis.

Annex F – Logic Model for the Environmental Sustainability and Protection Program (6.6)

Inputs	<p>Drivers or influencers: Canadian Environmental Protection Act (CEPA), Impact Assessment Act (IAA), Fisheries Act (FA), Species at Risk Act (SARA), etc.</p> <p>Documents: Canada's defence policy: Strong, Secure, Engaged, Departmental Plans for National Defence, United Nations' 2030 Agenda for Sustainable Development, ECCC's Federal Sustainable Development Strategy, TBS's Greening Government Strategy, etc.</p> <p>Resources: \$131.3 million of program expenditures and 64 Full-Time Equivalents (historical data from FY 2018/19) etc.</p>			
Activities	<p>Management of Unexploded Explosive Ordnance (UXO) and Contaminated Sites</p> <p>Identify, assess, and mitigate risk of UXO and contaminated sites</p> <ul style="list-style-type: none"> - Tactical-level activities include strategic portfolio planning, prioritization, coordination, control, governance, performance measurement, reporting and outreach. <p>Progress sites through the Federal Contaminated Sites Decision-Making Framework</p> <p>Environmental Protection and Sustainability</p> <p>Management and promotion of sustainable wing, base and formation garrisons, including RTAs</p> <ul style="list-style-type: none"> - Provides guidance, expertise and support to a variety of environmental aspects (e.g., reducing GHG and energy use, adaptation to climate change, reducing plastics use, managing invasive and alien species, natural resources, environmental aspects of hazardous product acquisition, disposition and spill response, green procurement and emissions to soil, water and the atmosphere, etc.) <p>Management of environmental policies, frameworks, strategies and plans for environmental compliance and sustainability across Defence activities</p> <ul style="list-style-type: none"> - Review, develop, implement and monitor DND and CAF energy and environmental policies, frameworks, strategies and plans, including those led by other government departments. 			
Outputs	<ul style="list-style-type: none"> - Assessment reports, classification scores, management actions and plans (strategies) and closure reports are developed 	<ul style="list-style-type: none"> - Governance and planning - Policies, directives and procedures - Communications, engagement and training - Inspections and monitoring 	<ul style="list-style-type: none"> - Federal and departmental energy and environmental policies, frameworks, strategies and plans are developed, implemented and monitored - Performance measurement, including annual or progress reports 	
Immediate Outcomes	Immediate Outcome 1 Canadians are safeguarded against UXO threats	Immediate Outcome 2 Contaminated sites are remediated to acceptable levels	Immediate Outcome 3 Wings, bases and formation garrisons and RTAs effectively support environmental and operational sustainability	Immediate Outcome 4 The department's environmental commitments, targets and statutory obligations are met
Intermediate Outcomes	Intermediate Outcome 1 Impacts of defence activities on human health and the environment are minimized		Intermediate Outcome 2 Defence activities are conducted in an environmentally responsible manner	
Ultimate Outcome	Defence activities are conducted in a safe and sustainable manner (Departmental Result 6.3)			