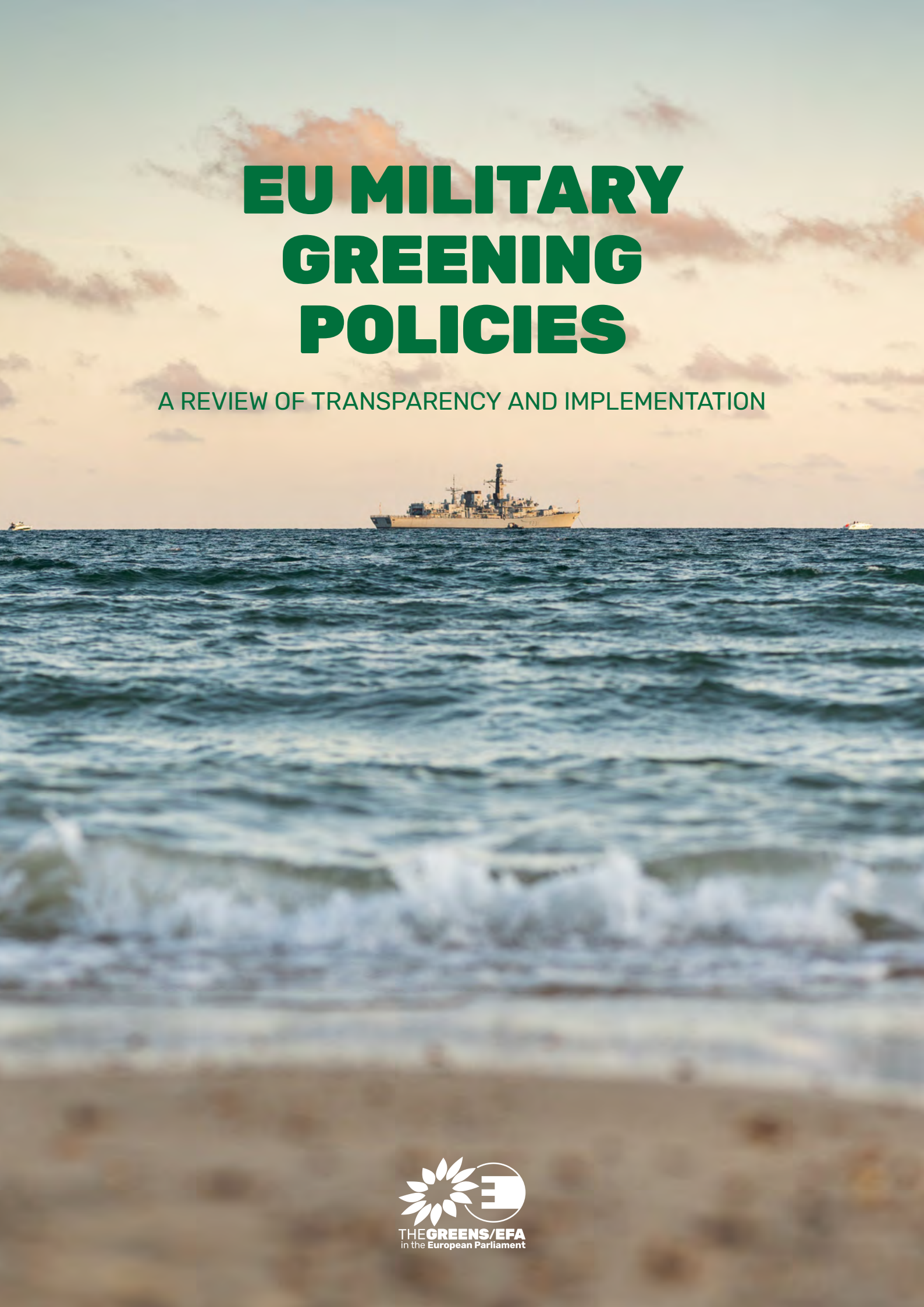
EU MILITARY GREENING POLICIES

A REVIEW OF TRANSPARENCY AND IMPLEMENTATION



THE GREENS/EFA in the European Parliament

COMMISSION

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ABOUT CEOBS

The Conflict and Environment Observatory (CEOBS) is a UK charity that undertakes research and advocacy on the environmental dimensions of armed conflicts and military activities and their derived humanitarian consequences. CEOBS' overarching aim is to ensure that the environmental consequences of armed conflicts and military activities are properly documented and addressed, and that those affected are assisted. *www.ceobs.org*

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Every effort has been taken to ensure the accuracy of the information provided, any errors remain the responsibility of CEOBS. Searches were constrained in part by the language and online translation tools available.

ACRONYMS

AFFF	Aqueous film forming foams
CCCR	Climate Change and Defence Roadmap
CJEC	Court of Justice of the European Union
CSDP	Common Security and Defence Policy
CF SEDSS	Consultation Forum for Sustainable Energy in the Defence and Security Sector
DP	Draft principle
EEA	European Environment Agency
EDA	European Defence Agency
EDEN	European Defence Energy Network
EDRC	Environment and Development Research Centre
EDSTAR	European Defence Standards Reference System
EEA	European Environment Agency
ETC	European Topic Centres
EEAS	European External Action Service
EP	Environmental protection
EPWG	Environmental Protection Working Group
F-gases	Fluorinated gases
GHG	Greenhouse gas emissions
GMACCC	Global Military Advisory Council on Climate Change
IF CEED	Incubation Forum on Circular Economy in European Defence
ILC	International Law Commission
IPCC	Intergovernmental Panel on Climate Change
ISO	International Standards Organisation
NATO	North Atlantic Treaty Organisation
NCWES	North-Atlantic Civil-Society Working-Group on Environment and Security
OBOD	Open Burning and Open Detonation
ODS	Ozone depleting substances
OECD	Organisation for Economic Cooperation and Development
PERAC	Protection of the environment in relation to armed conflict
PFAS	Per- and polyfluoroalkyl substances
POP	Persistent organic pollutant
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RoHS	Restriction of hazardous substances
SDG	Sustainable Development Goal
STANAGs	Standardization Agreements
SRD	Standards-related document
STEEP	Specialist Team on Energy Efficiency and Environmental Protection
TFEU	Treaty on the Functioning of the EU
TPI	Transitional Performance Index
UNFCCC	United Nations Framework Convention on Climate Change

EXECUTIVE SUMMARY

Europe's environment is under pressure and there is an urgent need for all sectors - including the military - to contribute to improving the EU's environmental outlook. The newly updated EU Strategic Compass outlines a commitment to substantially increase EU military and security spending by 2030, while also embedding climate change and environmental considerations. However, at present it is unclear how effective military "greening" policies have been to date.

Many EU militaries have well-established environmental policies and implementation programmes, but the mechanisms in place to demonstrate their effectiveness to external stakeholders, are unclear. Military exemptions can also apply to some environmental legislation and it is important this does not weaken environmental protection measures or reduce scrutiny. Robust and effective environmental policy is all the more important when disapplication, exemption or derogation of external environmental legislation applies.

This review maps out the environmental policies and greening initiatives that EU militaries have in place, including the extent to which environmental performance reporting is made publicly available. The review also draws on direct feedback from EU defence ministries on their environmental policies, as well as from other stakeholders with an interest in military environmental policy.

We found that in spite of the scale of military expenditure, and the potentially environmentally harmful nature of its activities, the military is commonly excluded from discussion in environmental performance indicators. Military environmental policy and reporting should be readily accessible and easy to find, but open access to both military environmental policy and environmental reporting is sporadic. The majority of EU militaries do not publish regular environmental reports. Where provided, the scope and range of environmental topics covered also varies, and there is a tendency to focus on positive news stories.

A key challenge for the military in implementing environmental policies is maintaining long-term commitment and funding, especially in light of pressures to increase military capacity. Improving environmental performance, and making a meaningful contribution to wider governmental, regional or international environmental and sustainable development goals, requires behavioural change, improved awareness training and staff engagement.

Military activities can contribute to the triple environmental crisis of climate change, pollution and biodiversity loss – more effective environmental policies can help to reduce this burden. However, those policies must be reflected in practice, and will only be effective with a clearer commitment to auditing, open reporting and review to ensure compliance and ongoing improvement.

KEY RECOMMENDATIONS:

This reports recommendations are:

1. EU ministries of defence should pursue senior command buy-in and appraisal of environmental performance.

2. The EU should establish an independent Defence Environmental Protection Regulator for EU militaries similar to the UK's to provide assurance, improve compliance and improve the co-ordination of environmental reporting. Making this part of the European Environment Agency could help regulatory coordination.

3. Set out a minimum framework for military environmental reporting to ensure the materiality of reports. This should include the environmental topics to be covered, key performance indicators, challenges, realistic timeframes and requirements for independent assurance.

4. Incorporate the appraisal and inclusion of the UN SDGs and EU environmental targets in military environmental policy and reporting, to support the military's contribution to wider government environmental goals.

5. Set obligatory GHG reporting requirements for the military and encourage all EU militaries to establish GHG emissions reduction targets that align with the European Green Deal and goal for climate-neutrality by 2050.

6. Commission independent environmental compliance auditing for overseas deployment.

7. Improve the training provision available through NATO's School and the European Security and Defence College to include environmental leadership, behavioural change and environmental protection.

8. Establish a centralised online platform hosted by the European Environment Agency enabling open access to all military environmental policy, strategy and reporting.

9. Encourage the establishment of centralised domestic reporting and environmental tracking systems to records incidents, as well as positive environmental outcomes and actions.

10. Set obligatory environmental protection and technical specifications on environmental performance for defence contracts and awards, though amendment of the Defence Directive 2009/81/EC.

11. Promote the streamlining of military environmental technical networks to increases transparency and accessibility, and to avoid duplication, and increase the participation of civilian stakeholders.

1. INTRODUCTION

1.1. SCOPE AND OBJECTIVES

This review examines EU military greening policies and the mechanisms currently in place to gauge their effectiveness.

Military environmental policy should set out clear commitments to manage the environmental impacts of all military operations and activities, and to reducing the environmental footprint as far as possible. Environmental policy should define the principles and goals for environmental management, and set targets for achieving environmental improvements that are directly relevant for the military. With global and regional environmental challenges increasing, and a need to improve environmental performance across all sectors, the military must aim beyond statutory compliance and make positive contributions to the wider environmental goals set by governments.

NATO introduced its first environmental protection policy in 2003,[1] and in 2012, the EU set-out an environmental concept for EU-led military operations.[2] Militaries within the EU have taken steps to mainstream the environment in their activities and the European Defence Agency (EDA) has promoted environment policies – particularly on energy efficiency and renewable energy initiatives.[3]

This review has set out to:

i. Map out the military environmental policies and greening initiatives in place across the EU;

ii. Review any evidence of buy-in from senior leadership;

iii. Review any evidence of commitment to resourcing the implementation of environmental policies;

iv. Map out the extent of performance reporting processes in the public domain; and

v. Consider future trajectories of policy requirements.

1 MC 0469 - NATO Military Principles and Policies for Environmental Protection.

2 EEAS (2012). European Union Military Concept on Environmental Protection and Energy Efficiency for EU-led military operations. *https://data.consilium.europa.eu/doc/document/ST-13758-2012-INIT/en/pdf*

3 *https://eda.europa.eu/what-we-do/all-activities/activities-search/energy-and-environment-programme*

The review has considered EU-wide and country specific policies, as well as NATO initiatives. Of the 27 EU Member States, 21 are currently also members of NATO.[4]

The focus extends to military environmental policy on:

- Greenhouse gas emissions and energy use;
- Management of the military estate and biodiversity;
- Operational management systems;
- Supply chain management and procurement;
- Use of ISO certification or other relevant certification systems;
- Management of legacy contamination and environmental incidents;
- Mindset and environmental awareness; and
- Transparency, reporting and verification.

Military strategy, overseas military deployments and operations falls outside of the scope of this review. However, Member States' positions on the UN International Law Commission's draft principles on the *Protection of the environment in relation to armed conflict* (PERAC),[5] have been considered, as well as NATO policy (see Section 2).

This review is not designed to examine legal compliance and the accuracy or detail of any specific environmental reporting or environmental data. This would require a technical audit, access to in-house datasets and a broad technical team.

There are also some wider sustainability issues - such as community engagement, public access to military estates lands, welfare, diversity, equality and inclusion within the armed forces, and veteran support - which are not covered in this review.

'MOD' has been used throughout this report as a common abbreviation for Ministry of Defence, but covers a range of terms used by EU armed forces such as National Defence etc.

4 EU Member States not in NATO are: Austria, Cyprus, Ireland and Malta, with application to join pending for Sweden and Finland.

5 ILC (2019). United Nations International Law Commission, A/CN.4/L.937, Protection of the environment in relation to armed conflicts. *https://legal.un.org/docs/index.asp?symbol=A/CN.4/L.937*

1.2. METHODOLOGY

Open-source research was carried out into existing military environmental initiatives, policies, strategies and environmental reporting.

Perceptions on the performance of military policy from various stakeholders was also sought, including serving and ex-military personnel with an interest in greening policy and strategy, environmental bodies and environmental NGOs. Research for this study took place between January and April 2022. All websites listed in the footnotes were accessed in June 2022. Requests for participation were circulated through associates and members of the Environment & Development Resource Centre (EDRC),[6] the Eurosite network,[7] and the Global Military Advisory Council on Climate Change (GMACCC).[8] Responses from these participants have been anonymised and are included as commentary throughout this report. A copy of the questions sent to stakeholders is available in Appendix A.

Engagement and direct feedback from EU defence ministries on their environmental policies was also sought. A request was made through the EDA for the in-country MOD liaisons for environmental policy, and their availability to take part in this study. The EDA was not able to fulfil this request and alternatively, each Member State was contacted through their MOD's public website. Initial contact through the MOD websites of Germany and France was unsuccessful.

Responses to our initial enquiry for an environmental contact point were received from 11 Member States and questionnaires were forwarded to them. Completed questionnaires were returned by Austria, Denmark, Latvia, Lithuania, Portugal and Romania. Sweden was unable to complete the questionnaire but no reason was given. Hungary indicated willingness to participate but a completed questionnaire was not provided in time for inclusion in this report. A copy of the questions sent to MOD contact points is given in Appendix B.

1.3. REPORT STRUCTURE

The remaining sections of this report are structured as follows. A summary of military environmental initiatives that may affect EU military's environmental policies is provided in Section 2. Section 3 gives an overview of derogation provisions under legal frameworks for military compliance with environmental regulation. Section 4 considers the external review of any military environmental policy and its impact. Section 5 discusses specific environmental topics and policy implementation, including reference to some country-specific policy positions. The overall study findings and recommendations are provided in Section 6.

6 *https://www.edrc.net*

7 *https://www.eurosite.org/eurosite-network*

8 *https://www.gmaccc.org*

2. MILITARY ENVIRONMENTAL POLICY

This section summarises some of the overarching policies and initiatives in place that may influence military environmental policies, including those of the European Defence Agency and NATO.

A summary of military environmental policies for EU Member States is also given in this section.

2.1. MILITARY EXPENDITURE

EU states are among several countries announcing increases in military expenditure following Russia's invasion of Ukraine. The EU's Strategic Compass, launched in March 2022,[9] outlines a commitment to substantially increase EU military and security investment by 2030 and reduce perceived military and civilian capability gaps.

The Strategic Compass acknowledges the need for innovation and increased energy and resource efficiency. This includes reducing the environmental footprint of CSDP missions and operations, in line with the European Green Deal and goal for climate-neutrality by 2050, without compromising operational effectiveness. The Strategic Compass states the need for climate change and environmental considerations to be embedded across civilian and military CSDP missions and operations. It sets ambitious goals, although funding from the European Defence Fund for environmental obligations is not clear. Targets include having an environmental advisor for all CSDP operations by 2025 and to report on their environmental footprint. It is unclear how strategy targets will be measured, where responsibilities rest and how strategy compliance will be reported in the public domain.

One of the key challenges for the military in implementing environmental policies will be maintaining long-term commitment and funding, especially in light of pressures to increase military capacity. Funding pressures also include expenditure on any adaptation of existing military assets to build climate resilience across the estate - such as military bases and infrastructure vulnerable to extreme weather or other climate-related risks.

The Working Group 3 report of the Intergovernmental Panel on Climate Change (IPCC) focuses on how governments and the public can reduce greenhouse gas emissions (GHG) and limit global heating to 1.5 degrees above pre-industrial levels.[10] Military spending is mentioned briefly in the IPCC report, with recognition that moderate reductions could mean that resources are available for reallocation for the Sustainable Development Goals, although no details or targeted measures are provided.

9 EU (2022). A Strategic Compass for Security and Defence. *https://www.eeas.europa.eu/sites/default/files/documents/strategic_compass_en3_web.pdf*

10 IPCC (2022). Climate Change 2022: Mitigation of Climate Change. *https://www.ipcc.ch/report/ar6/wg3/*

Demand-side mitigation features widely in the IPCC report, highlighting that this can be achieved through socio-cultural factors, infrastructure design and use, and end-use technology adoption, such as green procurement and energy efficiency. Demand-side mitigation is important in reducing GHG emissions across multiple sectors, including the military.

2.2. EU AND EEAS POLICIES

In November 2020, the European External Action Service (EEAS)[11] published a Climate Change and Defence Roadmap with short-, medium- and long-term measures for addressing the links between the military, climate change and environmental degradation.[12] This includes goals for the EEAS to:

- Develop operational guidelines and standard operating procedures on environmental and carbon footprint management;
- Introduce monitoring measures on the effective implementation of the EU Military Concept;[13]
- Initiate the development of measurement capabilities and an associated light-touch reporting process based on indicators of progress related to the environmental footprint, including energy, water, waste management, etc. within CSDP missions and operations.

The EEAS roadmap also invites EU Member States to share good practices, join existing platforms and networks such as EDA's Energy and Environment Working Group, and strengthen the military's role in conserving biodiversity, given that the EU armed forces are the largest landowner in Europe. EU Member States are also invited to:

- Proactively identify environmental advisors suitable to serve in CSDP operations;
- Enhance tools to measure and monitor energy efficiency and introduce benchmarks;
- Include climate and environmental assessment in procurement and capability development processes;
- Take climate, energy and environmental considerations into account when building and renovating military infrastructure;

11 EEAS is the EU's diplomatic service to support EU policies including the Common Foreign and Security Policy (CFSP) and Common Security and Defence Policy (CSDP).

12 EU (2020a), Climate Change and Defence Roadmap, 9 November 2020. *https://data.consilium.europa.eu/doc/document/ST-12741-2020-INIT/en/pdf*

13 The EU Military Concept (2012) referenced in the Roadmap has subsequently been revised – refer to footnote 14

- Build commitment and awareness; and

- Improve data collection and analysis efforts by providing national defence-related energy data.

The Climate Change and Defence Roadmap (CCDR) sets out steps against which the performance of the EU's militaries can be assessed and stated the need for an EEAS review of its EU Military Concept.13 In 2021, the EEAS's updated EU Concept for Environmental Protection and Energy Optimisations for EU-led military operations and missions was published, which provides strategic guidance and acknowledges the need for EU-led operations to adequately address environmental protection.[14] This applies to the military, as well as its contractors and their activities. The Concept highlights the need for environmental protection (EP), including cultural property protection and energy optimisation, and the need for adequate consideration during both planning and conduct of EU-led operations. The Concept notes that CSDP EP standards should be included in the Operation/Force Headquarters standard operating procedures, and align with environmental standards defined by the UN and NATO. Environmental and energy management systems should also align with ISO 14001:2015 and ISO 50001:2018, as far as possible.

Recommendations include compliance auditing of management systems and EP standards. Planning and procurement was also highlighted as an opportunity to introduce appropriate technical specifications to mitigate adverse environmental effects through a life-cycle approach. In the adoption of EU policies and principles, the Concept notes that military necessity may justify overriding EP during EU-led operations, and that operational imperatives will usually have priority. Impacts however must be *'avoided or mitigated by early integration of environmental considerations into all aspects of operational planning, training and execution of the EU-led military O/M.'*

The EU Concept also notes that awareness training and education should be incorporated into military personnel training programmes. However, a separate EEAS report on 'military leadership and management training requirements' did not make any specific reference to environmental awareness or environmental protection needs.[15] Similarly, the agreed CSDP Military Training Programme 2022-2023 includes provision for 'maritime contribution to preventing and mitigating climate change, natural catastrophes and environmental disasters (including marine pollution)', but excludes broader environmental protection and awareness modules.[16]

14 EEAS (2021a). 9263/21 EU Concept for Environmental Protection and Energy Optimisation for EU-led military operations and missions. *https://data.consilium.europa.eu/doc/document/ST-9263-2021-INIT/en/pdf*

15 EEAS (2021b). Training Requirements Analysis Report on Leadership and Management military discipline. *https://data.consilium.europa.eu/doc/document/ST-14971-2021-INIT/en/pdf*

16 EEAS (2021c). CSDP Military Training Programme 2022-2023. *https://data.consilium.europa.eu/doc/document/ST-10520-2021-INIT/en/pdf*

2.3. NATO

There are two NATO groups addressing EP: the Environmental Protection Working Group (EPWG); and the Specialist Team on Energy Efficiency and Environmental Protection (STEEEP). *NATO's MC 0469 Military Principles and Policies for Environmental Protection* was introduced in 2003 and updated in 2011 (MC 0469). The EPWG develops NATO EP policies and guidance and the STEEEP aims to integrate environmental protection and energy efficiency regulations into technical requirements and specifications for armaments, equipment and materials on ships. The NATO Life Cycle Management Group (AC/327) is due to consider the topic of environmental standards in military procurement within the next 24 months.[17]

NATO's Allied Joint Environmental Protection Publication (AJEPP) has issued five EP Standardization Agreements (STANAGs) – plus one standards-related document (SRD) - that focus on protecting the environment during NATO-led military operations.[18] The STANAG on the safe disposal of munitions is also relevant, and includes standards to minimise environmental impacts.[19] Other guidance is also available. The Environmental Guidebook for Military Operations - developed by the Finnish, Swedish and US defence research organisations – provides tools for operational planners and deployed forces to incorporate environmental mitigation and management responsibilities.[20],[21]

Environmental training is primarily a national responsibility and it is not readily clear how NATO members and partners have integrated these EP policies into national military plans and practice. In 2019, NATO's own Legal Gazette highlighted that:

- Greater scrutiny is expected in the future and military justification for environmental damage is likely to diminish;
- Poor EP practices can undermine alliance cohesion and legitimacy;
- The need for the regular review and update of environmental protection procedures;
- The need for a fully developed environmental risk assessment and management process; and
- Staff under-manning in environmental protection which 'inhibit the inclusion of EP in important initiatives and activities across NATO'.[22]

17 *https://diweb.hq.nato.int/lcmg/Pages/About.aspx*

18 STANAGs issued by AJEPP are available via *https://nso.nato.int/nso/nsdd/listpromulg.html*

19 NATO (2018). AOP-4518 Safe disposal of munition, design principles and requirements, and safety assessment.

20 Finland, Sweden and US defence organisations (2008). Environmental Guidebook for Military Operations. *https://www.defmin.fi/files/1256/Guidebook_final_printing_version.pdf*

21 Guidebook updates in Environmental Tools for Military Activities, 2019. *https://www.defmin.fi/files/5013/Environmental_Tools_for_Military_Activities_introduction.pdf*

22 NATO (2019). Legal Gazette. Environmental Protection: NATO Policies and National Views. *https://tinyurl.com/3bm5ee87*

NATO has also developed a range of policies, operating standards and tools around civilian protection, including a handbook covering military operations and tactical decisions.[23] The handbook includes the need to mitigate the direct and indirect effects of military action - including environmental damage and long-term environmental harm - while still meeting military training and operational objectives. The handbook states that *'[a]ll military activities that change or impact the physical environment must be undertaken with the appropriate amount of information and planning prior to execution'.* The handbook highlights a general responsibility to reduce the environmental footprint of military operations. However, the potential primary, secondary and tertiary effects listed - that can negatively affect the civilian population - excludes specific environmental indicators, such as conflict-related pollution caused by destroyed or damaged infrastructure.

In 2020, the NATO Secretary General acknowledged the need for NATO and the armed forces to contribute to reaching net zero carbon emissions by 2050.[24] At the June 2021 NATO Summit, NATO members agreed to *"significantly reduce greenhouse gas emissions from military activities and installations without impairing personnel safety, operational effectiveness and our deterrence and defence posture."*[25] They did not define a target for emissions reductions and getting all NATO members to follow the same climate and carbon reduction obligations will be challenging when climate policies or targets are not equally prioritised across the nations.

NATO has a range of initiatives in place, with a shared aim to support the move to lower carbon energy use in the military. NATO adopted the Green Defence Framework in 2014,[26] and the Energy Security Centre of Excellence (ENSEC COE) was also established in 2012,[27] which addresses energy infrastructure, efficiency and management. In June 2021, NATO also announced plans for a Climate and Security Centre of Excellence hosted by Canada.[28] Environmental management courses are available through the NATO School.[29]

In 2015, NATO undertook a review of military energy use and national approaches to reducing energy consumption.[30] At the time, few countries across NATO were noted to have meaningfully engaged with energy efficiency measures for the military, although a number of NATO and partner nations have established strategies, policies and standards, as well as implementing energy efficiency technologies.

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23 NATO (2021a). Protection of Civilians Allied Command Operations (ACO) Handbook. *https://shape.nato.int/resources/3/website/ACO-Protection-of-Civilians-Handbook.pdf*

24 Virtual speech by NATO Secretary General, 28.09.2020. *https://tinyurl.com/3kky3sf4*

25 NATO (2021b). Brussels Summit Communiqué. *https://www.nato.int/cps/en/natohq/news_185000.htm?selectedLocale=en*

26 NATO (2014a). Green Defence Framework. *https://natolibguides.info/ld.php?content_id=25285072*

27 NATO Energy Security COE. *https://www.enseccoe.org/en/about/6*

28 *https://www.nato.int/cps/en/natohq/opinions_185083.htm*

29 *https://www.natoschool.nato.int/Academics/Resident-Courses/Course-Catalogue/Course-description?ID=77&ID=77*

30 NATO (2015). Smart Energy Team (SENT) Comprehensive Report. *https://natolibguides.info/ld.php?content_id=18110194*

With the exception of the Legal Gazette in 2019,22 which examined environmental protection in terms of international law, NATO policy and national views, a detailed review of the implementation and effectiveness of wider EP policies across its members has not been carried out. Such a review, would be valuable and should include: strategies, standard operating procedures, areas of responsibility, targets and objectives, and improvement processes.

2.4. EUROPEAN DEFENCE AGENCY

All EU Member States participate in the EDA, except Denmark. The EDA has also established several initiatives and networks with similar objectives of supporting the move to lower carbon energy use and improving environmental protection. These include:

- European Defence Energy Network (EDEN);[31]
- Consultation Forum for Sustainable Energy in the Defence and Security Sector (CF SEDSS) - European Commission funded initiative, managed by the EDA to introduce sustainable energy models into militaries and the widermilitary industry sector;[32]
- European Defence Standards Reference System (EDSTAR) - best practice guidance and specifications for the military sector;[33]
- Energy and Environment Working Group;[34] and
- Incubation Forum on Circular Economy in European Defence (IF CEED) – launched in January 2022 to enhance environmental sustainability and resource use across the military sector.[35]

The EDA's Energy and Environment Working Group, was established in 2014. It aims to build on work conducted under the EDA's earlier Military Green initiative and cooperate with other entities such as CF SEDSS, NATO's Environmental Protection working group and DEFNET.34 DEFNET is an informal expert-led forum that focuses on navigating EU environmental legislation that adversely affects, or could adversely affect, Member State's defence activities and operational capabilities.

31 CF SEDSS. *https://www.eda.europa.eu/european-defence-energy-network*

32 CF SEDSS Phase III. *https://www.eda.europa.eu/european-defence-energy-network/phase-iii*

33 European Defence Standards Reference System. *https://edstar.eda.europa.eu/*

34 *https://eda.europa.eu/what-we-do/all-activities/activities-search/energy-and-environment-programme*

35 *https://eda.europa.eu/news-and-events/news/2022/01/27/eda-s-new-forum-for-circular-economy*

The EDSTAR includes expert group reports on a range of topics, some of which cover environmental considerations including life-cycle project management, waste management, ammunition and the disposal of munitions.[36] The EDSTAR also hosts links to NATO's STANAGs and other external best practice guidance.

EDA activities to improve energy efficiency and reduce the environmental impact of European militaries have been on-going from at least 2013, but no consolidated reporting of performance or target setting has been made public. The EDA's annual report has brief updates on EDA environmental initiatives, including reference to upcoming chemicals and waste legislation with the potential to impact the defence sector, although no detail is provided.[37]

A progress report on the EU Climate Change and Defence Roadmap is due in mid-2022, with inputs from EDA.

36 *https://edstar.eda.europa.eu/ExpertGroups*

37 EDA (2022). Annual report 2021. *https://eda.europa.eu/docs/default-source/brochures/eda-annual-report-2021.pdf*

2.5. EU MEMBER STATE POLICIES

Military environmental policy and reporting should be readily accessible and easy to find. However, there is no central, open access depository of military environmental policies held by either the EU, EDA or NATO. Results from an online search for military environmental policy and reporting is summarised in Table 2.1 and in Appendix C.

Table 2.1 – Military environmental policies and reporting for EU Member States

	EU ranking - based on military spending*	Online env policy / strategy	Published environmental report
Austria	15	√	√
Belgium	9	-	-
Bulgaria	20	-	-
Croatia	18	-	-
Cyprus	25	√	√
Czech Republic	14	-	-
Denmark	12	√	√
Estonia	23	-	-
Finland	10	√	√
France	1	√	-
Germany	2	√	√
Greece	7	√	-
Hungary	16	-	-
Ireland	19	√	-
Italy	3	√	√
Latvia	21	√	√
Lithuania	22	-	-
Luxembourg	36	-	-
Malta	27	-	-
Netherlands	5	√	√
Poland	6	-	-
Portugal	13	√	-
Romania	11	√	-
Slovakia	17	-	-
Slovenia	24	√	-
Spain	4	√	-
Sweden	8	√	√

– not found, √ policy/strategy/environmental report found

*SIPRI (2021). SIPRI Military Expenditure Database. https://milex.sipri.org/sipri

Access to both military environmental policy and environmental reporting is sporadic. Notably France, Spain, Poland, Greece and Poland are all in the top ten EU countries in terms of military spending, but do not publish either an environmental policy, standalone report, or both. Where provided, the scope and range of environmental topics covered also varied.

In some cases – such as Spain, Hungary and Portugal – the MOD websites host several articles on positive environmental activities, initiatives underway and links to relevant information, but these are not collated as part of an annual progress or sustainability report.

Questionnaire responses from military stakeholders also indicated that military environmental policy was generally considered poorly communicated, and when available online, difficult to locate and navigate. A reluctance by the military to share EP policies and reporting is likely driven by concerns that disclosure will trigger public challenge and demands for environmental performance reporting. Poor external communication of military environmental policy however means low public engagement, risks distrust in implementation, and any positive environmental actions or best practice are not shared. If EP policies are not openly shared, promoted and discussed, it is not possible to properly gauge whether stakeholder concerns are being addressed.

When environmental policy and performance is provided, there is a tendency to only focus on positive actions that are being tackled, and a reluctance to be realistic about the challenges ahead, and timeframes involved. Reporting for some countries – such as Sweden – did reflect these challenges, including resource constraints and dealing with contaminated sites.

The European Climate Law Regulation 2021/119 sets a legally binding target of net-zero GHG emissions by 2050.[38] In May 2022, the G7 countries and the High Representative of the EU issued a statement on climate, environment, peace and security, which acknowledged the wider consideration of climate change, environmental degradation and biodiversity loss.[39] The statement sets out a seven-point agenda for action to respond to these risks, including climate mitigation action but excluded the specific need for militaries to reduce their own contribution to environmental impacts. Only four EU states – Finland, Germany, the Netherlands and Slovenia - have defined reduction targets for the military (Appendix C). France, Sweden and Austria have stated that the military will contribute to national net-zero targets.

38 *https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021R1119&from=EN*

39 G7 (2022). G7 Foreign Ministers' Statement on Climate, Environment, Peace and Security. *https://www.auswaertiges-amt.de/en/newsroom/news/-/2531240*

The level of engagement by individual EU Member States in either the EDA or NATO-led sustainability and environmental forums is unclear (sections 2.3 and 2.4). However, MOD questionnaire respondents indicated involvement with both EDA and NATO initiatives on energy and environmental protection, as well as the informal DEFNET. Few indicated involvement with the EDA Circular Economy in European Defence forum, but this only launched in early 2022.

3. LEGAL FRAMEWORKS

This section gives an overview of exemptions and derogation provision under relevant international environmental treaties and EU environmental legislation.

3.1. LEGISLATION AND EXEMPTIONS

Across the EU, national security and defence policies remain in the domain of Member States, although there are exceptions such as the Common Security and Defence Policy (CSDP). The CSDP means that most EU Member State or EU military operations are conducted multilaterally, although in practice, policy is fragmented.[40] Article 346 of the Treaty on the Functioning of the EU (TFEU) makes reference to military exemptions,[41] in that:

(a) no Member State shall be obliged to supply information the disclosure of which it considers contrary to the essential interests of its security;

(b) any Member State may take such measures as it considers necessary for the protection of the essential interests of its security which are connected with the production of or trade in arms, munitions and war material; such measures shall not adversely affect the conditions of competition in the internal market regarding products which are not intended for specifically military purposes.

The Court of Justice of the European Union (CJEU) has constrained the use of this Treaty exemption, with military exemptions under EU law typically relating to concerns from internal market rules, the protection of military industries and military procurement.[42] However, there is also a range of environmental protection legislation, international treaties or protocols that includes exemptions (coverage excludes) or derogations (authority given to deviate) relevant to military activities.

An overview of relevant international treaties and EU legislation, together with any specified exemptions in place for the military is given in Appendix D.

40 Finabel (2021). EU Law and Military Interoperability, Assessing the European Defence Initiative of 2009 and 2016. *https://finabel.org/wp-content/uploads/2021/01/6.-EU-Law-and-Military-Interoperability-1-compressed.pdf*

41 OJEU (2012). Consolidated version of the Treaty on the Functioning of the European Union. *https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:12012E/TXT&from=EN*

42 EU ISS (2014). Article 346 and the qualified application of EU law to defence. *https://www.iss.europa.eu/sites/default/files/EUISSFiles/Brief_22_Article_346.pdf*

EU Directives set out goals that all Member States must achieve, but it is up to the individual countries to decide how this is applied. A Member State can apply stricter rules than that prescribed by a Directive – in accordance with Article 193 of the TFEU. Variation in adoption may therefore apply across Member States. An EU regulation is binding and must be applied in its entirety across the EU but can still include a military exemption.

The list of treaties and legislation in Appendix D is not exhaustive, but highlights areas where military dispensations can apply. This does not mean these dispensations are necessarily applied, and defence authorities may choose to follow the regulation imposed on other sectors and governmental departments. For example, in France, the military is subject to the Environmental Code under the same conditions as private sector companies, concerning the operation of certain installations.[43] All state regulations apply to the MOD in Latvia, with just a few exceptions, and authorities can audit MOD performance and compliance.[44]

Robust and effective environmental policy is all the more important when disapplication, exemption or derogation of external environmental legislation applies. It is important that military necessity is not used to justify weaker environmental protection measures or reduce scrutiny.

Examples of areas where military dispensations can apply include:

Chemical regulation and waste

- Batteries and battery waste.
- Use of hazardous materials in military equipment, including mercury, ozone depleting substances (ODS), persistent organic pollutants (POP), other RoHS, [45]and chemicals covered by a REACH defence exemption.[46]
- Disposal of decommissioned and end-of-life explosives.
- Waste electrical and electronic equipment (WEEE).

Climate change

- Reporting of GHG emissions.
- Use of fluorinated greenhouse gases (F-gases).

43 *https://www.defense.gouv.fr/sga/au-service-nation-du-public/developpement-durable/pilier-environnement/installations-classees-icpeiota*

44 Latvia MOD (2022). Questionnaire response April 2022.

45 As defined by the RoHS Directive 2011/65/EU which restricts the use of certain hazardous substances in electrical and electronic equipment.

46 Under the REACH Regulation (EC) No 1907/2006, a defence exemption can apply.

Environmental protection

- Environmental impact assessments and strategic environmental assessments.
- Environmental noise.
- Prevention of major accidents and hazards involving dangerous substances.
- Liability for environmental damage caused.
- Marine protection policy.

Military environmental policy should set out how environmental protection is assured, including in areas not addressed by external regulation.

EU Defence Directive 2009/81/EC relates to military procurement and contract award. Prior to this Directive, most Member States automatically exempted military equipment purchases from public procurement rules.[47] Environmental protection obligations under 2009/81/EC are discretionary and technical specifications on environmental performance may be included, provided these are compatible with EU law.

The list of exemptions continues to grow. Planned legislation updates or mandates at the time of writing include a proposal on offsetting requirements for GHG emissions from aviation, which will exclude military flights,[48] and proposals to add shipping to the EU Emission Trading System to support GHG emission reductions.[49] Military vessels would be exempt since they are currently excluded from EU Regulation 2015/757,[50] which requires the monitoring, reporting and verification of carbon dioxide emissions from maritime transport.

3.2. INTERNATIONAL COMMITTEE OF THE RED CROSS GUIDELINES AND THE INTERNATIONAL LAW COMMISSION DRAFT PRINCIPLES

Whilst the military has taken steps to improve responsible environmental management of the military estate, gaps remain in practices in conflict contexts. Tracking by the military of the environmental effects of their combat activities is largely absent, with minimal information released into the public domain.

47 OJEU (2012). Consolidated version of the Treaty on the Functioning of the European Union. *https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:12012E/TXT&from=EN*

48 *https://data.consilium.europa.eu/doc/document/ST-9366-2022-INIT/x/pdf*

49 *https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12660-Climate-change-updating-the-EU-emissions-trading-system-ETS-_en*

50 *https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02015R0757-20161216&from=EN*

The International Committee of the Red Cross (ICRC) has published guidelines on the protection of the natural environment in armed conflict,[51] and in May 2022 the UN's International Law Commission's adopted 27 draft principles intended to enhance the *protection of the environment in relation to armed conflict* (PERAC).[52]

The ILC principles apply to the protection of the environment before, during or after an armed conflict. Draft Principle 3 (DP3) – *Measures to enhance the protection of the environment* – is especially relevant in terms of military environmental policy. DP3 requires States to 'take effective legislative, administrative, judicial and other measures to enhance the protection of the environment in relation to armed conflicts' and *'take further measures, as appropriate, to enhance the protection of the environment in relation to armed conflicts.'*

DP3's focus therefore includes environmental measures taken before conflict, as well as during or after it. States were invited to submit written comments on the provisional draft principles in 2021,[53] as part of final review before planned adoption by the ILC and the UN General Assembly in late 2022. In total, 12 EU Member States submitted written comments, with Denmark, Finland, Portugal and Sweden indicating strong support.[54] France submitted serious objections to the draft principles, but they did not comment specifically on DP3. The ILC's project began in 2013 and many EU Member States have engaged with the process, providing written views and national statements during debates at the UN General Assembly. A summary of the positions of EU Member States submitted to date is provided in Appendix E, noting that smaller states generally have less capacity to comment.

A detailed review of states' positions on the draft principles sits outside the scope of this report, and further commentary is expected in late 2022. However, an understanding of any objections by states can highlight where attention should be focused in terms of military environmental policy, future implementation and how this will align with the PERAC principles, once adopted.

4. EXTERNAL REVIEW

In spite of the scale of military expenditure and the nature of its activities, the military is commonly excluded from discussion on environmental performance indicators and the contribution it could make to wider governmental goals. This section summarises some of the overarching environmental performance reports for EU countries and other commentary.

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51 ICRC (2020). Guidelines on the Protection of the Natural Environment in Armed Conflict. *https://tinyurl.com/4b6rwfuu*

52 ILC (2022). United Nations International Law Commission, A/CN.4/L.968, Protection of the environment in relation to armed conflicts. *https://legal.un.org/docs/index.asp?symbol=A/CN.4/L.968*

53 ILC (2019). United Nations International Law Commission, A/CN.4/L.937, Protection of the environment in relation to armed conflicts. *https://legal.un.org/docs/index.asp?symbol=A/CN.4/L.937*

54 CEOBS (2022). State positions on the draft principles on the Protection of the environment in relation to armed conflicts after first reading. *https://ceobs.org/state-positions-on-the-ilcs-draft-perac-principles-after-first-reading*

4.1. GLOBAL ENVIRONMENTAL PERFORMANCE

Various global indicators aim to track and rank national environmental performance. The ranking and performance of individual EU Member States in such indices may be useful in highlighting which militaries should be pursuing effective environmental policies and those countries where greater support may be needed.

The Transitional Performance Index (TPI) measures country performance and includes a set of environmental indicators, including GHG emissions reduction, biodiversity, material use and energy production.[55] Overall, EU Member States ranked high in the 2021 TPI, with 13 in the top 20. These were: Malta, Italy, Denmark, Ireland, Latvia, Croatia, France, Portugal, Hungary, Greece, Spain, Romania and Germany. Sweden, Estonia, Luxembourg and Cyprus ranked the lowest of EU Member States.

4.2. EUROPEAN ENVIRONMENT AGENCY

The European Environment Agency (EEA) is an agency of the EU, gathering data and assessments on a wide range of environmental topics. The latest EEA report on the state and outlook of Europe's environment identified serious gaps in environmental policy targets.[56] Discouraging trends include:

- The overall increase in energy demand since 2014;
- No reduction in the production or consumption of hazardous chemicals;
- Presence of persistent and mobile chemicals in drinking water; and
- On-going poor urban air quality.

Militaries, and the defence technology sectors are not mentioned in the EEA report, however the failure of other sectoral environmental policy to deliver effective change is highlighted.

Biodiversity

The EEA also publishes reviews on the state of nature in the EU, which is based on information submitted by Member States under the Birds (2009/147/EC) and the Habitats (92/43/EEC) directives.[57] This includes the status of the Natura 2000 network and its possible contribution to improving the status of species and habitats through conservation measures. The 2020 report identified that only 15% of European habitats protected by the EU Habitats Directive have good conservation status, with the status of the majority identified as poor or bad.

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55 European Commission (2022). Transitions Performance index 2021: towards fair and prosperous sustainability. *https://data.europa.eu/doi/10.2777/09602*

56 EEA (2019). The European environment – state and outlook 2020. *https://www.eea.europa.eu/publications/soer-2020/at_download/file*

57 EEA (2020). State of nature in the EU. Results from reporting under the nature directives 2013–2018. *https://www.eea.europa.eu/publications/state-of-nature-in-the-eu-2020*

The agricultural sector is identified as the major driver of biodiversity loss. The significance of pressures or threats on Natura 2020 sites from either military buildings or military land use is not addressed.[58] The report refers to improvements to around 40 hectares of wet heath in Latvia - the Adazi military training area - the majority of which is a Natura 2000 site.

Unlike earlier reports, pressures and threats to open ocean ecosystems is not summarised. The EEA report covering 2007-2012,[59] recorded military use as the third highest-ranked pressure and threat to species, after fishing/harvesting or marine pollution (Figure 4.1).

There are more than 27,000 Natura 2000 sites across Europe and examination of the datasets (submitted in 2021) indicate that impacts linked with military activities were listed for a small number of them (Table 4.1).

58 The Standard Data Form for a Natura 2000 site requires information on the 'threats, pressures and activities with impact on the site'. The same 'impact code' list used for reporting impacts and activities under Article 17 of the Habitats Directive has previously been used for Natura 2000 sites. The Article 17 code list was revised (reporting period 2013-2018) and adaptation for Natura 2000 sites is pending.

59 EEA (2015). State of nature in the EU, European Environment Agency. Results from reporting under the nature directives 2007–2012. *https://www.eea.europa.eu/publications/state-of-nature-in-the-eu*

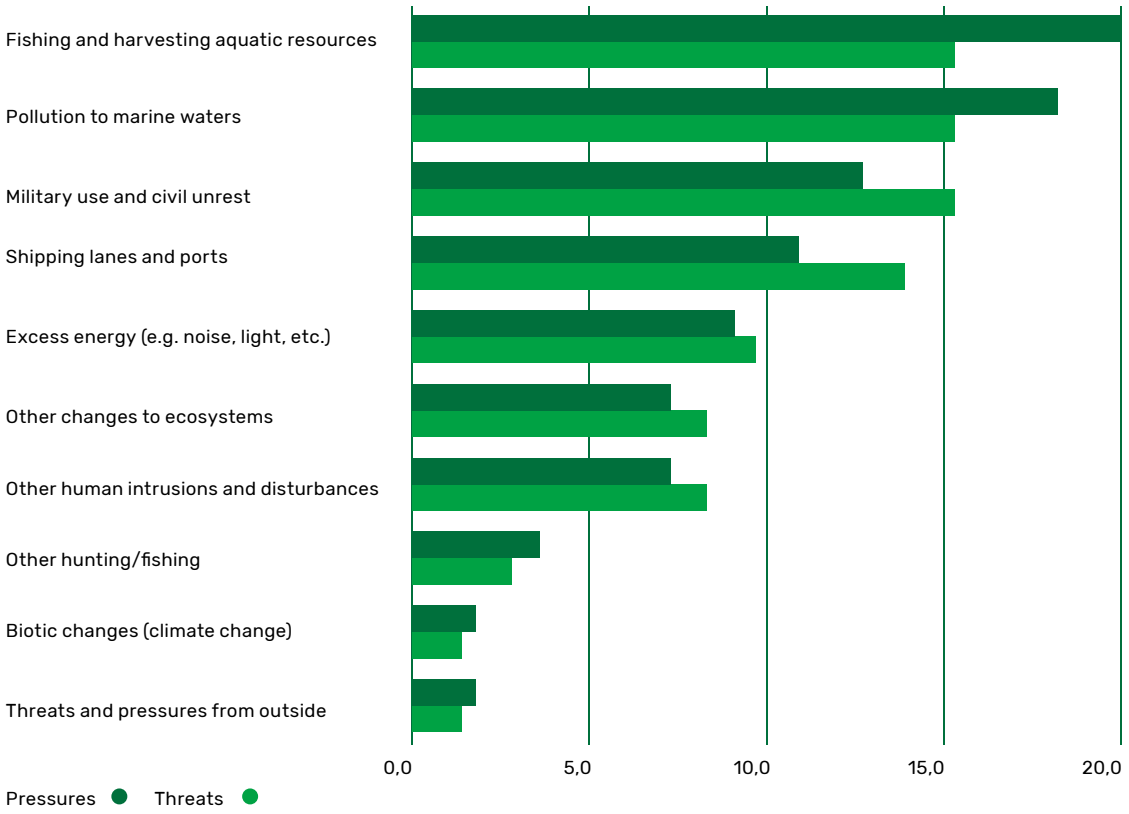
Table 4.1 – Summary of Natura 2000 sites with impacts due to military use [Source: EEA, 2021][60]

Description (impact code)	Intensity of impact	Number of Natura 2000 sites identified*		
		Positive impact	Negative impact	Not given
Abandonment of military use (G04.02)	Low	3	2	-
	Medium	2	6	-
	High	1	9	-
	Total	6	17	
Military manoeuvres (G04.01)	Low	37	154	7
	Medium	43	132	2
	High	27	58	1
	Not given	-	1	10
	Total	107	345	20
Military use and civil unrest (G04)	Low	1	21	-
	Medium	3	16	-
	High	3	11	-
	Total	7	48	
Military constructions and buildings in the landscape (E04.02)	Low	2	18	-
	Medium	-	13	-
	High	1	-	-
	Total	3	17	

*Some Natura 2000 sites have multiple entries under a 'military' impact code, listing both positive and negative impacts. All entries are included.

60 *https://www.eea.europa.eu/data-and-maps/data/natura-13/#IMPACT*

Figure 4.1 - Highest-ranked pressures and threats for species associated with open sea ecosystems [Source: EEA, 2015] [59]



Water

The EEA report on the assessment of European waters highlights agriculture as a major pollution source and the wider need for reducing hazardous chemical use.[61] Military activities are identified as a potential source, although the report does not provide detail regarding these or other point sources of pollution. Water contamination from the PFAS group of persistent chemicals is not addressed (also see section 5.12), but is covered in a separate briefing note.[62] PFAS contamination is commonly linked to fire-fighting training areas and military bases.

Contaminated Land

The EEA assessment on the management of contaminated sites estimated that military activities and war-affected areas account for around 3.4% soil contamination in Europe.[63] The estimates listed for each EU Member State are summarised in Table 4.2. Although not reflected by the summary data in Table 4.2, the EEA noted that 30% of the contamination in Lithuania has been caused by military operations, mainly from oil spills and waste disposal on former military sites.

61 EEA (2018). European waters - Assessment of status and pressures 2018. *https://www.eea.europa.eu/publications/state-of-water*

62 EEA (2019a). Emerging chemical risks in Europe – PFAS. *https://www.eea.europa.eu/publications/emerging-chemical-risks-in-europe*

63 EEA (2019b). Progress in management of contaminated. *https://www.eea.europa.eu/data-and-maps/indicators/progress-in-management-of-contaminated-sites-3/assessment*

Table 4.2 – Estimated contribution of military activities to soil contamination for each EU MS [Source: EEA, 2019b] [63]

Member State (MS)	Estimated % contribution of military activities to soil contamination in each MS
Austria	0
Belgium	0
Bulgaria	**
Croatia	Not given
Cyprus	0
Czech Republic	**
Denmark	**
Estonia	8
Finland	0.6
France	Not given
Germany	**
Greece	**
Hungary	4
Ireland	0
Italy	1
Latvia	**
Lithuania	1
Luxembourg	**
Malta	**
Netherlands	0.1
Poland	**
Portugal	**
Romania	**
Slovakia	7
Slovenia	**
Spain	0
Sweden	**

** not included in EEA summary

The figures indicate a large variation in the reported data, uncertainty on the criteria used, and whether these includes both active and former military sites in each EU Member State. Estonia (8%), Slovakia (7%) and Hungary (4%) were recorded with the highest estimated contribution of military activities to soil contamination. For non-EU countries, Norway had the highest figure, with 13% of soil contamination attribtedto military activities.

4.3. EUROPEAN TOPIC CENTRE

European Topic Centres (ETC) are consortia of organisations in member countries with expertise in specific environmental areas, contracted by the EEA to support the implementation of the EEA work programmes.

Each ETC focuses on specific task areas such as climate change adaptation and mitigation, human health, biodiversity, the circular economy, sustainability transition and water. An ETC is not focused on any individual sector and no previous ETC reports specifically cover the military and environmental practice.

Some technical reports do include discussion on military activities - for example, the marine threats from military operations,[64] although no specific data or maritime sector indicator is provided for military activities.

4.4. ORGANISATION FOR ECONOMIC COOPERATION AND DEVELOPMENT

The Organisation for Economic Cooperation and Development (OECD) publishes independent environmental performance reviews, which assess the progress of states towards environmental policy objectives.[65] The OECD's EU country reviews do not specifically mention military environmental policy or implementation, with the exception of contaminated military sites. The OECD review for several EU countries – including Estonia and the Czech Republic - highlighted the identification of priority contaminated areas, which includes former Soviet military bases.[66],[67]

4.5. ENVIRONMENTAL THINK TANKS AND POLICY INSTITUTES

In 2021, a consortium of civil society organisations – the North-Atlantic Civil-Society Working-Group on Environment and Security (NCWES) - published a set of recommendations to NATO on climate, environmental protection and security issues.[68] The recommendations were broad ranging, focusing on NATO, rather than country-specific policy, but highlighted the need for independent review of progress by the military against environmental objectives.

Climate security, environmental peacebuilding and military climate adaptation policy are addressed by many leading environmental think tanks and policy institutes.

However, climate mitigation and the effectiveness of wider military environmental policies do not appear to be commonly considered.

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64 EEA ETC (2019). Multiple pressures and their combined effects in Europe's seas. *https://tinyurl.com/3rvk5mrm*

65 OCED (2014-2021). Environmental performance reviews. *https://tinyurl.com/2p835j9v*

66 OCED (2017). Estonia. *https://tinyurl.com/8f2umefe*

67 OCED (2018). Czech Republic. *https://tinyurl.com/ykp5t4sp*

68 NCWES (2021). Sustainable Peace & Security in a Changing Climate - Recommendations for NATO 2030. *https://tinyurl.com/2kf85mdb*

A review of research papers and reports published on the websites of some other leading environmental institutes,[69] indicates limited published research or commentary on military environmental policies and their implementation. This review is not exhaustive, but provides an indication of the nature and extent of discussion in this field. Table 4.3 summarises the key commentary published by ten leading environmental policy organisations. The Stockholm Environment Institute has carried out research, mapping the environmental footprint of Estonian defence and security.[70]

Table 4.3 – Environmental policy institutes and military policy research or commentary

Online policy / strategy	Topic areas of research/commentary on military environmental policy						
	N/a*	Climate security	Adaptation	Energy	Arctic policy	Green procurment *	Footprint
The Ecologic Institute (Germany) [i]		•					
Stockholm Environment Institute (Sweden) [ii]		•	•				•
Potsdam Institute for Climate Impact Research (Germany) [iii]		•					
Resources for the Future (US) [iv]		•	•	•		•	
Center for Climate and Energy Solutions (US) [v]		•					
Third Generation Environmentalism E3G (UK) [vi]		•		•			
World Resources Institute (US) [vii]		•	•				
Wuppertal Institute for Climate, Environment and Energy (Germany) [viii]	•						
Copenhagen Consensus Center (Denmark) [ix]	•						
Brookings Institution (US) [x]		•			•		

* Not available or none found

i) https://www.ecologic.eu
ii) http://www.sei.org
iii) https://www.pik-potsdam.de
iv) https://www.rff.org
v) https://www.c2es.org
vi) https://www.e3g.org
vii) https://www.wri.org
viii) https://wupperinst.org
ix) https://www.copenhagenconsensus.com/
x) https://www.brookings.edu

69 Environmental think tanks and institutes as identified by the 2020 Global Go To Think Tank Index Report. *https://repository.upenn.edu/think_tanks*

70 *https://www.sei.org/projects-and-tools/projects/environmental-footprint-estonian-defence-and-security-sector*

4.6. EXAMPLES OF SPECIFIC IN-COUNTRY REVIEWS

French National Assembly

A 2021 report to the French National Assembly examined the challenges of ecological transition for the Ministry of the Armed Forces.[71] This included considerations of environmental protection measures and biodiversity across the military estate, as well as energy policy.

The ministry has had an environmental action plan in place since 2007 and produces annual sustainable development reports, but these are not published. The assembly's report observed that its environmental policy was poorly communicated, with limited public knowledge. The report also noted that the ministry's environmental policy required further commitment, with parliament taking a more important future role in its development, monitoring and evaluation.

Other specific recommendations included:

- Provide specific environmental training modules;
- Allocate budgets for biodiversity and environment protection;
- Better protect redundant military land;
- Set clear objectives for innovation and research investment for energy transition;
- Develop a strategy for reducing the environmental footprint of digital technology;
- Action a green NATO's single fuel policy;
- Work with the UK to stimulate a dynamic of energy transition;
- Set specific annual energy transition targets to reflect the objectives set out in the Defence Energy Strategy; and
- Publish biannual reports to parliament giving an account, in a precise, clear and exhaustive manner, of all the actions undertaken by the ministry to achieve the objectives it has set itself in environmental policy, justifying any possible failure.

71 National Assembly (2021). Information report on the challenges of ecological transition for the Ministry of the Armed Forces. *https://www.assemblee-nationale.fr/dyn/15/rapports/cion_def/l15b4145_rapport-information#_Toc256000007*

UK Defence Audit

The UK National Audit Office report on environmental sustainability across the UK MOD is useful even though the UK is no longer an EU member.[72]

The UK MOD is large but the report highlighted findings likely to be generally reflective across even the smaller EU militaries. This includes a tendency to focus on avoiding environmental incidents, rather than consideration of the positive contribution that management of the military estate and procurement decisions could make to wider environmental goals across government. Environmental protection is also often regarded as a lower priority, rarely receiving the same attention as safety. The report also identified that there was no single reporting tool for environmental incidents, or a centralised incident log, and a risk of under reporting due to a lack of awareness, or due to a lower priority being placed on environmental incidents compared to safety.

The report found that it is important that separate responsibilities relating to the environment are specified, rather than subsumed into overarching 'health, safety and environmental protection'. It is also important that environmental and sustainability groups are co-ordinated, given the risk of varied or non-aligned approaches and the strength of influence across military departments.

Responsibilities of the UK's Defence Safety Authority include the regulation and assurance of environmental protection across the MOD, as well as health and safety. However, the 2020 DSA Annual Assurance Report identified very limited DSA resource capacity and suitably qualified and experienced people in environmental protection.[73] Environmental protection issues and challenges were also reported for Naval Command, with a lack of resources and qualified staff also limiting progress. Independent assurance of environmental protection on military ranges was reported to be minimal. The most recent DSA Annual Assurance Report noted significant improvement in environmental protection within Naval Command, but the need for continued strengthening of environmental responsibility and resource planning.[74]

In April 2022, the UK established the Defence Environmental Protection Regulator,[75] which seeks to undertake third party assurance, provide an oversight of compliance and improve the co-ordination of environmental reporting across the UK MOD.

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72 NAO (2020). Ministry of Defence, Environmental Sustainability Overview. UK National Audit Office. *https://www.nao.org.uk/wp-content/uploads/2020/05/Environmental-Sustainability-Overview.pdf*

73 UK DSA (2020). Defence Safety Authority: Annual Assurance Report 2019-2020. *https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/929865/DG_DSA_AAR_2019-209_0__accessible_version.pdf*

74 UK DSA (2022). Defence Safety Authority Annual Assurance Report April 2020 to March 2021. *https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1079704/DSA_annual_assurance_report.pdf*

75 *https://www.gov.uk/government/groups/defence-environmental-protection-regulator-depr#related-information*

5. POLICY IMPLEMENTATION

This section discusses specific environmental topics and policy implementation, including some country-specific information collated through questionnaire responses or environmental reports available in the public domain.

5.1. DEFINITIONS AND PRIORITY AREAS FOR THE MILITARY

The definitions of 'greening' and 'sustainability' varies across militaries. Responses received and a review of available military policy and environmental reporting indicate the broad range of environmental issues considered relevant to military activities and the military estate. The priority topics addressed by militaries include climate adaptation, energy use, sustainable buildings, waste management, and biodiversity and species protection across the military estate and in foreign deployments. There is inconsistency in the topic areas covered, and in their prioritisation between militaries, with a very clear focus on the adoption of energy efficiency and energy security policies.

Climate change is regarded as a national security issue for EU states and a risk multiplier in terms of disasters, instability and conflict. The majority of EU states refer to climate change in their defence strategies, but only some have highlighted GHG mitigation needs and set specific GHG reduction targets for the military (Appendix C). Seven EU states - Cyprus, the Czech Republic, Greece, Hungary, Latvia, Luxembourg and Malta - do not currently refer to climate change in their defence strategies.[76]

5.2. CHALLENGES

As highly diverse organisations, geographically dispersed and operating in unique environments, there are multiple challenges and tensions between military operations and compliance with environmental protection measures.

There is need to mitigate the direct and indirect effects of military action itself, including the short- and long-term environmental harm caused, which future adoption of ILC's PERAC principles aims to address.[77] During combat activities, military logistics demand the transport and stockpiling of high volumes of supplies and equipment, there is reduced access to responsible waste management systems in conflict zones, and security conditions can limit response to environmental needs. Wartime environmental conduct lies outside the scope of this report, but peacetime training, overseas deployment and military exercises all present the risk of environmental damage. Military equipment often contains hazardous materials, which risks impacting the environment during their manufacture, use and end-of-life disposal. This includes the use of toxic materials such as beryllium, cadmium

76 IISS (2022). Green Defence: the defence and military implications of climate change for Europe. The International Institute for Strategic Studies. *https://www.iiss.org/blogs/research-paper/2022/02/green-defence*

77 ILC (2022). United Nations International Law Commission, A/CN.4/L.968, Protection of the environment in relation to armed conflicts. *https://legal.un.org/docs/index.asp?symbol=A/CN.4/L.968*

and mercury – used in on-board missile guidance systems – and barium, cobalt, lead, nickel (together with cadmium), and selenium used in batteries and for energy storage.[78]

Across the military estate, there are often legacy issues relating to land, premises, plant or equipment. In some cases, their operational life has been extended due to budget constraints, meaning that less efficient and fossil fuel dependent assets remain in use. The high volume of procurement and wide range of products also presents a challenge to embed environmental considerations into purchasing and acquisitions.

There is also the risk that senior decision-makers may be cautious about making 'non-operational' investments in environmental improvements, especially if this is regarded as affecting operational capacity or diverting resources from military capacity-building. Russia's invasion of Ukraine risks shifting any existing focus away from strengthening environmental policy and implementation, and losing any momentum achieved through current programmes.

5.3. ENVIRONMENTAL STANDARDS FOR OVERSEAS OPERATIONS

During overseas deployment, NATO policy is to respect the environmental laws of a host nation or, where a NATO Member's environmental standards are more stringent, these should be applied. NATO policy, however, does not require compliance with environmental laws if it is not militarily necessary to do so.

MOD questionnaire responses suggested this was the general policy although in two cases – Lithuania and Romania – the environmental standards of the host nation may apply. This raises concern for situations where a host nation's standards do not exist, are weakly regulated or are less stringent.

There is no clear oversight on how this policy is applied in practice, and compliance is not reported in the public domain. This is particularly true for militaries that do not publish environmental reports, where the mechanism to monitor and report on compliance is unclear.

78 JRC (2016). Joint Research Centre, Science for Policy Report. Raw materials in the European defence industry. *https://setis.ec.europa.eu/system/files/2021-02/raw_materials_in_the_european_defence_industry.pdf*

5.4. GOVERNANCE AND LEADERSHIP

Environmental governance includes strategic, operational and tactical level responsibility, incorporating logistics, procurement and the supply chain. Coordination across all organisational levels and departments is important to ensure a policy alignment and to strengthen influence – vital where environmental considerations are a lower priority. In some cases, responsibilities for environmental protection, nature conservation and sustainability sit separately to climate change and defence policy.

It is difficult to assess leadership buy-in without sight of comprehensive environmental reporting or interviews. However, where militaries have: published policy; engaged in internal and external working groups or stakeholders; provided access to environmental data or reports; shared updates on environmental projects and initiatives; and set improvement targets, this indicates a resource commitment. Questionnaire respondents however indicated that senior command does not appraise environmental performance. It is likely that senior command buy-in would be expected to increase the likelihood of public reporting.

In 2020, Sweden shared a policy that aims to embed environmental commitments across its defence sector in climate and energy use, limiting the use of hazardous materials and addressing soil and water contamination.[79] Shared agreement and commitment is vital for large and multi-structured organisations.

The 2020 sustainability report for the Swedish Armed Forces also noted operational challenges, including resourcing.

Questionnaire responses on funding from MOD representatives indicated that funds for environmental protection and sustainability initiatives were generally not ringfenced. However, Latvia, Portugal and Romania did indicate that funding had increased, compared to previous years.

5.5. ACCOUNTABILITY AND TRANSPARENCY IN REPORTING

Demonstrating commitment to EP requires clear communication and accountability for the measures in place. Transparency is critical for environmental reporting because it allows for proper scrutiny of relevant information and progress, builds trust, promotes co-operation between stakeholders and demonstrates the resources in place or required to meet environmental performance targets. It can also motivate progress and internal engagement.

79 Sweden MOD (2020). The defense sector agrees on an environmental focus. *https://www.forsvarsmakten.se/sv/aktuellt/2020/11/forsvarssektorn-enig-om-miljoinriktning*

The EU military sector is not unique in its apparent lack of commitment to transparency in environmental policy implementation and reporting. For example, research in 2017 found that the majority of EU Member States failed to provide environmental permitting conditions for major industrial plants in a clear and transparent manner, [80]suggesting a wider lack of commitment by some EU Member States to share information and demonstrate compliance with environmental legislation.

Third party validation of reporting, in accordance with recognised verification standards such as AA1000 AS,[81] supports accountability and provides credibility for external stakeholders. It can also help navigate sensitivities around public disclosure. Independent assurance is not common practice among EU militaries, and reporting appears largely verified by internal audit only. Some exceptions apply. A number of militaries – including Austria, Denmark, Germany, Italy and Portugal – operate management systems at sites either structured around or certified to ISO 14001, the EU Eco-Management and Audit Scheme (EMAS), or ISO 15001. The performance reports for Portugal's EMAS registered sites are available through the Portuguese Environment Agency's EMAS website.[82]

5.6. CONTRIBUTION TO WIDER ENVIRONMENTAL GOALS

Military policy should also support and positively contribute to wider government environmental goals, including the UN's SDGs.[83] A focus only on regulatory compliance and the avoidance of pollution incidents, for example, will limit the contributions that the military can make to these wider environmental goals.

Just three of the environmental reports referenced in Appendix C – Austria, Germany and Sweden - made specific reference to the UN SDGs. The non-binding SDGs are not perfect, but can be useful to indicate wider benefits that go beyond regulatory compliance and can also be used to highlight potentially detrimental negative interactions.

5.7. SUSTAINABLE PROCUREMENT

Some EU countries have sustainable procurement policies in place for the military. These include Austria, Denmark, Germany, Slovakia and Sweden. The Romanian MOD reports that its procurement policy requires EP obligations and technical specifications in contract awards.

Such policies are not widespread and it is uncertain whether they apply to all acquisitions. Procurement was highlighted as an opportunity to introduce

80 EEB (2017). Burning: The Evidence. How European Countries Share Industrial Pollution Permit Information Online. *https://eeb.org/most-eu-countries-failing-to-ensure-effective-access-to-industrial-pollution-information*

81 AA1000 Assurance Standard v3. *https://www.accountability.org/standards/aa1000-assurance-standard*

82 *https://emas.apambiente.pt/content/base-aerea-n5-monte-real* and *https://emas.apambiente.pt/content/estacao-de-radar-n-2*

83 *https://sdgs.un.org/goals*

environmentally-responsible specification requirements under the EU Concept,14 and there is an expectation that more EU militaries will introduce sustainable procurement policies shortly. Portugal, for example, indicated plans to develop and introduce green procurement criteria, and that under some current contract awards – such as munition disposal – ISO 14001 certification is a contractual requirement. However, evaluating the environmental performance of suppliers seems to be limited to the use of public eco-labels, ISO 14001 accreditation, or similar. Evaluation of suppliers based on GHG emission data is in its infancy.

The EU Defence Directive 2009/81/EC relates to military procurement and contract award, but environmental protection obligations and technical specifications on environmental performance remain discretionary. Austria are updating the nation's sustainable public procurement within the next 18 months, which will include a binding declaration for the MOD.[84]

5.8. ESTATE MANAGEMENT, BIODIVERSITY AND CONSERVATION

EU Member States' Armed Forces are the biggest landowners in Europe.12 This includes large areas used for military training and firing exercises. Data on the total military landholdings across the EU was difficult to find, but figures suggest that landholdings range from 0.2% - 2%, depending on the country.[85]

Military sites can provide important natural habitats,[86] and some military areas can deliver 'ancillary' conservation, even though it is not a primary objective.[87] The abandonment of military training areas in some cases - such as in Germany and Poland – has resulted in the loss of large areas of heathland.[88] However, conservation measures on decommissioned military areas can be significantly restricted by the presence or lack of information on explosive ordnance risks. This can mean that prescribed burning is deemed the only practical measure to manage habitats such as heathland. In Poland, the EU Habitat Plan encourages the mimicking of military disturbances as part of heathland management.[89]

In France, the MOD manages 250,000 hectares of public land, of which 17% hosts habitats and species that are classified in the Habitats Directive and Birds Directive. In 2012, the first LIFE nature conservation project was targeted on military areas in France to restore biodiversity. A lack of nature-based management and unmanaged disturbance on MOD-owned land threatened these habitats, compounded by a lack

84 *https://www.nabe.gv.at/nabe-aktionsplan*

85 For example, the total military lands in Lithuania is 102 square kilometres. (questionnaire response) and in Spain is 10,000 square kilometres (see footnote 157)

86 EC (2005). LIFE, Natura 2000 and the military. *https://ec.europa.eu/environment/archives/life/publications/lifepublications/lifefocus/documents/military_en.pdf*

87 EEA ETC (2021). Protected area management in the EU. *https://tinyurl.com/593ssy7d*

88 EC (2020). EU Habitat Action Plan. Action plan to maintain and restore to favourable conservation status the habitat type 4030 European dry heaths. *https://ec.europa.eu/environment/nature/natura2000/management/pdf/EU%20HABITAT%20ACTION%20PLAN%204030.pdf*

89 Ibid

of knowledge among military personnel.[90] The project ended in 2017, with a list of priority sites developed and actions to be implemented. The full extent of the benefits for the targeted habitats or species is not yet apparent.[91] Similarly, in Belgium seven LIFE restoration projects have been implemented on military heathland in Belgium and across 500 hectares on the Zahorie Military Training Area in Slovenia.98

Germany's MOD estate includes 228,000 hectares of training grounds, of which 135,000 hectares are also Natura 2000 conservation sites. A minimum requirement for Natura 2000 sites is to avoid any deterioration of significant habitat and species. However, the conversation status and condition of these Natura 2000 sites is not provided in the MOD's latest sustainability report.[92] This should be given to demonstrate that adequate status monitoring is in place, and to reflect the potential for any adverse impacts from military ownership and use. The training area also includes 45 military practice areas in the North Sea and Baltic Sea, which are also Natura 2000 protected sites.[93] In August 2019, military exercises in the Baltic Sea were believed to have caused the death of several porpoises.[94] Measures to prevent similar incidents have since been developed, but this is not mentioned in the 2020 sustainability report, published a year following the event. Failure to include such incidents, focusing on only positive outcomes and not highlighting the lessons learnt and any corrective actions taken, is poor practice.

Some militaries have already highlighted biodiversity enhancement and net gains in existing greening strategies. The Danish MOD has included biodiversity enhancement for barracks, shooting and training areas in its 2021-2025 green strategy, with an initial assessment to be completed in 2022.[95]

The revision and development of existing MOD policies is likely to be required to align with the EU's Biodiversity Strategy for 2030.[96] The Austrian MOD's biodiversity strategy is currently being modified to align it with the EU 2030 strategy and the Federal Government's Biodiversity Strategy 2020+. Similarly, for the EU's Soil Strategy, which aims to protect and restore soils, ensure that they are used sustainably and help achieve climate neutrality.[97]

5.9. WASTE AND RESOURCE USE

Waste, materials and water use should fall under the scope of the EDA's Incubation Forum on Circular Economy in European Defence, which was launched in January

90 LIFE11 NAT/FR/000734. *https://webgate.ec.europa.eu/life/publicWebsite/index.cfm?fuseaction=search.dspPage&n_proj_id=4272*

91 Ibid

92 Germany MOD (2020). Sustainability report 2020, reporting period 2018-19. https://www.bmvg.de/resource/blob/3744490/fb034ba5fc1c8148bb103b-b04ae928e5/20201022-dl-nachhaltigkeitsbericht-2020-data.pdf

93 German MOD website. Number, data, facts. *https://tinyurl.com/yp998hbn*

94 German MOD website. *https://www.bmvg.de/de/presse/ministerien-vereinbaren-vorgehen-schutz-schweinswale-3748686*

95 Denmark MOD (2021). Ministry of Defence Green Action Plan 2021-25. *https://www.fmn.dk/globalassets/fmn/dokumenter/strategi/miljo/-forsvarsministeriets-groenne-handleplan-2021-2025-.pdf*

96 EU Biodiversity 2030. *https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020DC0380&from=EN*

97 EU Soil Strategy 2030. *https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52021DC0699*

2022 (see Section 2.4). MOD questionnaire responses and published environmental reports note that systems are in place to monitor water consumption and waste volumes, although not all set specific waste recycling and recovery targets.

The revision and development of existing military policies is likely required to align them with the EU's Circular Economy Action Plan, which sets out to reduce overall consumption rates and reduce the production of waste.[98] Across some militaries, programmes are already in place. Examples from Portugal include: mid-life upgrades to equipment and weapons systems to prolong lifespans; furniture refurbishment; repurposing of old uniforms; and protocols to reduce food waste.

5.10. DISPOSAL OF MUNITIONS AND EXPLOSIVE ORDNANCE

Open burning and open detonation (OBOD) remains a method for munition disposal in several countries since it is cheap and can be used to deal with a wide range of munitions. The use of OBOD is however under increased pressure due to environmental regulations, better understanding of the environmental contamination risks, land remediation costs, and access to OBOD alternatives.

Some countries already ban the use of OBOD, unless there is no alternative and it is justified on safety grounds. NATO also prohibits the use of OBOD under its contract framework for munition disposal.[99] MOD questionnaire responses indicate that OBOD remains in use, although this is typically not cited in environmental reporting. Portugal reported that ISO 14001 certification is a contractual requirement for munition disposal. No responses referred to policy compliance with NATO's STANAG on the safe disposal of munitions.[100]

5.11. CONTAMINATED LAND

Approaches to the identification and management of contaminated land varies between EU Member States, with military activities recognised as one of several contaminating land uses practices.[101] Across Europe, military use is estimated to account for around 3.4% of contamination (see Section 4.2). Inspection strategies to assess the risks and liabilities from contaminated land within military estates vary. The majority of the published environmental reports referenced in Appendix C refer to contaminated land inspection or assessment strategies, or in some cases, remediation activities. Given the large size of most military estates and potential for ground contamination to be present, reporting of progress and action regarding land quality assessments is expected as standard.

The responsibility for the management of contaminated land may also sit with other

98 *https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1583933814386&uri=COM:2020:98:FIN*

99 Under contract frameworks let through the NATO Support and Procurement Agency (NSPA).

100 NATO (2018). AOP-4518 Safe disposal of munition, design principles and requirements, and safety assessment.

101 EC JRC (2018). Status of local soil contamination in Europe. *https://tinyurl.com/2s43naty*

authorities. In Latvia, the MOD is responsible for the identification and registration for sites under its responsibility, whilst the Regional Environmental Boards approve the investigation and remediation of non-military sites.[102] In Estonia, the MOD has responsibility for the investigation and inventory programme of polluted military and industrial sites.[67] The Czech Republic maintains a register of contaminated and potentially contaminated sites,[103] which includes military sites. Remediation of legacy military sites from the Soviet era was reported as completed in 2016.

France also maintains a public database (formerly called BASOL) that records polluted or potentially polluted industrial and former industrial sites, and which require preventative or restorative action. The database is fed by regional authorities and inspection services, but excludes military sites. It is unclear whether a register of potentially contaminated military sites is maintained internally by either the MOD or environmental authorities.

5.12. PER- AND POLYFLUOROALKYL SUBSTANCES

Per- and polyfluoroalkyl substances (PFAS) are a large group of highly persistent man-made chemicals, which have wide application and are found in many products, including firefighting aqueous film forming foams (AFFF) and waterproof coatings. Around 100,000 sites in Europe are estimated to be impacted by PFAS, although total figures remain uncertain.[104] Firefighting AFFF containing PFAS have contributed to groundwater contamination, especially around airports and military bases where fire-training has taken place. The number of military sites impacted is not known but there are around 240 active military airfields across Europe, excluding redundant sites.[105]

EU Member States have adopted different approaches to addressing problems associated with the use of PFAS containing AFFF and other PFAS products. The Danish Armed Forces and the Royal Danish Air Force no longer uses fluorinated AFFF;[106] Finland's military no longer uses fluorinated AFFFs during training. In 2021, Sweden's Air Force announced plans to switch to non-PFAS foams for use in their new rescue vehicles,[107] although PFAS foams do remain in use, with restrictions in place and controls to reduce the risk of pollution.

In Germany - under the Contaminated Sites Remediation Program - the Federal MOD has investigated defence sites to identify potential PFAS risks. As of 2020, 74 sites have been identified as potentially posing possible PFAS-related risks.[108]

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102 OCED (2019). Latvia. *https://tinyurl.com/3hfaj34z*

103 *https://www.sekm.cz/portal*

104 Nordic Council of Ministers (2019). The Cost of Inaction - A socioeconomic analysis of environmental and health impacts linked to exposure to PFAS. *http://norden.diva-portal.org/smash/get/diva2:1295959/FULLTEXT01.pdf*

105 Ibid.

106 IPEN (2018). Fluorine free-firefighting foams (3f). Viable alternatives to fluorinated aqueous film-forming foams. *https://ipen.org/sites/default/files/documents/IPEN_F3_Position_Paper_POPRC-14_12September2018d.pdf*

107 *https://www.forsvarsmakten.se/sv/aktuellt/2021/06/flygvapnet-gar-over-till-pfas-fri-slackvatska*

108 Sweco (2019). Determining historic and current PFAS levels in AFFF in the Republic of Ireland. *https://tinyurl.com/4ah4r7uy*

Consequently, the use of AFFF during training at MOD fire brigades is only allowed when using closed systems. On a national level, Germany has inventoried PFAS-contaminated soils to some degree, with investigations taking place across MOD sites. Information on the PFAS investigation is provided on the MOD website although not referenced in the latest sustainability report.[109]

Only one of the environmental reports referenced in Appendix C – Sweden - made specific reference to PFAS contamination or use. This is another example of the tendency of militaries to only report positive environmental narratives in public reporting.

5.13. BEHAVIOURAL CHANGE, STAFFING AND CULTURE

Improving environmental performance, and making meaningful contributions to reduce GHG emissions and the military environmental footprint requires behavioural change, improved awareness training and staff engagement. A 'top-down' approach may be most relevant to improve sustainability culture across the military. When prioritised by the leadership and commanders, this can become embedded domestically and for overseas deployments.

MOD questionnaire responses indicate a broad range of initiatives aimed at improving awareness and changing behaviours, including online training platforms, information portals, seminars, workshops, environmental awards and pilot projects.

Research has indicated that women have greater concern for the environment than men, and are more likely to proactively engage in environmental action.[110] Gender imbalance across the military could potentially constrain behavioural change. Under the EU's Common Security and Defence Policy framework in military missions and operations, just 7% of staff are women.[111]

Dedicated environmental roles are also essential. Analysis of Chief Sustainability Officer (CSO) positions in globally listed companies,[112] indicated that just under 30% of companies had no a formal CSO role. This dropped to only 17% of companies with a formal CSO role in the engineering sector, such as military technology companies. Mandated, well-supported and suitably qualified CSOs are critical to the delivery of greening policy within military supply chains, as well as within defence ministries themselves. Courses provided through the European Security and Defence College include climate and security, but do not cover wider EP and mitigation, including EP as part of the protection of civilians.[113]

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109 *https://www.bundeswehr.de/de/organisation/infrastruktur-umweltschutz-und-dienstleistungen/aktuelles/schwerpunktthemen/per-und-polyfluorierte-chemikalien-kurz-pfc*

110 Ramstetter & Habersack (2020). Do women make a difference? Analysing environmental attitudes and actions of Members of the European Parliament. *https://doi.org/10.1080/09644016.2019.1609156*

111 *https://eeas.europa.eu/headquarters/headquarters-homepage/111000/eums-launches-its-missions-and-operations-gender-monitoring-team-mog-mt_en*

112 PWC (2022). *https://www.strategyand.pwc.com/de/en/unique-solutions/sustainable-impact-made-real/empowered-chief-sustainability-officers.html*

113 *https://esdc.europa.eu/curricula*

The retention and recruitment of high calibre military personnel may also be affected if military environmental performance is deemed inadequate and below societally acceptable levels, especially for the younger generation who tend to afford the environment a higher priority. NATO's Youth Report stated the need to prioritise climate change within NATO and to 'reduce its own ecological footprint in theatres of operation' to fulfil its core responsibilities.[114]

5.14. EMERGING ISSUES AND OPPORTUNITIES

Key emerging issues for the military highlighted by questionnaire respondents included climate change and security issues, the need for military GHG emissions reductions, and greater consideration of the environmental impacts of war-fighting activities and depletion of natural resources.

With a commitment to transparency, the military has an opportunity to reflect and uphold domestic, regional and international EP standards and good practice, with cohesion across alliances such as NATO and the EDA. As well as improving environmental outcomes, effective implementation of EP policy can:

i) Reduce resource and logistical demands;

ii) Reduce health risks to military personnel and the local population;

iii) Reduce avoidable costs such as energy, handling and disposal of waste and hazardous materials;

iv) Improve co-operation and relationships with external stakeholders;

v) Avoid the need for costly and retrospective environmental remediation or reparation; and

vi) Help attract and retain personnel.

Militaries are increasingly wanting to make data-driven decisions and the integration of quantified environmental data that can indicate environmental, operational and cost benefits would be valuable.

114 NATO (2021). A report by the NATO 2030 Young Leaders Group. *https://www.nato.int/nato_static_fl2014/assets/pdf/2021/2/pdf/210204-NATO2030-YoungLeadersReport.pdf*

6. STUDY FINDINGS AND RECOMMENDATIONS

This section presents the study findings and our recommended actions.

6.1. OVERVIEW

Few EU militaries responded to our request to take part in this review by completing our questionnaire. Many militaries have well established environmental policies, and long-running implementation programmes, with internal audit systems and review processes. Some militaries also operate certified environmental management systems across sites – such as ISO 140001 or EMAS – or operate in accordance with such management compliance schemes. There are examples of good practice, which demonstrate the opportunities and readiness for strengthening environmental policy, practices and reporting reflective in other sectors.

There are core areas of military activities, such as existing health and safety obligations, already in place that also provide indirect protection to the environment. Rationalisation of the military estate, retaining smaller portfolios and reducing resource consumption, can also reduce maintenance needs and military environmental footprint, to some degree.

EP policies must be reflected in practice, with auditing and review to ensure compliance and ongoing improvement. This is especially challenging in conflict settings or during deployment overseas, where EP is typically not given a high priority and lower standards in environmental stewardship are sometimes considered acceptable.

6.2. LEGAL FRAMEWORKS AND EXEMPTIONS

The military operate in dynamic and challenging conditions, making it vital that environmental policy and environmental protection measures are robust and effective. This is especially important if disapplication, exemption or derogation of environmental legislation has been applied.

Under these circumstances, environmental policy must be subject to audit and external review, even when no statutory requirements to do so are in place. Policies must produce outcomes and minimise environmental impacts, and must be at least as good as those afforded by EU and country-specific environmental legislation, as far as practicable.

6.3. EXTERNAL REVIEW AND SCRUTINY

Overall, EU Member States rank highly in global environmental performance indicators, compared to other countries. However, the state of the environment in Europe indicates discouraging trends, and there is an urgent need for all sectors - including the military - to contribute to improving the EU's environmental outlook.

External reviews of the implementation of MOD environmental policy in France and in the UK highlighted that improvements were needed, including:

- Training;
- Budget allocation;
- Setting of clear objectives and targets;
- Regular publication of environmental performance reports;
- Greater contribution to wider environmental initiatives across government; and
- Increased capacity for independent assurance of environmental protection across the MOD.

It is likely that policy reviews in EU Member States would highlight similar concerns.

6.4. STATUS OF ENVIRONMENTAL REPORTING

Published environmental reports were not found for the majority of EU militaries and, when provided, the topics addressed and reporting frameworks varied. Few of the environmental reports seen included specific reference to the UN SDGs and there is a risk that a focus on regulatory compliance and the avoidance of pollution incidents will limit any contributions that militaries could make to these wider environmental goals.

Although some challenges were highlighted in reporting, there is a tendency to focus on positive activities. Failure to include incidents or be realistic about future challenges and timeframes is poor practice.

6.5. TRAINING AND BEHAVIOURAL CHANGE

In the absence of sector-wide reporting and dissemination of military environmental policies, there is less likelihood that environmental awareness will improve. All military personnel must understand and connect to the environmental, biodiversity and climate challenges in order to: encourage and normalise engagement; strengthen commitment; and accelerate change. This means a need for:

- Leadership buy-in;
- Greater use of case study narratives to inspire and mobilise mainstream participation;
- Policies and target setting that clearly reinforces this narrative;
- Visible feedback systems to highlight participation, drive momentum, and report progress against delivery targets.

With a commitment to transparency, the military has an opportunity to reflect and uphold domestic, regional and international EP standards and good practice. Effective implementation of EP has multiple benefits and the integration of quantified environmental data can help communicate these benefits.

6.6. RECOMMENDATIONS

Our recommendations are as follows:

1. EU ministries of defence should pursue senior command buy-in and appraisal of environmental performance.
2. The EU should establish an independent Defence Environmental Protection Regulator for EU militaries similar to the UK's to provide assurance, improve compliance and improve the co-ordination of environmental reporting. Making this part of the European Environment Agency could help regulatory coordination.
3. Set out a minimum framework for military environmental reporting to ensure the materiality of reports. This should include the environmental topics to be covered, key performance indicators, challenges, realistic timeframes and requirements for independent assurance.
4. Incorporate the appraisal and inclusion of the UN SDGs and EU environmental targets in military environmental policy and reporting, to support the military's contribution to wider government environmental goals.

5. Set obligatory GHG reporting requirements for the military and encourage all EU militaries to establish GHG emissions reduction targets which align with the European Green Deal and goal for climate-neutrality by 2050.

6. Commission independent environmental compliance auditing for overseas deployment.

7. Improve the training provision available through NATO's School and the European Security and Defence College to include environmental leadership, behavioural change and environmental protection.

8. Establish a centralised online platform hosted by the European Environment Agency enabling open access to all military environmental policy, strategy and reporting.

9. Encourage the establishment of centralised domestic reporting and environmental tracking systems to records incidents, as well as positive environmental outcomes and actions.

10. Set obligatory environmental protection and technical specifications on environmental performance for defence contracts and awards, though amendment of the Defence Directive 2009/81/EC.

11. Promote the streamlining of military environmental technical networks to increases transparency and accessibility, and to avoid duplication, and increase the participation of civilian stakeholders.

APPENDIX A

List of questions sent to military stakeholders

1. The EU Strategy Compass for Security and Defence outlines a commitment to substantially increase EU military and security investment by 2030, whilst acknowledging the need for increased energy and resource efficiency, and reducing the environmental footprint of CSDP missions and operations. What are your thoughts regarding this commitment?

2. Are there core areas of military activities which you believe complement their environmental responsibilities?Are there areas where there is tension between them?

3. How do you sense that military environmental policy is communicated in the public domain? [Scale 1 to 5 – please provide detail to explain your response]

4. What do you consider as the key concerns of stakeholders regarding military environmental policy?

5. Do you believe that stakeholder concerns are addressed under existing military environmental policy? [Scale 1 to 5 – please provide detail to explain your response]

6. Which areas of environmental policy do you feel that the military implement well? Why do you think the military are able to implement this area of policy well?

7. Which areas of environmental policy do you feel that the military do not implement well? Why do you think the military are unable to fully implement this area of policy?

8. Should the military publish annual environmental or sustainability reports? [Yes or No - please provide detail to explain your response]

9. Do you think military environmental or sustainability reports require external, third party validation? [Yes or No - please provide detail to explain your response]

10. Is external assurance or verification already in place for military environmental reporting? If so, please provide details of any assurance or verification processes in place:

11. Some militaries already publish environmental or sustainability reports. Based on your knowledge of current reporting, what is the materiality of these reports and are the right topics covered?

12. What do you believe are the key emerging environmental issues for the military?

13. What do you believe are the key challenges for the military in implementing environmental policy?

14. What do you consider to be the key opportunities for the military when implementing environmental policy?

15. Does military policy and practice generally meet the objectives of the EU Soil Strategy for 2030? [Please provide detail to explain your response and the country for which your response may specifically apply]

16. Does military policy and practice generally meet the objectives of the EU Action Plan Towards a Zero Pollution for Air, Water and Soil? [Please provide detail to explain your response and the country for which your response may specifically apply]

17. Does military policy and practice generally meet with objectives of the EU Biodiversity Strategy for 2030? [Please provide detail to explain your response and the country for which your response may specifically apply]

18. Does military policy and practice generally meet the objectives of the EU Circular Economy Action Plan? [Please provide detail to explain your response and the country for which your response may specifically apply]

19. Please rank how well you consider environmental and sustainability culture to be currently embedded across the military? [Scale 1 to 5 – please provide detail to explain your response and the country for which your response may specifically apply].

20. How could environmental and sustainability culture be further improved across the military?

21. The 2020 EEAS Climate Change and Defence Roadmap sets out short-, medium- and long-term measures for addressing climate change and broader environmental degradation. How would you rank the overall potential for the roadmap to succeed and meet its objectives for the EU military? [Please provide detail to explain your response]

22. Please use the text box below if you wish to provide further commentary on military environmental policy and implementation which has not been covered by your earlier responses.

APPENDIX B

List of questions sent to MOD contact points

1. What does the MOD consider as the key environmental issues relevant to its activities and estate and how are these reported to the public? [Please provide available reports]

2. What is the structure of environmental governance across the MOD and where are responsibilities designated?

3. How does MOD policy positively contribute to wider government environmental goals?

4. Under which mechanism and how often is environmental performance of the MOD appraised by Senior Command?

5. Is there an independent or external body which carries out assurance or verification of MOD environmental performance? [Please provide available reports]

6. Does the MOD operate under any ISO or equivalent certification schemes and assurance standards? [ISO 14001, ISO 50001, ISO 14064, ISAE 3000, AA1000 or other - state if these apply across the organisation or are unit/department specific]

7. In which collective sustainability and environmental forums does the MOD actively engage? [EDA Energy and Environment Working Group, EDA Consultation Forum for Sustainable Energy, EDA Incubation Forum on Circular Economy in European Defence, NATO Environmental Protection Working Group, NATO Specialist Team on Energy Efficiency and Environmental Protection, DEFNET, other]

8. Does the MOD have a green energy policy? [Please provide a copy or indicate when such a policy may be in place]

9. Does the MOD publish annual GHG emission data? [Please provide a copy or indicate by when future GHG reporting is planned]

10. Has the MOD set reduction targets for GHG emissions? [Please specify targets and timeframes]

11. Does the MOD have a sustainable procurement policy? [Please provide a copy or indicate when such a policy may be in place]

12. Does MOD policy require environmental protection obligations and technical specifications on environmental performance in contract awards, as allowed under the Defence Directive 2009/81/EC? [If so, please provide examples]

13. How does the MOD evaluate environmental and GHG performance in its supply chain?

14. Please state the current total area (in hectares) of the military estate, including all training and firing areas.

15. How does MOD policy and practice align with the objectives of the EU Soil Strategy for 2030, the EU Action Plan Towards a Zero Pollution for Air, Water and Soil, and the EU Biodiversity Strategy for 2030? [Please provide copies or indicate when such policies are planned to be in place]

16. Does the MOD implement an inspection and audit strategy to assess existing and potential environmental liabilities and contaminated land risks linked with its operations and estate? [Please provide a copy or indicate when a strategy may be in place]

17. Which environmental protection standards apply for overseas deployment?

18. Does the MOD monitor volumes of waste generated and set recycling and recovery targets? [Please provide details]

19. Does the MOD monitor water abstraction, use and discharge, and set reduction targets? [Please provide details]

20. What is MOD environmental policy on the disposal of decommissioned explosives and munitions?

21. How does MOD policy and practice align with the objectives of resource management and the EU Circular Economy Action Plan? [Please provide a copy or indicate when such policies may be in place]

22. How is environmental management and sustainability resources shared across MOD staff (e.g. online platforms, portals, forums)?

23. How is environmental and sustainability culture embedded across the MOD?

24. Is funding for environmental protection and sustainability initiatives - ringfenced? [Yes / No] - increasing, compared to previous years? [Yes / No] - incorporating a R&D allocation? [Yes / No]

25. If you wish to provide further information on MOD greening policy and implementation which has not been covered by your responses above, please give details below.

APPENDIX C

Summary of published military environmental policy and environmental reporting

	Environmental		Climate and energy		
	Online policy / strategy	Latest published environmental/sustainability reports - environmental topic areas included	Defence strategy includes climate change[115]	Military GHG mitigation needs noted	Military GHG reduction targets set
Austria	●[116]	Sustainability report, 2021 - peace and security, waste, biodiversity and conservation, energy and climate, procurement.[117]	√	√[116]	'Contribute' to national targets
Belgium	–	None found.	√		
Bulgaria	–	Annual energy efficiency reporting only, 2022.[118]	√		
Croatia	–	None found.	√		
Cyprus	●[119]	Annual MOD report, 2021 – includes plans for implementation of a waste and energy saving programme, including recycling, environmental awareness and energy audits.[120]			
Czech Republic	–	None found.			
Denmark	●[121]	Status report, 2016 to 2020 - energy audits, sustainable buildings, identification and assessment of contaminated sites, invasive species assessment, Arctic policy, conservation on Christianso island, energy and climate accounting, technology, behaviour and communication.[122] GHG emission data reported through the MOD Climate Accounts.[123]	√		
Estonia	–	None found, but a 2022 MOD environmental footprint study has been commissioned (to date unpublished).[124]	√		
Finland	●[125]	Defence Forces Environmental Report, 2021 - soil and water protection, management of contaminated sites, environmental assessment of marine activities, fuel and GHG emissions, water consumption, waste.[126]	√	√[127]	Yes

APPENDIX C

Summary of published military environmental policy and environmental reporting

	Environmental		Climate and energy		
	Online policy / strategy	Latest published environmental/sustainability reports - environmental topic areas included	Defence strategy includes climate change	Military GHG mitigation needs noted	Military GHG reduction targets set
France	●[128, 129]	Environmental reporting produced but not published – as reported by the 2021 Information report to the National Assembly.[130]	√	√[128]	'Contribute' to national targets
Germany	●[131]	Sustainability report, 2020 - environmental management system, nature conservation and biodiversity, sustainable buildings, energy consumptions and GHG emission, procurement.[131]	√	√[131]	Yes
Greece	●[132]	None found.			
Hungary	–	None found.			
Ireland	●[133]	None found.	√	√[133]	
Italy	●[134]	Environmental information is reported through 'transparent administration' webpage.[135]	√		
Latvia	● [136]	MOD Annual report, 2020 - land remediation, environmental monitoring, nature conservations, waste management, illegal fishing interventions.[137]			
Lithuania	–	None found.	√		
Luxembourg	–	None found.			
Malta	–	None found.			
Netherlands[138]	●	Annual Report and Final Act Ministry of Defence, 2020 – energy, airport decisions. [139]	√	√[138]	Yes
Poland	–	None found.	√		
Portugal[140]	○	None found.	√		
Romania[141]	○	None found.	√		

APPENDIX C

Summary of published military environmental policy and environmental reporting

	Environmental		Climate and energy		
	Online policy / strategy	Latest published environmental/sustainability reports - environmental topic areas included	Defence strategy includes climate change	Military GHG mitigation needs noted	Military GHG reduction targets set
Slovakia	–	None found but the Analytical Unit (AU) state that an internal report is produced which regularly monitors implementation of 'The green ministry concept', which covers green procurement and reducing the military carbon footprint.[142]	√	√[142]	
Slovenia	○[143]	None found.	√	√[144]	Yes
Spain	●[145]	Multiple resources and articles but no consolidated report found.	√[146]	√[147]	
Sweden	●[148]	Armed Forces Sustainability Report, 2020 – climate adaptation, energy use, waste, PFAS, procurement, resource use.[149]	√	√[148]	'Contribute' to national target

APPENDIX C - Footnotes

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[127] Finland MOD (b). Defence Forces Energy and Climate Program. Available via *https://puolustusvoimat.fi/osa-yhteiskuntaa/puolustusvoimat-ja-ymparisto*

[128] France MOD. Sustainable Defence Strategy. *https://www.defense.gouv.fr/sga/au-service-nation-du-public/developpement-durable/strategie-defense-durable*

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APPENDIX D

Summary of key international treaties and EU environmental legislation

Topic / scope	Treaty / Legislation	Military reference or exemption specified
Chemical regulation and waste		
Batteries and battery waste.	Directive 2006/66/EC [150]	Batteries and accumulators used in military equipment are excluded. This exemption has been rolled over into the proposed 2020 amendment to this Directive.[151]
Mercury - whole life-cycle of mercury, aiming to protect human health and the environment from mercury emissions and compounds.	Minamata Convention on Mercury [152]	Products essential for civilian and military protection are excluded from the Convention.
	EU Regulation 2017/852 [153]	Does not apply to equipment that is necessary for the protection of the essential interests of the security of Member States, including arms, munitions and war material intended for specifically military purposes. A consultation on a review on EU mercury law closed in May 2022.[154]
Ozone depleting substances (ODS) – phased reduction and consumption of ODS.	Montreal Protocol [155]	Encourages the regular reporting on ODS use, including the military, and to prepare to reduce access to and take all actions necessary to reduce reliance on ODS.
	EU Regulation 1005/2009 [156]	All use of ODS in any application is prohibited within the EU, with few specific exceptions, including Critical Use of Halons (CUH) in some military applications. Updates to the regulation are currently proposed,[157] which would set dates for the decommissioning of military equipment with CUH of 2035 and 2040.
Persistent Organic Pollutants (POP) - measures to eliminate or reduce the release of POPs into the environment, including the use and import or export of listed POPs.	Stockholm Convention[158]	The Convention also allows registration of acceptable purposes for the production and use of some POPs and for the registration of specific exemptions for the production and use of listed POPs.
	EU Regulation 2019/1021[159]	Exempts the use of certain POPs - such as brominated flame retardant - for civilian and military aircraft.
Registration, evaluation, authorisation and restriction of chemicals (REACH).	Regulation (EC) No 1907/2006[160]	An exemption can apply in the interest of national security, however significant justification is required.[161] Greece, Germany, and Romania currently hold the most defence exemptions, at 49, 28 and 25, respectively.
Restriction on the use of certain hazardous substances (RoHS) in electrical and electronic equipment.[162]	RoHS Directive 2011/65/EU [163]	Does not apply to equipment that is necessary for the protection of the essential interests of the security of Member States, including arms, munitions and war material intended for specifically military purposes.
Waste - sets the concepts and definitions related to waste management.	Directive 2008/98/EC [164]	The waste framework does not apply to the decommissioning of explosives.

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Summary of key international treaties and EU environmental legislation

Topic / scope	Treaty / Legislation	Military reference or exemption specified
Waste electrical and electronic equipment (WEEE).	Directive 2012/19/EU [165]	Does not apply to EEE necessary for the protection of the essential interests of the security of Member States, including arms, munitions and war material intended for specifically military purposes.
Waste shipments into the EU.	Regulation (EC) No 1013/2006[166]	Exemption for imports for waste generated by armed forces, but only in situations of crisis or peacemaking.
Climate change		
Climate change and GHG gas emissions, including fluorinated (F-gases).	Framework Convention on Climate Change [167]	Reporting of military GHG emissions to the UNFCCC are provided on a voluntarily basis only.
	Regulation (EU) No 517/2014 [168]	Military exemptions apply, including use of F-gases in military equipment. Consultation was completed in 2020, aiming to update the regulations to align with the EU Green New Deal and the Montreal Protocol.[169]
Environmental protection		
Defence contracts and procurement - covering contracts for military and sensitive equipment.	Defence Directive 2009/81/EC [170]	Environmental characteristics and environmental performance requirements for contracts may be applied but are not obligatory.
Environmental impact assessment of public and private sector development projects.	Directive 2014/52/EU [171]	Member States may decide, on a case-by-case basis and if so provided under national law, not to apply this Directive to projects, or parts of projects, having defence as their sole purpose, or to projects having the response to civil emergencies as their sole purpose, if they deem that such application would have an adverse effect on those purposes.
Environmental liability - defines liability for environmental damage including: damage to the aquatic environment; protected species and natural habitats; and contamination of the land which creates a significant risk to human health.	Directive 2004/35/EC[172]	Does not apply to activities the main purpose of which is to serve national defence or international security nor to activities the sole purpose of which is to protect from natural disasters. The Directive also has temporal application and does not apply for example, if more than 30 years have passed since the emission, event or incident, resulting in the damage, occurred.
Environmental noise.	Directive 2002/49/EC [173]	Does not apply to noise due to military activities in military areas.

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Summary of key international treaties and EU environmental legislation

Topic / scope	Treaty / Legislation	Military reference or exemption specified
Prevention of major accidents and hazards involving dangerous substances.	Seveso-III Directive 2012/18/EU[174]	Military establishments are excluded because their inclusion and the information disclosure is considered to adversely affect public security or national defence. The exclusion applies to all sites where military operations take place or where military products are produced or where military products/equipment are present or stored, including those directly operated by the military or a private company under military contract.[175]
Strategic environmental assessment of public plans and programmes, e.g. on land use, transport, energy, waste and agriculture.	Directive 2001/42/EC [176]	Plans and programmes, the sole purpose of which is to serve national defence or civil emergency are not covered by the Directive.
Marine		
Marine - strategy framework for marine environmental policy.	Directive 2008/56/EC [177]	Security/defence is listed as a human activity for which pressures or impacts on the marine environment are to be considered. However, it states that 'the Directive shall not apply to activities the sole purpose of which is defence or national security. Member States shall, however, endeavour to ensure that such activities are conducted in a manner that is compatible, so far as reasonable and practicable, with the objectives of this Directive'
Prevention of pollution and emissions from ships.	MARPOL Convention [178]	Under Article 3, the Convention shall not apply to any warship, naval auxiliary or other ship owned or operated by a State. However, each Party shall ensure 'adoption of appropriate measures not impairing the operations or operational capabilities of such ships owned or operated by it, that such ships act in a manner consistent, so far as is reasonable and practicable.' In 2018, a global data collection system came into force which was introduced by Resolution MEPC.278(70) to monitor ship fuel consumption.[179]
	EU Regulation 2015/757[180]	Requires the monitoring, reporting and verification of carbon dioxide emissions from maritime transport, although military vessels are excluded. In 2019, the EU adopted proposals to update 2015/757 align it with the MEPC.278(70) global data collection system.[181]

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[150] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02006L0066-20131230&rid=1

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[152] https://www.mercuryconvention.org/sites/default/files/documents/information_document/Minamata-Convention-booklet-Sep2019-EN.pdf

[153] https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1583933814386&uri=COM:2020:98:FIN

[154] https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12924-Mercury-review-of-EU-law_en

[155] https://ozone.unep.org/sites/default/files/Handbooks/MP-Handbook-2020-English.pdf

[156] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32009R1005&from=EN

[157] https://ec.europa.eu/clima/system/files/2022-04/ods_proposal_en.pdf

[158] http://chm.pops.int/Portals/0/download.aspx?d=UNEP-POPS-COP-CONVTEXT-2021.English.pdf

[159] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02019R1021-20210315&from=EN

[160] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02006R1907-20220301&from=EN

[161] https://reach.eda.europa.eu/

[162] Including mercury, cadmium, lead, hexavalent chromium, polybrominated biphenyls and polybrominated diphenyl ethers.

[163] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02011L0065-20211101&from=EN

[164] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02008L0098-20180705&from=EN

[165] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02012L0019-20180704&from=EN

[166] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02006R1013-20210111&from=EN

[167] https://unfccc.int/resource/docs/convkp/conveng.pdf

[168] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32014R0517&qid=1608306002561

[169] https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12479-Fluorinated-greenhouse-gases-review-of-EU-rules-2015-20-_en

[170] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02009L0081-20220101&from=EN

[171] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0052&from=EN

[172] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02004L0035-20190626&qid=1568193390794&from=EN

[173] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02002L0049-20210729&from=EN

[174] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32012L0018&from=EN

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[177] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32008L0056&from=EN

[178] https://www.imo.org/en/About/Conventions/Pages/International-Convention-for-the-Prevention-of-Pollution-from-Ships-(MARPOL).aspx

[179] https://wwwcdn.imo.org/localresources/en/OurWork/Environment/Documents/278(70).pdf

[180] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02015R0757-20161216&from=EN

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APPENDIX E

Summary of the position of EU Member States on the ILC's draft principles on the PERAC

	State position on the ILC draft principles			Notes
	Objection	Support	Not commented	
Austria		●		Comments indicate support since 2019[182]
Belgium		●		Comments indicate support [183]
Bulgaria			○	-
Croatia		●		Comments indicate support since 2016[184]
Cyprus		●		Comments indicate strong support[185]
Czech Republic	◉			Comments indicate some objection[186]
Denmark*		●		Comments indicate strong support[187]
Estonia		●		Comments indicate support since 2019[188]
Finland*		●		Comments indicate strong support197
France	●			Comments indicate serious objections[189]
Germany		●		Comments indicate support[190]
Greece		●		Comments indicate support since 2019[191]
Hungary			◉	A report in 2014 on national practice[192]
Ireland				Comments indicate support [193]
Italy				Comments indicate strong support since 2019 [194]
Latvia			○	-
Lithuania			○	-
Luxembourg			○	-
Malta			○	-
Netherlands		●		Comments indicate strong support[194]
Poland		◉	○	Comments in 2015 indicate some support, and in 2016 good support on occupation, [195]

*Joint submission of behalf of the Nordic countries

● - strong or generally strong, ◉ - some, ○ - not commented

APPENDIX E

Summary of the position of EU Member States on the ILC's draft principles on the PERAC

	State position on the ILC draft principles			Notes
	Objection	Support	Not commented	
Portugal		●		Comments indicate strong support[196]
Romania		●		Comments indicate strong support since 2019[197]
Slovakia	◉			Comments in 2019 indicate some objections[198]
Slovenia		●		Comments indicate strong support since 2019[199]
Spain		●		Comments indicate strong support[200]
Sweden*		●		Comments indicate strong support197[201]

*Joint submission of behalf of the Nordic countries

● - strong or generally strong, ◉ - some, ○ - not commented

APPENDIX E - Footnotes

[182] Austria (2019). Written comments.
https://www.un.org/en/ga/sixth/74/pdfs/statements/ilc/austria_1.pdf
https://www.un.org/en/ga/sixth/74/pdfs/statements/ilc/austria_2.pdf
https://www.un.org/en/ga/sixth/74/pdfs/statements/ilc/austria_3.pdf

[183] Belgium (2022). Written comments.
http://legal.un.org/docs/?path=../ilc/sessions/73/pdfs/french/poe_belgium.pdf&lang=EF

[184] Croatia (2016). Written comments.
https://www.un.org/en/ga/sixth/71/pdfs/statements/ilc/croatia_2.pdf
https://www.un.org/en/ga/sixth/71/pdfs/statements/ilc/croatia_3.pdf

[185] Cyprus (2022). Written comments.
http://legal.un.org/docs/?path=../ilc/sessions/73/pdfs/english/poe_cyprus.pdf&lang=E

[186] Czech Republic (2022) Written comments.
http://legal.un.org/docs/?path=../ilc/sessions/73/pdfs/english/poe_czech_rep.pdf&lang=E

[187] Sweden (2022) (on behalf of Nordic countries).
http://legal.un.org/docs/?path=../ilc/sessions/73/pdfs/english/poe_nordic.pdf&lang=E

[188] Estonia (2019). Written comments.
https://www.un.org/en/ga/sixth/74/pdfs/statements/ilc/estonia_1.pdf
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[189] France (2022) Written comments.
http://legal.un.org/docs/?path=../ilc/sessions/73/pdfs/french/poe_france.pdf&lang=EF

[190] Germany (2022). Written comments.
http://legal.un.org/docs/?path=../ilc/sessions/73/pdfs/english/poe_germany.pdf&lang=E

[191] Greece (2019). Written comments.
https://www.un.org/en/ga/sixth/74/pdfs/statements/ilc/greece_23.pdf

[192] The Hungarian MOD had developed an environmental protection doctrine, creating a system of tasks related to EP based on domestic, EU and NATO standards.

[193] Ireland (2022). Written comments.
http://legal.un.org/docs/?path=../ilc/sessions/73/pdfs/english/poe_ireland.pdf&lang=E

[194] Italy (2019). Written comments.
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https://www.un.org/en/ga/sixth/74/pdfs/statements/ilc/italy_3.pdf

[195] Netherlands (2022). Written comments.
http://legal.un.org/docs/?path=../ilc/sessions/73/pdfs/english/poe_netherlands.pdf&lang=E

[196] Poland (2015). Written comments.
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https://www.un.org/en/ga/sixth/70/pdfs/statements/ilc/poland_2.pdf
https://www.un.org/en/ga/sixth/70/pdfs/statements/ilc/poland_3.pdf

[197] Poland (2016). Written comments.
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https://www.un.org/en/ga/sixth/71/pdfs/statements/ilc/poland_23.pdf

[198] Portugal (2022). Written comments.
http://legal.un.org/docs/?path=../ilc/sessions/73/pdfs/english/poe_portugal.pdf&lang=E

[199] Romania (2019). Written comments.
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https://www.un.org/en/ga/sixth/74/pdfs/statements/ilc/romania_2.pdf
https://www.un.org/en/ga/sixth/74/pdfs/statements/ilc/romania_3.pdf

[200] Slovakia (2019). Written comments.
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https://www.un.org/en/ga/sixth/74/pdfs/statements/ilc/slovakia_2.pdf
https://www.un.org/en/ga/sixth/74/pdfs/statements/ilc/slovakia_3.pdf

[201] Slovenia (2019). Written comments.
https://www.un.org/en/ga/sixth/74/pdfs/statements/ilc/slovenia_1.pdf
https://www.un.org/en/ga/sixth/74/pdfs/statements/ilc/slovenia_2.pdf
https://www.un.org/en/ga/sixth/74/pdfs/statements/ilc/slovenia_3.pdf

[202] Spain (2022). Written comments.
http://legal.un.org/docs/?path=../ilc/sessions/73/pdfs/spanish/poe_spain.pdf&lang=ES

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