NATO Climate Change and Security Action Plan

Compendium of Best Practice

INTRODUCTION

NATO Climate Change and Security Action Plan

At the 2021 NATO Brussels Summit, Allied Heads of State and Government agreed a Climate Change and Security Action Plan with the aim of making NATO the leading international organisation when it comes to understanding and adapting to the impact of climate change on security. It provides a 360-degree approach, encompassing measures to increase Allied awareness of the impact of climate change on security. It outlines the need for clear adaptation and mitigation measures, and enhanced outreach, while ensuring a credible deterrence and defence posture.

This document contains examples of how individual Allies are putting these measures into practice. They include government initiatives, public-private partnerships, military and dual-use technologies, national and international efforts reflecting the different types of interventions required to meet the challenges posed by climate change. All examples were provided by Allied national authorities.

AWARENESS

A number of Allies have brought the notion of climate change as a threat multiplier into their national and defence policies. Public national risk assessments highlight and analyse key risks that hold the potential to cause crises that go far beyond what can be managed locally or with ordinary day-to-day resources. These risk profiles often contain typical climate related incidents, e.g., heatwaves and drought, storms and hurricanes, coastal flooding, and extreme rainfall and can form the basis for preparedness planning.

National Defence Energy Transition Action Plans set out the approach, principles, enabling conditions and measures to make defence organisations more sustainable in a targeted manner with due regard for the financial resources available and the tasks of the armed forces. Defence budgets are being reinforced across the Alliance to fund the measures listed in the Action Plans, i.e., to implement the enabling conditions for the energy transition, to carry out studies and pilot projects, and to embed sustainability more explicitly in the conduct of regular activities.

The subject of climate change and security is increasingly part of the curricula of Allied military education institutions. A Multinational Capability Development Campaign (MCDC) project called Climate Change, Global Security and Future Operations (CLIMSEC) aims at developing a common climate security construct to provide commanding officers and planners of military activities in areas affected by climate change with a better understanding of climate changes effect on operations. Other projects identify some of the most significant new global security threats and opportunities that could occur because of climate change and assess the direct operational consequences of climate change in terms of the efficacy and viability of different types of military activity.

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Allies attach great importance to raising awareness for the disproportionate impact of climate change on women and girls, as well as marginalised communities. The conclusions of the UN's Fourth World Conference on Women (Beijing, 1995) and the Beijing Platform for Action are used to measure progress in this area.

ADAPTATION

Allies are reviewing their national crisis response plans to deal with extreme weather events, including in the areas of energy, water and food supply. National exercises test the resilience of their electricity grids, critical infrastructure and energy mix. Through NATO's Climate Change and Security Impact Assessment, a number of climate change adaptation measures were identified, from retrofitting and improving the resilience of infrastructure to altering operational planning and training schedules.

Some NATO countries established public-private partnerships to provide a strategic and comprehensive approach to respond to defence-related energy and environmental challenges. Strategic defence and civilian stakeholder alliances can more easily integrate international defence programmes, global defence value chains and research and development projects in the areas of sustainable mobility, environmental protection, energy efficiency and renewable energy sources.

MITIGATION

Many Allies have created action plans to frame their efforts to mitigate the effects of climate change. Often, these policies define greenhouse gas (GHG) reduction targets for 2030 and include indicative trajectories and objectives for 2040 and 2050. Typically, national efforts to mitigate the effects of climate change include benchmarking emissions and the resources used in defence-related activities (fuel consumption, waste production, energy expenditure, use of ammunition, water consumption, chemicals, accidental emissions, etc.). The collection, analysis and processing of data enable defence institutions to set reduction goals and strategies.

Under NATO's Science for Peace and Security (SPS) Programme, researchers work to develop technology to limit GHG emissions, including by developing green hydrogen and electricity.

Some Allied Governments have introduced environmental criteria for the procurement of different types of products and services. Energy efficiency is becoming a criterion in the development of new military equipment. Allied defence organisations play an important role in the transition by testing concrete solutions. Examples of this include:

- experiments with the use of hydrogen in long-range drones for maritime surveillance;
- the use of biofuel in the flying, sailing and driving domains;
- the renovation of Defence-built estate according to energy efficiency principles and standards and by using innovative civil construction techniques;
- the installation of photovoltaic systems and other renewable energy sources for the production of electricity and heat;

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- the use of smart energy management systems leading to reduced energy consumption;
- the development of new underwater spoilers that reduce the fuel consumption of patrol vessels;
- the use of more economic diesel and electric engines instead of the gas turbines in new frigates;
- research into energy-independent camps, including by creating a “hydrogen highway” in Europe and by developing energy-autonomous logistic hubs located in military facilities to ensure energy self-sufficiency and support green transport;
- the increased use of simulators by aircraft, land vehicles and submarine crews;
- the use of lessons learned from the civilian sector to make military heavy transport more efficient.

NATO as an organisation has developed its own methodology to identify the emissions associated with the operations of its enterprise.

OUTREACH

Allies advocate for the integration of climate change-related concerns in all UN activities. Several nations are members of the UN Group of Friends on Climate and Security, and support the Climate and Security Mechanism.

The public sector, civil society and research institutions of NATO countries engage in collaborative networks to share knowledge, seek innovative solutions, uncover best practice examples and set collective aims and objectives with respect to climate change and security. An example of this is the Nordic-Baltic Expert Network on Climate and Security, which brings together twelve research institutes to create a space for research cooperation and to support member states from the region who serve on the UN Security Council and other multilateral and regional bodies. In attempting to diversify their energy sources, Allies are reaching out to partners in the Middle East and North Africa region.

As members of the Organisation for Security and Cooperation in Europe, Allies support the project “Strengthening Responses to Security Risks from Climate Change in SouthEastern Europe, Eastern Europe, the South Caucasus and Central Asia”. The project focuses on raising awareness, developing capacities and sharing knowledge within and among the regions, as well as through the implementation of climate change adaptation measures in the most vulnerable geographic areas (climate change and security hot spots).

More information on climate change and security

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UNITED STATES
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- Building Community Resilience with Nature-Based Solutions, Strategies for Success (Nature Based Solutions Guidebook 2023)
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- Issue Resilience Fact Sheet

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- Energy Performance Contracts (EPCs)
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- Naval Electric Ship Technologies (NEST
- Green Aviation Innovative Surfaces (GAINS)
- IDEaS Challenge: Land to sea with low GHGs: Arctic eco-safe transit of personnel and cargo
- IDEaS Challenge: A Cold Wind Blows: Seeking Smaller, Ruggedized Wind Turbines for the Arctic
- Nature-Based Infrastructure for Coastal Resilience & Risk Reduction

CZECHIA

- Methodology

DENMARK

- Danish Ministry of Defence Power-t-X analysis

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- Academy of Finland research project: Interplay between National Defence, Security and Low Carbon Energy Policies: a Sustainability Transitions Perspective, 2019-2024

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PORTUGAL

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SLOVAKIA

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SLOVENIA

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- ELUVAT I (Innovative electric light utility all-terrain vehicle for defence purposes) EDA CatB project
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- Slovenian Partnership for Energy and Environment in Defence (SiEnE)
- CF SEDSS
- Cooperation within EDA CapTech EnE (Capability Technology - Energy and Environment)
- Participation at IF CEED (Incubation Forum for Circular Economy in European Defence)

SPAIN
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- Strategic Communications

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AWARENESS

CANADA

Country	Canada
Action Plan Area	Awareness
Name or main objective of the project/activity/policy	**Climate Change impacts on Royal Canadian Navy (RCN), Royal Canadian Air Force (RCAF) and Canadian Army (CA)**
Description of the project/ activity/policy	Given the impacts a changing climate can have on infrastructure, operations and the safety of our personnel, Defence will take action to mitigate these risks. Defence will anticipate and better understand the impacts of climate change by reviewing existing policy and practice across the department and CAF, and identifying key areas where climate change can have an impact. Once identified, climate change adaptation measures will be included in key policies and practices. The RCAF completed the initial draft of a climate change risk assessment. The RCN has developed a plan to assess climate change impacts on RCN activities. The CA completed its climate change risk assessment.
Lead institution	Canadian Armed Forces / Department of National Defence, Canada
Point of contact	mnd.environment-environnement.mdn@forces.gc.ca
Key words	Awareness, Climate Change, Policy, Research

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Country	**Canada**
Action Plan Area	Awareness
Name or main objective of the project/activity/policy	**Net-Zero Data Mining: utilizing data to inform net-zero infrastructure planning**
Description of the project/activity/policy	The Department of National Defence and Canadian Armed Forces Data Strategy (2019) identifies data as critical assets to modern organizations, helping to gain insights that lead to the identification of opportunities for improved performance. To better manage the infrastructure's portfolio, a better understanding on how we can leverage existing and on-going accumulating is required to better inform and optimize net-zero infrastructure planning through the lens of public stewardship.
Lead institution	Defence R&D Canada, CORA, Canada
Point of contact	DRDCPartnerships-PartenariatsRDDC@forces.gc.ca
Key words	Awareness, Net-zero, Data Mining, Infrastructure

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Country	**Canada**
Action Plan Area	Awareness
Name or main objective of the project/activity/policy	**Characterizing the Impact of the Changing Arctic Maritime Environment on Defence and Security**
Description of the project/activity/policy	This activity will assess the current and future state of the Arctic environment to optimize surveillance and situational awareness for continental defence. This activity includes measuring a baseline of seasonal and long-term trends and variability for environmental conditions including ice cover, ocean currents and temperatures, bathymetry for deep and shallow ocean waters, and underwater ambient noise which impacts sonar performance. Knowledge gained will be used in developing and improving models that use environmental information to provide decision-makers with advice on conducting operations in the Arctic, with a focus on enabling surveillance for continental defence. This activity will also enable forecasting trends and operational and planning requirements over several decades, leveraging knowledge generated by internal and external Arctic climate change research.
Lead institution	Defence R&D Canada, Atlantic Research Centre
Point of contact	DRDCPartnerships-PartenariatsRDDC@forces.gc.ca
Key words	Arctic, Maritime, Sea-Ice, Nearshore, Navigation

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Country	**Canada**
Action Plan Area	Awareness
Name or main objective of the project/activity/policy	**IDEaS Challenge: Less GHGs on the Seas: Practical Solutions to Measure and Record Energy Consumption – Call for Proposal (CFP) to the Canadian innovation community (Private Sector and Academia)**
Description of the project/activity/policy	The Department of National Defence (DND)/Canadian Armed Forces (CAF) are seeking innovative systems and technologies to accurately measure fuel and load energy consumption and GHG emission data across the Royal Canadian Navy (RCN) fleet. Existing capabilities to quantify this information are constrained due to varying instrumentations and designs, which make it difficult to capture the required energy data. In addition, obtaining reliable measurements of energy consumption and GHG emission is challenging due to the range of conditions under which naval ships operate. These research projects are also exploring means of an energy management infrastructure to organize and analyze energy consumption and GHG emission data.
Lead institution	Innovation for Defence Excellence and Security (IDEaS) Program, Defence R&D Canada
Point of contact	DND.IDEaS-IDEeS.MDN@forces.gc.ca
Key words	Awareness, Education, Naval, Emission Reduction

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Country	**Canada**
Action Plan Area	Awareness
Name or main objective of the project/activity/policy	**Canada 1 Water: Evaluating climate change impacts on ground/surface water sustainability across continental Canada**
Description of the project/activity/policy	A continental scale framework will be available to support a decision support system (DSS) that can support community-based information dissemination and interrogation. The modelling of groundwatersurface-water will be based on the HydroGeoSphere platform. The online DSS platform will provide a window to the model results and provide information accessible to the nontechnical user at public, community, watershed management level, and higher governmental levels. Illustrative outputs through the DSS are climate change impacts to Canadian water resources (surface water and groundwater), including how flood and drought frequency may potentially change, for mid- and end-century time intervals. https://www.canada1water.ca/
Lead institution	Natural Resources Canada, Defence R&D Canada, Centre for Security Science
Point of contact	CSSP-PCSS@forces.gc.ca
Key words	Awareness, Groundwater, Climate Change

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Country	**Canada**
Action Plan Area	Awareness
Name or main objective of the project/activity/policy	**Mitigation of climate change threats to winter roads (Project Arctic Fox)**
Description of the project/activity/policy	In Canada, there are an estimated 10,000km of winter roads. Most of the communities that rely on winter roads are only accessible by air outside of the winter road season, which lasts approximately 6-8 weeks from mid-January to mid-March. Climate change is affecting the ability to predict the winter road ice quality as seasonal weather patterns are shifting. Project Arctic Fox will build on past hydrodynamics/ice modelling and remote sensing results to validate and improve models of dynamic loading action on segments of Canadian winter roads, which cross floating ice under different use and climate conditions. An analysis of ice movement during the use of ice roads, comparing on ground data to satellite data will be conducted with the aim to support future construction, operations and maintenance of winter roads.
Lead institution	Defence R&D Canada, Centre for Security Science
Point of contact	CSSP-PCSS@forces.gc.ca
Key words	Winter Roads, Ice Roads, Hydrodynamics, Ice Modelling

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Country	**Canada**
Action Plan Area	Awareness
Name or main objective of the project/activity/policy	**Multi-hazard Platform for Resilience and Strategic Planning of Real Assets**
Description of the project/activity/policy	As the number and intensity of natural disasters increase with climate change, this project will develop a reliable high-resolution risk assessment decision-support tool for critical real asset portfolios exposed to multiple natural catastrophes. Physical asset owners and managers will be empowered to understand exposures from multiple hazards at a quantitative level and proactively address risk using the most costeffective means.
Lead institution	Defence R&D Canada, Centre for Security Science
Point of contact	CSSP-PCSS@forces.gc.ca
Key words	Awareness Natural hazard, Risk Assessment, Real Assets

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Country	**Canada**
Action Plan Area	Awareness
Name or main objective of the project/activity/policy	**Enhancing Community Resilience and Adaptation (ECORES)**
Description of the project/activity/policy	One of the most important features in the ice environment is the floe edge, where the waters along the sea ice edge are biologically productive. Due to the changing climate, the location and persistence of the ice is changing, rendering traditional knowledge less useful for safe navigation, and making travel increasingly hazardous. This project will leverage satellite imagery to provide a comprehensive capacity to accurately delineate the floe edge boundary between immobile and moving sea ice using ML, additional nearshore ice parameters, sea ice models and derived predictive analytics. Communities and shipping companies will benefit from new ice dynamic products through route planning decision support helping to reduce risks when travelling on ice or through the hazardous mobile sea ice.
Lead institution	Defence R&D Canada, Centre for Security Science
Point of contact	CSSP-PCSS@forces.gc.ca
Key words	Search and Rescue, Sea Ice, Nearshore, Navigation

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Country	**Canada**
Action Plan Area	Awareness
Name or main objective of the project/activity/policy	**Earth Observation Monitoring System of Environmental Risks to Coastal Communities**
Description of the project/activity/policy	Coastal integrity is currently under threat from the impact of the increasing number and severity of extreme weather events due to climate change as well as human induced hazards such as intensive shipping activity and coastal urbanization. Earth Observation (EO) is a prominent source of information critical to emergency preparedness, response and management, and to coastal integrated planning and management. However, traditional EO information services are not always adequate to address the complexity of marine and coastal monitoring needs. These involve large data quantities from various sources that require effective management and processing, and they impose stringent service availability, latency, and dissemination requirements. The project aims provide access to enhanced information using simulated hyperspectral, spaceborne optical and Synthetic Aperture Radar (SAR) data to improve decision making for navigation and routing, ice management planning to reduce threats to vessels and infrastructure, coastal habitat protection, and emergency preparedness and response efforts.
Lead institution	Defence R&D Canada, Centre for Security Science
Point of contact	CSSP-PCSS@forces.gc.ca
Key words	Search and rescue, sea ice, nearshore, navigation

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CZECHIA

Country	**Czechia**
Action Plan Area	Awareness
Name or main objective of the project/activity/policy	**Integration of climate change into strategic defence documents**
Description of the project/activity/policy	Czechia is now beginning to develop its own goals and ambitions in the area of Climate, Defence and Security. The Czech Republic is currently taking steps to integrate climate and environmental considerations across all relevant areas within the Ministry of Defence. The current priority within the MoD is to include the topic of Climate, Defence and Security in conceptual documents dealing with defence, which are currently being revised (Defence Strategy of the Czech Republic, The Long-term Perspective for Defence 2040). Climate change should be included also in defence planning process. The next step will be the creation of a national conceptual document specifically defining national policy on Climate, Defence and Security, which is also one of the ambitions set by the EU Strategic Compass (by the end of 2023).
Lead institution	Ministry of Defence
Point of contact	Veronika Jelínková, jelinkovav@army.cz, Marijana Šutová, sutovam@army.cz
Key words	Awareness, Policy, National plan/strategy

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DENMARK

Country	Denmark
Action Plan area	Awareness / Mitigation
Name or main objective of the project/activity/policy	**Danish Ministry of Defence Carbon Account**
Description of the project/activity/policy	The Danish MoD publishes an annual Carbon Account, which gives an overview of the most important sources of greenhouse gas emissions of the activity of the MoD ranging from estate operations and administrative tasks (e.g. office operations and travels) to military activity conducted by the Defence Command Denmark, The Danish Emergency Management Agency, or the Home Guard Command Denmark. The Carbon Account is based on the Greenhouse Gas Protocol Corporate Standard (GHG Protocol), which divides the energy consumption of an organization into three scopes depending on the level of control the organization has over its emissions. The Danish MoD's Carbon Account covers scope 1 og 2, and strives to be able to cover scope 3 with in the coming years.
Lead institution	Danish Ministry of Defence Estate Agency
Point of contact	Camilla Mønsted Simonsen, special advisor, Danish MoD / cms@fmn.dk / +45 7281 0146
Key words	Carbon account, energy consumption, climate impact

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FRANCE

Country	**France**
Action Plan area	Awareness
Name or main objective of the project/activity or policy	**Climate & Defence Strategy**
Description of the project	France's MoD has adopted a Climate & Defence Strategy in April 2022. To address the defence and security challenges brought by climate change, the Ministry's strategy structures its action around 4 main focus areas: - Developing knowledge and the ability to anticipate the strategic issues of climate change; - Commitment to a comprehensive adaptation process; - Continuation of the Ministry's contribution to collective mitigation and energy transition efforts; - Enhancement of the cooperation process.
Lead institution	France's MoD Joint Staff
Point of contact	nicolas.regaud@intradef.gouv.fr & ema-mga-ccsp.coordinateur.fct@intradef.gouv.fr
Key words	strategy, climate security, green defence, foresight

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Country	**France**
Action Plan area	Awareness
Name or main objective of the project/activity or policy	**Geopolitical Observatory on climate change and defence**
Description of the project	The "Defence and Climate Observatory", launched in December 2016, is tasked with studying climate-related security and defence issues. It is coordinated by the think tank IRIS under a contract carried out on behalf of the French Ministry for the Armed Forces' Directorate General for International Relations and Strategy (DGRIS). The Observatory's multidisciplinary and cross-disciplinary team is made up of researchers specialized in international relations, security & defence, migrations, energy, the economy, climatology and health. It helps disseminate knowledge on climate security issues within the MoD and the civil society (website).
Lead institution	France's MoD – General Directorate for International and Strategy (pilot/funder) and the French Institute for International and Strategic Relations (IRIS - think-tank/scientific team)
Point of contact	tom.haristias@intradef.gouv.fr & jtasse@iris-france.org
Key words	research, foresight, climate security, geopolitics

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Country	**France**
Action Plan Area	Awareness
Name or main objective of the project/activity/policy	**Climate & Defence Fresk**
Description of the project/ activity/policy	This project aims to raise awareness of the impacts of climate change on defence, particularly for a defence audience. This workshop is an adaptation for defence of the "Climate Fresk", a famous climate change awareness-raising workshop attended by 1 million people worldwide (>30 countries/languages). It consists in a 2-hour long interactive workshop, organised in two parts: the study of the defence impacts of climate change and a reflexion on the solutions that are already or could be implemented. It is based on 44 cards, addressing various topics, complemented by two graphical supports. Between 6 and 10 participants attend the workshop, organised by a facilitator. This tool will be widely deployed within France's Ministry of Defence and in the global defence ecosystem, from September 2023 onwards.
Lead institution	Climate & Defence Permanent Secretary / Joint Staff / France's Ministry for the Armed Forces
Point of contact	nicolas.regaud@intradef.gouv.fr & ema-mga-ccsp.coordinateur.fct@intradef.gouv.fr
Key words	Awareness, interactive workshop, climate security, green defence

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Country	**France**
Action Plan area	Awareness – Adaptation – Mitigation - Outreach
Name or main objective of the project/activity or policy	**French ministry for the armed forces joint ministerial statement on climate change and the armed forces**
Description of the project	Climate change represents an immense challenge for global security. Food insecurity, the multiplication of extreme weather events, the vulnerability of equipment and infrastructure are likely to cause large-scale social and international unrest. This challenge also affects the armed forces. In 2021, the French Minister for the armed forces launched during the 4th edition of the Paris Peace Forum the "Climate Change and the Armed Forces". This roadmap, the foundation for a growing coalition, aims to reduce emissions from armed forces, mitigate damage, and strengthen cooperation between states in the process of adapting armed forces to the impact of climate change. The initiative counts 26 co-signatory countries at this stage: Albania, Austria, Belgium, Canada, Côte d'Ivoire, Cyprus, Denmark, Estonia, Finland, France, Greece, Hungary, Ireland, Japan, South Korea, Lithuania, Luxembourg, Malta, the Netherlands, New Zealand, Norway, Portugal, Senegal, Slovenia, Spain, and the United States. Download the declaration
Lead institution	France's MoD – General Directorate for International and Strategy (pilot/funder) and the Paris Peace Forum
Point of contact	dgris-at.trait.fct@intradef.gouv.fr https://parispeaceforum.org/en/initiatives/the-armed-forces-pledge-to-reduce-their-impact-on-the-climate/
Key words	Action plan, awareness, adaptation, climate security

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GERMANY

Country	Germany
Action Plan area	Awareness
Name or main objective of the project/activity/policy	**Active participation in the NATO Climate Change and Security Centre of Excellence (CCASCOE) in Montreal, Canada**
Description of the project/ activity/policy	NATO CCASCOE's mission is to improve understanding of how and to what extent climate change will affect the security interests of NATO, its allies and partner nations. The aim is to support NATO and its allies in adapting to the negative consequences of climate change and in improving resilience, with a special focus on security-related aspects of military tasks and operations. In this context, efforts are also being made to reduce the impact on the climate and the environment while maintaining the operational capabilities and effectiveness of the armed forces. The German MFA and MoD actively support this effort by providing substantive contributions to the NATO CCASCOE in Montreal, Canada.
Lead institution	German Federal Foreign Office / German MoD
Point of Contact	408-0@diplo.de / BMVgIUDII5@bmvg.bund.de
Keywords	CC & Security, Research, Partnership with academia

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Country	**Germany**
Action Plan area	Awareness
Name or main objective of the project/activity/policy	**Climate & Security Advisors**
Description of the project/ activity/policy	Climate & security advisors deployed in UN special political missions and peacekeeping operations: OSE Horn of Africa, UNMMISS, UNOCA, UNOWAS. The advisors' role is to strengthen the understanding of climate change, peace and security linkages through analysis on climate-related security risks. They contribute to sustained advice, deepen partnerships with regional actors in the field and enhance stronger regional UN cooperation to address climate-related security risks. In addition and if needed, they help to improve analysis and programming for action on climate-related security risks, including the development of a shared vision and capacity for integrated action on climate security risks with partners. Through trainings and practitioners' dialogues, the advisors share their experiences and strategies.
Lead institution	Climate Security Mechanism (CSM)
Point of Contact	climate-security-mechanism@un.org
Keywords	Risk analysis, policy mainstreaming, coordination, awareness

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Country	**Germany**
Action Plan area	Awareness
Name or main objective of the project/activity/policy	**National Security Strategy**
Description of the project/ activity/policy	Germany's first National Security Strategy proposes an integrated security concept to provide robustness, resilience and sustainability. While strengthening national and collective defence, the national security strategy also emphasizes a broader scope to security: it encompasses all actors, resources and instruments that contribute to national security. Sustainability and climate action are one of its three pillars. The climate crisis and its effects threaten human security and exacerbate other crises and conflicts. Ambitious global emission reduction remains the primary goal to protect human kind against these threats. Where climate impacts are unavoidable, adaptation and resilience must be strengthened. With the National Security Strategy, the German government commits itself to, inter alia: • prepare a foreign climate policy strategy, defining priorities of action and goals, and expand our partnerships to address the climate crisis effectively. • commission a comprehensive assessment of national climate risks, building on both science and intelligence, in order to derive informed decisions for action. • put the climate crisis on the on the agenda of the security organs of the Federal Government as well as regional and global security organizations, including the UNSC, NATO and OSCE and systematically strengthen their capabilities to deal with climate security risks. The strategy and a summary in English, French and German may be found under: https://www.nationalesicherheitsstrategie.de/en.html
Lead institution	German Federal Foreign Office
Point of Contact	
Keywords	National strategy, guidance, policy

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GREECE

Country	Greece
Action Plan area	Awareness
Name or main objective of the project/activity/policy	**Environmental – Energy & Climate Change Adaptation Policy (EECCAP)**
Description of the project/ activity/policy	The Hellenic Ministry of National Defence (HMoD) implements the current "Environmental – Energy and Climate Change Adaptation Policy (EECCAP)", the 2nd revised version of which was published in December 2020. The implementation of the EECCAP is based on the five (5) following fundamental pillars: a. Compliance with the EU/National legislation and NATO agreements b. Rational management of natural resources and energy c. Prevention of pollution d. Continuous improvement of environmental performance e. Overall staff involvement The abovementioned document is accessible through the following link: https://www.greenarmedforces.mil.gr/en/environmental-energy-and-climate-change-adaptation-policy/
Lead Institution	Hellenic Ministry of National Defence (HMoD)
Point of Contact	spaparizos@mod.mil.gr kpapadimitriou@mod.mil.gr
Key Words	Awareness, Policy

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Country	**Greece**
Action Plan area	Awareness
Name or main objective of the project/activity/policy	**Climate Change Adaptation & Mitigation Roadmap of the Armed Forces**
Description of the project/ activity/policy	The Hellenic Ministry of National Defence (HMoD) implements the "Climate Change Adaptation & Mitigation Roadmap of the Armed Forces", which has been published in April 2023. The abovementioned document as well as the EECCAP form our National Strategy to prepare the Armed Forces for Climate Change. This document describes actions within three different periods (short-, medium-, long-term), with the aim of maintaining combat capability of the Armed Forces under any climatic condition, while contributing to the national efforts for a smooth transition to climate neutrality. The link for accessing the abovementioned document is the following one: https://www.greenarmedforces.mil.gr/en/prosarmogi-ed-klimatiki-allagi-en/
Lead Institution	Hellenic Ministry of National Defence (HMoD)
Point of Contact	spaparizos@mod.mil.gr kpapadimitriou@mod.mil.gr
Key Words	Awareness, National plan/strategy, Mitigation, Adaptation

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Country	**Greece**
Action Plan area	Awareness
Name or main objective of the project/activity/policy	**Carrying out Environmental Training Seminars**
Description of the project/ activity/policy	The Hellenic Ministry of National Defence (HMoD) conduct in association with the "National Centre for Public Administration & Local Government" seminars in environmental area annually. For the time being, four different types of seminars are carried out, as follows: a. Training of Armed Forces personnel in environmental management policies (entry level) b. Armed Forces environmental management c. Armed Forces energy management d. Energy managers and ISO 50001 energy management implementation in public sector It is estimated that more than 200 trainees are participating in those seminars in annual base.
Lead Institution	Hellenic Ministry of National Defence (HMoD)
Point of Contact	spaparizos@mod.mil.gr kpapadimitriou@mod.mil.gr
Key Words	Awareness, Training, Education, Personnel

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ITALY

Country	**Italy**
Action Plan area	Awareness / Mitigation
Name or main objective of the project/activity/policy	**Plan for the Energy Strategy of the Defense**
Description of the project/ activity/policy	A “Plan for the Energy Strategy of the Defense” was approved in 2019. It sets a roadmap until 2030 for the development of strategic and defence-specific interventions aimed at improving the sustainability, the resilience of the energy supply chain, including the protection of critical infrastructures, the efficiency of energy use and the reduction of consumptions and expenditures.
Lead institution	Ministry of Defense
Point of contact	Stato Maggiore Difesa, IV Reparto,Ufficio Sicurezza Energetica della Difesa, quarto.csezsed@smd.difesa.it
Key words	sustainability, resilience, energy efficiency

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NETHERLANDS

Country	The Netherlands
Action Plan area	Awareness
Name or main objective of the project/activity/policy	**Sustainability implementation agenda 2023**
Description of the project/ activity/policy	The Government of the Netherlands created the sustainability implementation agenda 2023. With this implementation agenda, we set out how the MoD will, with concrete actions, contribute to overcoming the climate, energy and circularity challenges ahead. The budget for sustainability measures will gradually increase from €18 million in 2023 to around €60 million a year from 2026. From 2026, €12 million a year is reserved for the purchase of sustainable fuel and €14 million for the purchase of zero-emission vehicles in the non-operational domain, such as vans and cars. A further €10 million a year is reserved for increasing sustainability and circularity in business operations. The remainder is reserved for research and development, and the performance and implementation of sustainable innovation.
Lead institution	
Point of contact	
Key words	Sustainability, strategy, budget

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NORWAY

Country	Norway
Action Plan Area	Awareness
Name or main objective of the project/activity/policy	**Strengthen work on climate and environment**
Description of the project/ activity/policy	The defence sector agencies have now also produced a strategic paper on climate and environment for the sector, and then subsequently prepared an action plan to implement the strategy. The action plan is thereby an extension of the strategy and is more detailed on the specific measures that will contribute to the achievement of the goals set in the strategy. Implementing the strategy and action plan will be important and should strengthen our work on climate and environment. The strategy describes several focus areas with associated ambitions, direction and areas of action. These are areas where the agencies consider that efforts in the sector will have the greatest effect on climate and environment. The focus areas are: • To reduce energy consumption and direct greenhouse gas emissions, • Minimize environmental impact and ensure a non-toxic environment, • Preserve biological diversity and secure cultural heritage values • Emphasis on circular economy and sustainable procurement • Adapting to a changing climate
Lead institution	Ministry of Defence
Point of contact	vegard.engh@fd.dep.no
Key words	Action plan

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Country	**Norway**
Action Plan Area	Awareness
Name or main objective of the project/activity/policy	***Mainstream climate change into planning***
Description of the project/ activity/policy	Factoring climate change into planning is important for the Norwegian defence sector. The focus is particularly three-folded, and include reducing the climate and environmental impact of the military and defence sectors at the same time as maintaining operational effectiveness, managing security policy implications, and adapting operations and infrastructure to a new climate environment. The new long term defence plan of Norway is planned presented to the Norwegian Parliament in 2024. Here, the development of the defence structure will be assessed holistically, with adaptation and mitigating the effects of climate change as one of several important topics.
Lead institution	Ministry of Defence
	vegard.engh@fd.dep.no and Julie-Marie-Borna.Fossem@fd.dep.no
Key words	Climate change into planning

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Country	**Norway**
Action Plan Area	Awareness
Name or main objective of the project/activity/policy	**Environmental measurement and reporting (Enhance the understanding of the implications of climate change on security)**
Description of the project/ activity/policy	Since 2012 Norway have developed an annual environmental report for the defence sector. The report provides statistics and analyses such as energy expenditure, fuel consumption, and greenhouse gas emissions presented in a greenhouse gas inventory. Such data can support targeted environmental measures. The report for the year 2021, with an English summary, can be found on the following web site Forsvarssektorens miljø- og klimaregnskap for 2021 (ffi.no) [ffi.no]. The report for 2022 is expected early summer 2023.
Lead institution	Ministry of Defence
Point of contact	vegard.engh@fd.dep.no
Key words	Annual environmental report

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POLAND

Country	**Poland**
Action Plan area	Awareness
Name or main objective of the project/activity/policy	**Application of "Guidelines on improving energy security, efficiency of the facilities subordinate to and supervised by the Minister of National Defence"**
Description of the project/activity/policy	The guidelines describe detailed recommendations for improving energy efficiency across the polish armed forces. Those activities cover not only the enhancements such as facility insulation, heat source replacement but also more practical measures to reduce electricity/thermal charges e.g. usage of LED bulbs, proper use of radiators, implementation of the smart lightning systems. The document allows to adapt to continuously increasing energy prices by presenting actions to reduce energy consumption in already existing facilities.
Lead Institution	Military Inspection of Energy Economy
Point of Contact	Patryk KIERZKOWSKI, pa.kierzkowski@ron.mil.pl
Key words	Energy efficiency, training, education, standards

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Country	**Poland**
Action Plan area	Awareness
Name or main objective of the project/activity/policy	**Life project "Supporting military users in the management of Natura 2000 sides"**
Description of the project/ activity/policy	In the year 2023-2024, training and workshop for soldiers and employees of the Ministry of National Defense will be conducted on environmental protection issues (including climate change).
Lead institution	Poland's Ministry of Defence, Regional Board Infrastructure in Kraków
Point of contact	
Key words	Environmental protection, Climate change, Increasing awareness

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PORTUGAL

Country	**Portugal**
Action Plan Area	Awareness
Name or main objective of the project/ activity/ policy	**Environmental Directive for National Defence / Environment and Climate Strategy**
Descritpion of the project/ activity/ policy	The Directorate-General for National Defence Resources (DGRDN) is the entity responsible for defining the overall environmental policy and guidelines for the MoD. In 2020, DGRDN prepared the Environmental Directive for National Defence (Despacho n. º 149/2020) and its action plan (2020-2023), which included climate change-related goals, such as the promotion of energy efficiency and renewable measures/projects. In 2023, due to the EU Strategic Compass requirements, DGRDN is developing the Environment and Climate Strategy to help the Armed Forces and other MoD entities prepare for Climate Change. This strategy will reinforce the mitigation dimension of the MoD policy and expand and develop the adaptation one. It is also expected to replace the Environmental Directive in order to avoid duplication.
Lead Institution	DGRDN
Point of Contact	ana.correia@defesa.pt
Key Words	Policy, Energy Efficiency, Renewable Sources, Emission Reduction

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Country	**Portugal**
Action Plan Area	Awareness
Name or main objective of the project/ activity/ policy	**Energy and Water Data Collection**
Descritpion of the project/ activity/ policy	Every year, DGRDN collects energy and water data from the Armed Forces and produces a report. Energy data is shared with the European Defence Agency within the scope of the Energy and Data Collection and Sharing initiative. DGRDN is also responsible for promoting the implementation of the Public Administration Resources Efficiency Program 2030 (ECO.AP 2030) in the MoD, and within this scope, MoD entities register their installations consumption in a data collection platform provided by the National Energy Agency (ADENE).
Lead Institution	DGRDN
Point of Contact	ana.correia@defesa.pt
Key Words	Electricity, Energy Efficiency, Renewable Sources, Fuels, Outreach, Water

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SLOVAKIA

Country	Slovakia
Action Plan area	Awareness
Name or main objective of the project/activity/policy	**Adoption of The Concept of the Green Ministry: Together for Ecological & Cleaner Defence Sector**
Description of the project/ activity/policy	Concept elaborated several ideas related to adaptation to climate change in the Defence sector through four key areas: Energy Efficiency; Clean Mobility; Protection of Environment; Green Public Procurement. Ideologically, the Concept uses European Green Agreement, the Climate Change and Defence Roadmap, or the NATO Climate Change and Security Action Plan as well as national strategic documents as its base. The Concept is the first such document adopted by the MOD SVK. The ambition of the Concept was to identify such imperfections in each of key areas, which hinder adopting more ecologic alternatives and solutions. The concept focuses both on the military and civil section of the ministry. If we only look at guidance that aims "at preparing the armed forces for climate change (in terms of adaptation as well as mitigation)", all of the key areas set more or less ambitious goals for the armed forces.
Lead institution	Analytical Unit (Ministry of Defense of the Slovak Republic)
Point of contact	Barbora.HROZENSKA@mod.gov.sk ; Martin.BREZINA@mod.gov.sk
Key words	Policy, Strategy, Climate Change Awareness

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Country	**Slovakia**
Action Plan area	Awareness
Name or main objective of the project/activity/policy	**Adoption of The Action Plan on Clean Mobility at the Ministry of Defence of the Slovak Republic**
Description of the project/ activity/policy	Its main goal is to reduce greenhouse gas emissions and pollutants produced by the MoD's vehicle fleet by 55 % by 7/2030, compared reference period 7/2021 in line with the need to implement the European Fit for 55 package. Identified measures will be exclusively applied to the civilian part of the vehicle fleet, since from the legislative point of view, there are no obligations to reach lower emissions for military vehicles. In the first stage of the action plan for the period 2021 - 2023, tasks were also set for the Armed Forces of the Slovak Republic, but only in terms of providing cooperation in the supply of energy infrastructure documents for building charging stations for alternative propulsion vehicles. Within the Slovak legislation, there are exceptions for vehicles of the Armed Forces, due to the need to respect the specifics of military vehicles. In addition to reducing greenhouse gas emissions, the material will focus on supporting public transport for employees, and on supporting research, development and lifelong learning in the field of clean and intelligent mobility.
Lead institution	Department of Investment Planning and Project Financing (Ministry of Defense of the Slovak Republic)
Point of contact	Attila.TOTH@mod.gov.sk; Martin.BREZINA@mod.gov.sk; Lubos.SADOVSKY@mod.gov.sk
Key words	Policy, Fleet vehicles, Non-military vehicles, mobility

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Country	**Slovakia**
Action Plan area	Awareness
Name or main objective of the project/activity/policy	**Adoption of is The Action Plan on Building Renovation at the Ministry of Defence of the Slovak Republic**
Description of the project/ activity/policy	Action plan aims to reduce CO2 emissions as much as possible, ideally by at least 40% through in-depth renovation of buildings compared to 1990), and increase the share of alternative energy sources by 5 %. However, before implementation, the MoD SVK must carry out the certification of the technical condition of buildings, of which there are currently 1,416 in the categories of office buildings, residential buildings, educational buildings and listed buildings. The comprehensive renovation of the buildings itself will be carried out in order to maximize energy savings in their subsequent operation in order to repay the investments early. In addition to increasing the efficiency of buildings, activities and measures will also focus on building and modernizing energy infrastructure through electronic processes and digitization of building management, as well as on adaptation to climate change through the construction of blue and green infrastructure elements. The green and blue infrastructure in the settlements is an interconnected network of green and blue areas that preserve the values and functions of the original and close to nature ecosystems. Its basic task is to ensure a quality environment for the population in city settlements.
Lead institution	Department of Investment Planning and Project Financing (Ministry of Defense of the Slovak Republic)
Point of contact	Attila.TOTH@mod.gov.sk ; Martin.BREZINA@mod.gov.sk ; Lubos.SADOVSKY@mod.gov.sk
Key words	Policy, Buildings, Energy Efficiency, sustainable building

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SLOVENIA

Country	**Slovenia**
Action Plan area	Awareness
Name or main objective of the project/activity/policy	**ISO 50001**
Description of the project/activity/policy	Ministry of Defence of the Republic of Slovenia will integrate International Standard (ISO) 50001 into its general management system. The main goal of the implementation is to improve energy efficiency and to improve/ensure systematic approach over the energy consumption at the Ministry. We understand the "ISO" approach as unification with international level of understanding of energy efficiency. With ISO 50001 implementation, we want to centralize energy consumption review of the Ministry and make our energy system and our general system of the Ministry more optimized, efficient, transparent and resistant.
Lead institution	Ministry of Defence of the Republic of Slovenia
Point of contact	seuzp@mors.si, 00386 (0)1 471 25 46
Key words	System, Energy Efficiency, Standardisation, Processes

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Country	**Slovenia**
Action Plan area	Awareness
Name or main objective of the project/activity/policy	**Calculation of the carbon footprint of the Ministry of Defence in scopes 1, 2 and 3 according to the GHG protocol standard and the ISO standard – in progress**
Description of the project/activity/policy	The aim of the research project is to calculate the carbon footprint of the MOD within all three scopes of the defined system, where scope 1 represents the direct emissions of the activities controlled by the organization (fossil fuel consumption of all vehicles/aviation, electricity and heat production, fugitive emissions, etc.); scope 2 represents indirect emissions from activities mainly related to the supply of electricity and heat; and scope 3 represents indirect emissions from products, goods, investments, services, business travel, etc. In the case of the military sector, this includes all investments in arms, the purchase of ammunition and other specific military goods, in addition to the most common Scope 3 activities.
Lead institution	Ministry of Defense of the Republic of Slovenia, Logistics Directorate
Point of contact	seuzp@mors.si, 00386 (0)1 471 25 46
Key words	Carbon footprint

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Country	**Slovenia**
Action Plan area	Awareness
Name or main objective of the project/activity/policy	**Strategy for Energy Efficiency and Green Energy Transition – in progress**
Description of the project/activity/policy	At the Ministry of Defence of the Republic of Slovenia we are in the process of preparation of general strategy (Climate Change National Strategy of the Ministry of Defence of the Republic of Slovenia) which includes guidelines of several different documents (Paris Agreement from 2015, The European Green Deal from 2019, documents from EEAS, EDA, European Commission from 2022, etc.). The strategy will contain all above-mentioned guidelines and awareness. The document is intended to be a strategy and action plan at the same time.
Lead institution	Ministry of Defence of the Republic of Slovenia
Point of contact	seuzp@mors.si, 00386 (0)1 471 25 46
Key words	Strategy, System, Systematic Approach, Processes

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SPAIN

Country	Spain
Plan area	Awareness
Name or main objective of the project/activity/policy	**Climate change significantly affects Defence in various ways. It is mandatory to identify how and in which areas**
Description of the project/ activity/policy	It is necessary to identify the various consequences of climate change, which can be grouped as follows: - Frequent extreme weather events. • Floods. • Big snowfalls and extreme frosts. • Storms with extreme winds. - Reduction of the rainfall regime and increases in periods of drought. • Increased frequency and virulence of forest fires. • Difficulties in obtaining water. • Desertification and increase in dust and sand in suspension. - Significant rise in sea level. • Disappearance of beaches. • Flooding of ports and their infrastructures. • Destruction of dikes and breakwaters. • Variations in nautical charts. - Generalized rise in the temperatures of the atmosphere and the sea. • Additional need for refrigeration of motors and machinery. • Greater needs for air conditioning in buildings, vehicles, ships and aircraft. • Consequences on aircraft lift indices and acoustic propagation. • Appearance of non-endemic diseases. - Increased global instability. • Possible conflicts due to the scarcity of resources. • Migratory movements caused by local conflicts or economic depression.
Lead institution	Ministry of Defence
Key words	Extreme weather, migration, resources

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Country	**Spain**
Action Plan area	Awareness
Name or main objective of the project/activity/policy	**Analyse the consequences of climate change so that the implications can be anticipated in terms of the normal functioning of the Armed Forces units, in national territory and in operations.**
Description of the project/ activity/policy	• Support strategic research related to anticipation and adaptation to climate change (Think Tanks, etc.), • Support scientific projects related to Defence (cooperating with research organizations such as universities, research centres, etc.), • Analyse and consider the consequences of climate change in health care for personnel, both in preventive medicine and in care.
Lead institution	Ministry of Defence
Point of contact	
Key words	Research, health care.

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TÜRKIYE

Country	Türkiye
Action Plan area	Awareness
Name or main objective of the project/activity/policy	**Zero Waste Education Programme** **Environmental Management Education Programme**
Description of the project/activity/policy	Awareness raising and training activities on environmental management (waste management, energy consumption management, climate change adaptation etc) are carried out periodically. With the aim of informing to all the staff members, trainings on waste management for the protection of the environment are organized and posters, brochures and the likes are prepared. In the trainings conducted as per the zero waste project, such practical trainings as reuse, recycling and recovery of wastes trainings are performed. Thanks to the awareness created in the personnel as a result of such a training, the wastes are collected as per their types and classes in compliance with the environmental management system, and the raw material recovery is achieved by sending the wastes to the relevant institutions and licensed companies.
Lead institution	Ministry of Defence (MoD)/ General Directorate of Logistic
Point of contact	
Key words	Education programme, awareness, training, zero waste

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Country	Türkiye
Action Plan area	Awareness
Name or main objective of the project/activity/policy	**Personnel Education**
Description of the project/activity/policy	Regular trainings are organized for all personnel serving in Naval Shipyards (including privates and non-commissioned officers) at regular intervals in order to increase awareness and promote environmental protection and zero waste practices. Scope of the Energy Efficiency Law No. 5627 implemented under the coordination of the Ministry of Energy and Natural Resources, the personnel to be assigned as energy managers in the General Directorate of Naval Shipyards were provided with certificates by participating in the Energy Manager Training. The appointed "Energy Managers" provide trainings to the personnel on energy efficiency and awareness in our associations, technical advice is given about the efficient use of energy and savings, and reports are prepared at certain times and presented to the senior management.
Lead institution	Ministry of Defence (MoD)/ General Directorate of Naval Shipyards
Point of contact	
Key words	Environment, energy, education

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UNITED KINGDOM

Country	**United Kingdom**
Action plan area	Awareness, Adaptation and Mitigation
Name or main objective of the project/activity/policy	**The UK Defence Operational Energy Strategy**
Description of the project/ activity/policy	The UK MOD Defence Operational Energy Strategy which will be released in summer 2023. The vision for this strategy is that 'in responding successfully to the energy transition, Defence will maximise the operational advantage gained through its energy choices'. It acknowledges the need to proactively engage with the energy transition to ensure that it continues to be able to access the energy it requires to deploy its platforms and personnel and conduct operations into the future, as the energy markets shift in response to national and international mandates. In developing this strategy, the UK MOD has engaged extensively with partner nations and NATO Energy Security Centre of Excellence, and presented interim findings at the NATO Future Energy Conference in the Hague in April 2023. A key tenet of the strategy is to ensure close collaboration with Allies (and industry) in order to ensure continued interoperability and interchangeability. Priority actions include senior level sponsorship of energy, development of an Energy Insight function through close engagement with industry, allies and academia, enhanced energy management and data capture to inform energy decisions, energy elevation within the Capability Development sphere and continued investment in innovation, research and experimentation. Through these means, it intends to assure energy resilience, security, and operational advantage into the future.
Lead institution	MOD, Strategic Command
Point of contact	Gp Capt Tom Stevenson Tom.Stevenson212@mod.gov.uk
Key words	Energy, interoperability, energy resilience

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Country	**United Kingdom**
Action plan area	Awareness
Name or main objective of the project/activity/policy	**Ministry of Defence (MOD) Climate Change and Sustainability Strategy**
Description of the project/ activity/policy	To fully understand the ways climate change might impact UK defence, including: • Increases in extreme temperature, providing challenges for personnel • Increased environmental stresses on equipment and infrastructure • Increases in extreme UK weather that require military assistance Produced a public report, accessible here: https://www.gov.uk/government/publications/ministry-of-defence-climate-change-and-sustainability-strategic-approach
Lead institution	
Point of contact	
Key words	

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UNITED STATES

Country	**United States**
Action Plan area	Awareness
Name or main objective of the project/activity/policy	**DHS Strategic Framework for Addressing Climate Change**
Description of the project/ activity/policy	The Strategic Framework guides DHS' efforts to address the climate challenge through the five lines of effort implemented through the lens of the guiding principles that will enable the Department to safeguard the homeland from the immediate impacts of climate change, while pursuing long-term solutions that support resilient, prosperous communities and safeguard critical national security interests. For more information: https://www.dhs.gov/publication/dhs-strategic-framework-addressing-climate-change
Lead institution	U.S. Department of Homeland Security (DHS)
Point of contact	ashley.harrigan@hq.dhs.gov
Key words	Homeland Security, Community Resilience, Climate Change

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Country	**United States**
Action Plan area	Awareness
Name or main objective of the project/activity/policy	**Disaster Recovery and Resilience Database**
Description of the project/ activity/policy	FEMA developed the Recovery and Resilience Resource Library in collaboration with our federal interagency partners to navigate the numerous programs available to the United States and its territories to help recover from a disaster. The resources are intended for state, local, territorial and tribal (SLTT) governments, as well as nonprofits, businesses, healthcare institutions, schools, individuals and households. The tool helps users to find and research federal disaster recovery resources that would be beneficial in pre-disaster recovery planning or in the wake of a disaster.
Lead institution	Federal Emergency Management Agency (FEMA), US Department of Homeland Security
Point of contact	FEMA-ClimateAdaptation@fema.dhs.gov
Key words	Adaptation, Awareness, Mitigation, Resilience

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Country	**United States**
Action Plan area	Awareness
Name or main objective of the project/activity/policy	**Mitigation Best Practices**
Description of the project/ activity/policy	Mitigation Best Practices are stories, articles or case studies about individuals, businesses or communities that undertook successful efforts to reduce or eliminate disaster risks. They demonstrate that disaster preparedness decreases repetitive losses, financial hardship and loss of life. FEMA seeks to inspire and educate citizens to consider mitigation options by highlighting proven practices implemented by others in their homes and communities. It is our hope that visitors to this library find relatable and informative techniques to reduce their risk and eliminate hazards.
Lead institution	FEMA, US Department of Homeland Security
Point of contact	FEMA-ClimateAdaptation@fema.dhs.gov
Key words	Hazard Mitigation, Adaptation, Resilience

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Country	**United States**
Action Plan area	Awareness
Name or main objective of the project/activity/policy	**Building Alliances for Climate Action**
Description of the project/ activity/policy	A produce of the Resilient Nation Partnership Network, NASA, and 36 partners, “Building Alliances for Climate Action” represents a unifying voice, providing partner perspectives, personal stories, insights and resources the Whole Community can use to address climate change.
Lead institution	FEMA Resilience Nation Partnership Network (RNPN), US Department of Homeland Security
Point of contact	FEMA-ClimateAdaptation@fema.dhs.gov
Key words	Adaptation, Hazard Mitigation, Resilience, Equity

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Country	**United States**
Action Plan area	Awareness
Name or main objective of the project/activity/policy	**FEMA Resources for Climate Resilience**
Description of the project/ activity/policy	The FEMA Resources for Climate Resilience assists FEMA's state, local, tribal, and territorial (SLTT) partners in navigating the FEMA resources that are available to support communities in adapting to the impacts of climate change and build resilience. The document offers a description of available FEMA resources communities can use to plan for, respond to, recover from, and mitigate against the adverse impacts of climate change.
Lead institution	FEMA, US Department of Homeland Security
Point of contact	FEMA-ClimateAdaptation@fema.dhs.gov
Key words	Adaptation, Resilience, Hazard Mitigation, Funding

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Country	**United States**
Action Plan area	Awareness
Name or main objective of the project/activity/policy	**Assessing Risk to the National Critical Functions as a Result of Climate Change**
Description of the project/ activity/policy	The Assessment examines how the National Critical Functions (NCFs) could be affected by and at risk from climate change in three future time periods (by 2030, by 2050, and by 2100) and two future greenhouse gas emission scenarios (current and high). NCFs are government and private-sector functions so vital that their disruption would debilitate security, the economy, public health, or safety. For more information: https://www.rand.org/pubs/research_reports/RRA1645-7.html
Lead institution	Cybersecurity and Infrastructure Security Agency (CISA), US Department of Homeland Security
Point of contact	paige.morimoto@cisa.dhs.gov
Key words	Interdependency, Critical Infrastructure, Climate Driver

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Country	**United States**
Action Plan area	Awareness
Name or main objective of the project/activity/policy	**Regional Resiliency Assessment Program (RRAP)**
Description of the project/ activity/policy	RRAP is a voluntary, cooperative assessment of specific critical infrastructure that identifies a range of security and resilience issues that could have regionally or nationally significant consequences. For more information: https://www.cisa.gov/resources-tools/programs/regional-resiliency-assessment-program) In March 2016, the Casco Bay Region Climate Change Adaptation Planning RRAP was the first RRAP in the history of the program to focus on climate change and provide information and methodlogies to stakeholders to enable effective regional climate change adaptation planning. There are three more pending RRAPs focused on climate. (1) The Alaska Arctic/Near-Arctic NCF RRAP project is underway to examine the impacts of climate change-induced issues on NCFs. (2) The Iowa Harmful Algal Bloom (HAB) RRAP project investigates the sources of HABs, possible mitigation methods, and impacts to potable water treatment for a major metropolitan area. (3) The Guam-CNMI RRAP project focuses on the Port Authority of Guam and Commonwealth Ports Authority seaports examining various threats, including climate change, to inform stakeholders' planning and operations.
Lead institution	Cybersecurity and Infrastructure Security Agency (CISA), US Department of Homeland Security
Point of contact	William.delong@cisa.dhs.gov
Key words	Assessment, Resilience, Critical Infrastructure

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Country	**United States**
Action Plan area	Awareness
Name or main objective of the project/activity/policy	**Synthesize research addressing the impacts of climate change to Coast Guard missions, assets, and personnel.**
Description of the project/ activity/policy	Scientific research is essential to understanding where, when, and how changes in the physical environment will affect the Coast Guard. The Service will adapt how it plans operations, designs assets, and executes missions to account for climate change, leveraging both internal and external research to enhance our resiliency and mission effectiveness in a changing world. Our understanding of future challenges will be informed by research from the Department of Homeland Security's Science & Technology Directorate and partner Centers of Excellence; the Coast Guard Academy, the Coast Guard Research and Development Center, and other Centers of Expertise; and core intergovernmental partners including NOAA and NSF.
Lead institution	U.S. Coast Guard, U.S. Department of Homeland Security
Point of contact	USCG Office of Emerging Policy, CG-DCO-X, strategy@uscg.mil
Key words	Research, Awareness

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Country	**United States**
Action Plan area	Awareness
Name or main objective of the project/activity/policy	**Improve response readiness by expanding incident management training and contingency planning activities. (For extreme weather driven events)**
Description of the project/ activity/policy	The Coast Guard will build workforce capacity by prioritizing incident command system qualifications and disaster response training. The Service will expand emergency management and contingency planning with federal, state, and local partners and assess risk and conduct exercises to improve preparedness.
Lead institution	U.S. Coast Guard, U.S. Department of Homeland Security
Point of contact	USCG Office of Emerging Policy, CG-DCO-X, strategy@uscg.mil
Key words	Training, Exercises, Mobility, Awareness

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Country	**United States**
Action Plan area	Awareness
Name or main objective of the project/activity/policy	**Incorporate climate forecasts and information into contingency and strategic planning.**
Description of the project/ activity/policy	Climate change will further degrade aging infrastructure and influence shifts in population concentrations. These stressors will drive irregular migration, illegal fishing, transnational organized crime, and threats to port security, subsequently increasing demand for Coast Guard capabilities. The Service will use the latest climate trend forecasts to inform our strategies and plans to identify risk and enhance preparedness and mission effectiveness.
Lead institution	U.S. Coast Guard, U.S. Department of Homeland Security
Point of contact	USCG Office of Emerging Policy, CG-DCO-X, strategy@uscg.mil
Key words	National plan/strategy, Awareness

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ADAPTATION

CANADA

Country	Canada
Action Plan area	Mitigation / Adaptation
Name or main objective of the project/activity/policy	**Green Building Directive (GBD)**
Description of the project/ activity/policy	The purpose of GBD is to provide direction consistent with the principles of sustainable development on the planning, construction, renovation, refit, operation, maintenance and deconstruction of buildings owned and managed by DND, while respecting the heritage values of existing buildings and protecting cultural and natural resources. The GBD was revised to include construction renovation and demolition waste, net-zero, and available industry standards on embedded carbon requirements.
Lead institution	Canadian Armed Forces / Department of National Defence, Canada
Point of contact	mnd.environment-environnement.mdn@forces.gc.ca
Key words	Buildings, Energy Efficiency, Standards, Emissions Reduction

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Country	**Canada**
Action Plan Area	Mitigation / Adaptation
Name or main objective of the project/activity/policy	**Advanced Microgrids toward Arctic Zero Emissions (AMAZE)**
Description of the project/activity/policy	Defence buildings and assets in Canada's Far North, including the North Warning System (NWS), use significant amounts of fuel for electricity and heating because of their remote locations and extreme cold conditions. AMAZE targets the development and deployment of an advanced microgrid system to reduce diesel dependency and GHSs at an NWS site by developing hybrid microgrid systems that use multiple distributed energy resources including renewables with advanced microgrid controls, adapted for the North, to reduce fuel use for the generation of power and heat whilst maintaining or improving DND operations.
Lead institution	Defence R&D Canada Atlantic Research Center
Point of contact	DRDCPartnerships-PartenariatsRDDC@forces.gc.ca
Key words	Arctic, Microgrid, North Warning Sites, Renewable Energy

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Country	**Canada**
Action Plan area	Mitigation / Adaptation
Name or main objective of the project/activity/policy	**Energy Efficient Deployed Camps**
Description of the project/ activity/policy	Deployed forces must sustain themselves in harsh environments for extended periods of time. There are also ever-increasing costs and risks associated with securing traditional resources, such as fuel and water for these types of camps. This requires modern, energy efficient, flexible and scalable deployable camp infrastructure and utilities that minimize logistical demands and footprint.
Lead institution	Canadian Armed Forces / Department of National Defence, CAN
Point of contact	mnd.environment-environnement.mdn@forces.gc.ca
Key words	Energy Efficiency, Deployed camps, Adaptation, Equipment

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Country	**Canada**
Action Plan Area	Mitigation / Adaptation
Name or main objective of the project/activity/policy	**Reducing the Environmental Footprint of Munitions in Training and Operations**
Description of the project/activity/policy	Activity involves studying the environmental fate and the ecotoxicological impacts of munitions, as well as developing environmentally sound solutions that will sustain military training and maintain force readiness. Investigation into modifying actual live-firing activities to minimize their environmental adverse impacts, as well as Canada is aiming at developing greener and insensitive munitions that will ease the environmental pressure.
Lead institution	Defence R&D Canada Valcartier Research Center
Point of contact	DRDCPartnerships-PartenariatsRDDC@forces.gc.ca
Key words	Mitigation, Munitions, decision support, energetic materials

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Country	**Canada**
Action Plan Area	Mitigation / Adaptation
Name or main objective of the project/activity/policy	**Marine Mammal Mitigation (M3)**
Description of the project/activity/policy	The CAF has a requirement to minimize the impact of its sonar readiness activities on the marine environment. Beyond simple compliance with federal guidelines, environmental stewardship guides the organization towards leadership in understanding our noise impact and developing new concepts, technologies, and procedures to mitigate these effects while enabling effective training and development of our anti-submarine warfare capabilities. The aim of the M3 Project is to support the development of new mitigation tools and approaches that allow the RCAF and RCN to meet legislative and ethical responsibilities by minimizing risk of harm on marine mammals while enabling readiness activities.
Lead institution	Defence R&D Canada Atlantic Research Center
Point of contact	DRDCPartnerships-PartenariatsRDDC@forces.gc.ca
Key words	Mitigation, Adaptation, Marine mammal, mitigation, sonar

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Country	**Canada**
Action Plan Area	Adaptation
Name or main objective of the project/activity/policy	**Extreme Cold Weather and Remote Fuel Sensors**
Description of the project/activity/policy	Monitoring stored fuel on-site is currently a challenge in the North because of extreme weather conditions, remoteness of sites and for some locations, lack of ready access to power. Fuel sensors work to -40°C, however the data loggers are rated up to -25°C, resulting in unreliable readings for almost half of the year. DRDC is seeking cold weather options to monitor fuel tank levels to detect and respond to leaks and spills as well as reliability for low temperature operations.
Lead institution	Defence R&D Canada Atlantic Research Center
Point of contact	DRDCPartnerships-PartenariatsRDDC@forces.gc.ca
Key words	Adaptation, Fuel sensors, North, detection

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Country	**Canada**
Action Plan Area	Adaptation
Name or main objective of the project/activity/policy	**IDEaS Challenge: Under the Sea: Real-time Detection of Marine Mammals during Sonar Operations – Call for Proposal (CFP) to the Canadian innovation community (Private Sector and Academia)**
Description of the project/activity/policy	The Department of National Defence (DND)/Canadian Armed Forces (CAF) are seeking more effective, real-time situational awareness of marine mammal presence to minimize the risk of harm from naval sonar operations. Current approaches have various limitations, for instance with visual monitoring, as it can be affected by environmental conditions, low visibility at night, observer skill level and limited opportunities to identify certain species. There are also challenges with passive acoustic monitoring, which requires unique skills and is further hindered by increased background noise generated by the active sonar transmissions. In addition to these operational limitations, bandwidth and latency add
	additional challenges. This research area also supports the Government of Canada's Oceans Protection Plan, which is designed to safeguard the health of the marine environment.
Lead institution	Innovation for Defence Excellence and Security (IDEaS) Program, Defence R&D Canada
Point of contact	DND.IDEaS-IDEeS.MDN@forces.gc.ca
Key words	Awareness, Adaptation, Naval, Water

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Country	**Canada**
Action Plan Area	Adaptation
Name or main objective of the project/activity/policy	**IDEaS Challenge: Green Heat: Low Carbon Energy Generation for Heating Existing Buildings Test Drive – Call for Proposal (CFP) to the Canadian innovation community (Private Sector and Academia)**
Description of the project/activity/policy	The Department of National Defence (DND)/Canadian Armed Forces (CAF) are seeking to acquire, install, and operate a large-scale low-carbon energy generation and storage system for heating existing buildings by integrating with their current hydronic heat distribution systems. This will assess the effectiveness and costs of such a technology for the modernization of and GHG emissions reductions efforts for the entire DND infrastructure portfolio. In March 2022, Black & McDonald was awarded a contract to install and operate their solution at the designated test building (VC-31) at Canadian Forces Base (CFB) Kingston, with a complete cost of $7.5M over 3 years. This project will also support the Government of Canada's mandate in making its building and facilities operations carbon neutral by 2050.
Lead institution	Innovation for Defence Excellence and Security (IDEaS) Program, Defence R&D Canada
Point of contact	DND.IDEaS-IDEeS.MDN@forces.gc.ca
Key words	Energy Efficiency, Heating, Sustainable Buildings, Emissions Reduction

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Country	**Canada**
Action Plan Area	Adaptation
Name or main objective of the project/activity/policy	**IDEaS Challenge: Pop-Up City Contest: Integrating Energy, Water and Waste Management Systems for Deployed Camps – Call for Proposal (CFP) to the Canadian innovation community (Private Sector and Academia**)
Description of the project/activity/policy	The Department of National Defence (DND)/Canadian Armed Forces (CAF) are seeking solutions through a multi-phased contest that will provide reliable, energy-efficient, integrated and scalable energy, water and waste management systems for the CAF's Relocatable Temporary Camps (RTCs) deployed in national and international operations.
Lead institution	Innovation for Defence Excellence and Security (IDEaS) Program, Defence R&D Canada
Point of contact	DND.IDEaS-IDEeS.MDN@forces.gc.ca
Key words	Deployed Camps, Energy Efficiency, Water, Waste

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Country	**Canada**
Action Plan Area	Adaptation
Name or main objective of the project/activity/policy	**IDEaS Challenge: Sub-zero Infrastructure, Security, and Sensors: Safekeeping assets in the Arctic – Call for Proposal (CFP) to the Canadian innovation community (Private Sector and Academia)**
Description of the project/activity/policy	The Department of National Defence (DND)/Canadian Armed Forces (CAF) are seeking innovative solutions to secure and autonomously monitor DND/CAF fixed ground-based assets operating in the Arctic. Multiple sites in isolated locations across this region shelter remotely operated military assets that are exposed to extreme weather conditions and could be susceptible to interference or physical disruption. Ensuring continuity of operations in the region has many aspects, including physical protection of the assets against various intruders and extreme weather, 24/7 monitoring for perimeter or power impacts, and/or real-time alerts of disruption or tampering of the assets. The solution must also include reusable and sustainable power generation and storage for monitoring systems that safeguard the asset's site.
Lead institution	Innovation for Defence Excellence and Security (IDEaS) Program, Defence R&D Canada
Point of contact	DND.IDEaS-IDEeS.MDN@forces.gc.ca
Key words	Adaptation, Energy Efficiency, Generator, Renewable Resources

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Country	**Canada**
Action Plan Area	Adaptation
Name or main objective of the project/activity/policy	**IDEaS Challenge: Human Performance in Extreme Climatic Environments – Call for Proposal (CFP) to the Canadian innovation community (Private Sector and Academia)**
Description of the project/activity/policy	The Department of National Defence (DND)/Canadian Armed Forces (CAF) seeks the means to enable human operators to perform tasks in extreme conditions including cold/hot and humid/dry environments, in both physical and psychological conditioning aspects. The CAF is developing concepts and strategies for future ground combat operations in the 2025-2040 timeframe that will require highly capable and dispersed units in very austere environments, particularly in the Arctic. Enhancing the future protection of soldiers requires a holistic approach by converging advancements in domains such as textiles, portable power sources, mobile computing, and data fusion technologies to modernize military effectiveness in a sustainable way.
Lead institution	Innovation for Defence Excellence and Security (IDEaS) Program, Defence R&D Canada
Point of contact	DND.IDEaS-IDEeS.MDN@forces.gc.ca
Key words	Adaptation, Batteries, Equipment, Mobility

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CZECHIA

Country	**Czechia**
Action Plan area	Adaptation
Name or main objective of the project/activity/policy	**Integration of the climate change into resilience and civil preparedness**
Description of the project/ activity/policy	Czechia has integrated the climate change into the provision of standards, assets and installations, training and exercises and disaster response mechanisms. The Czech armed forces have been part of the integrated rescue system providing help in cases of climate disasters.
Lead institution	Ministry of Defence, Ministry of the Interior
Key words	Adaptation, Resilience

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Country	**Czechia**
Action Plan area	Adaptation
Name or main objective of the project/activity/policy	**Creation of the Climate Change and Security Task Force**
Description of the project/ activity/policy	In 2020, the Ministry of Foreign Affairs created the Climate Change and Security Task Force which is based for the purpose of the MFA only.
Lead institution	Ministry of Foreign Affairs
Point of contact	Bronislava Tomášová, bronislava_tomasova@mzv.cz
Key words	Adaptation

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FINLAND

Country	**Finland**
Action Plan area:	Adaptation
Name or main objective of the project/activity/policy	**Legislation on the responsibilities of the Defense Forces in the event of a natural disaster 10 May 2023**
Description of the project/activity/policy	According to the Finnish legislation (2 § (29.12.2022/1304)) on the tasks and duties of the Finnish Defense Forces, the Finnish Defense Forces can contribute in managing disruptions caused by natural disasters. The Defense Forces provide this support only by request and the requests will be considered taken into account the resources of the Defense Forces.
Lead institution	The Finnish Defense Forces, Ministry of Defense
Point of contact:	hanna.havumaki@gov.fi
Key words	National plan / Resilience

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Country	**Finland**
Action Plan area	Adaptation
Name or main objective of the project/activity/policy	**EU research project "CAScading Climate risks: towards ADaptive and resilient European Societies" (CASCADES), 2019-2023**
Description of the project/activity/policy	Impacts of climate change can have knock-on effects that propagate across borders, for example, via international trade, financial markets, international aid operations or migration. These can pose risks for regions remote from the initial impacts and for global security. The CASCADES project studies risks of cross-border and cascading climate change impacts and their possible adaptation policy responses. The project has developed conceptual frameworks for describing the phenomenon, supported by case studies in different world regions with important EU connections. One study focuses on climate change related ice retreat in the Arctic, which presents economic opportunities for actors both within and outside the Arctic but is also associated with security concerns and heightened risks for indigenous livelihoods, environmental protection and safety.
Lead institution	Potsdam Institute for Climate Impact Research (coordinator), Finnish Environment Institute (Syke) leads the work on the Arctic case study 10 May 2023
Point of contact	Paula Kivimaa, Policies and Risks Group, Climate Solutions Unit paula.kivimaa@syke.fi
Key words	Adaptation, cascading risks, security, transboundary

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Country	**Finland**
Action Plan area	Adaptation
Name or main objective of the project/activity/policy:	**Increasing the security of supply standards in electricity distribution networks**
Description of the project/activity/policy	In 2013 Finland introduced binding targets for maximum times of electricity interruptions in distribution networks due to weather-related events (e.g. storms, snow): 6 hours in urban areas and 36 hours in rural areas. These targets should be reached in steps by 2028 with possibility to extend to 2036 for some companies. The targets were introduced due to strong storms leaving hundreds of thousands of customers without electricity. Majority of the network companies chose to replace their aging overhead network with underground cables but it has also lead to better management of outage situations. The security of supply has already increased markedly increasing the resilience of the whole society.
Lead institution	Energy department, Ministry of Economic Affairs and Employment
Key words	Electricity networks, underground cables, security of supply

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Country	**Finland**
Action Plan area:	Adaptation
Name or main objective of the project/activity/policy	**National Climate Change Adaptation Plan 2030**
Description of the project/activity/policy	In 2022, the government of Finland adopted the most recent climate change adaptation plan. The plan includes a goal that the consequences, preparedness and adaptation to climate change are integrated into the national comprehensive security model, and into the general objectives of security of supply, established by the Finnish government by 2026. The primary objective of security of supply work is to safeguard the functioning of critical infrastructure, production and services so that they meet the most vital basic needs of the population, economy and national defence. The adaptation plan includes also measures to prepare for the impacts of extreme weather events and climate change in agriculture and food, water, energy and transport sectors.
Lead institution	Natural Resources and Water Management Unit / Natural Resources Department / Ministry of Agriculture and Forestry
Point of contact	karoliina.pilli-sihvola@gov.fi; luonnonvaravesitalous.mmm@gov.fi
Key words	Adaptation/ Awareness/ National plan / Resilience

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FRANCE

Country	**France**
Action Plan area	Adaptation / Mitigation
Name or main objective of the project/activity/policy	**ECOCAMP Project: Reduce reliance on fossil fuel and enhance autonomy of deployed camps**
Description of the project/ activity/policy	ECOCAMP aim is to test and validate technological bricks for deployed camp in order to reduce logistic footprint and enhance autonomy. Four main pillars: water / waste / energy / temporary building.
Lead institution	French Joint Defense Staff / Defence Infrastructure Service
Point of contact	germain.ranquet@intradef.gouv.fr
Key words	Deployed camps / Energy efficiency / renewable sources / resilience

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ITALY

Country	**Italy**
Action Plan area	Awareness / Mitigation / Adaptation
Name or main objective of the project/activity/policy	**“Castro Pretorio Smart Military District”**
Description of the project/ activity/policy	Castro Pretorio Smart Military District is located in Rome. It is an interministerial and interagency infrastructural project, with the involvement of academic and scientific institutions. The new infrastructure aims at maximizing it energy resilience through auto-production, optimization of the distribution grid, extensive use of renewables, mitigation measure to reduce the risks linked to the climate change. It is worth mentioning that the project is co-financed by European Local Energy Assistance Program and receives the financial support of the European Investment Bank for 1.6 million Euro. The overall investment is around 43 million Euro. Upon its completion, the Smart District will reduce its energy consumption by 50%, its CO22 emission by 45% and the costs for energy and maintenance by 44% compared to current prices.
Lead institution	Ministry of Defense
Point of contact	Stato Maggiore Difesa, IV Reparto,Ufficio Sicurezza Energetica della Difesa, mail: quarto.csezsed@smd.difesa.it
Key words	energy resilience, renewable sources, mitigation

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NORWAY

Country	Norway
Action Plan area	Adaptation
Name or main objective of the project/activity/policy	**Research on the impact of climate change on all aspects of national and Allied security and defense**
Description of the project/ activity/policy	The Norwegian Defence Research Establishment conducts research on climate change mitigation and adaptation. Two highly relevant reports are the "Consequences of climate change and climate adaptions for the Norwegian defence towards 2040 – a report to the Defence Commission" and the report "How can the Norwegian Armed Forces reduce its greenhouse gas emissions?". The reports, with English summaries, can be found on the following web sites respectively: Rapport (knowledgearc.net) [ffi-publikasjoner.archive.knowledgearc.net], and Rapport (knowledgearc.net) [ffi-publikasjoner.archive.knowledgearc.net].
Lead Institution	Ministry of Defence
Point of Contact	vegard.engh@fd.dep.no
Key words	Research on climate change mitigation and adaption

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POLAND

Country	**Poland**
Action Plan area	Adaptation
Name or main objective of the project/activity/policy	**Designing container facilities powered entirely with Renewable Energy Sources**
Description of the project/activity/policy	Polish MOD analyzes the possibility of constructing container building powered by solar power. Installation could be situated either on the roof of the object or function as a land farm. Such complex might operate regardless of external fuel supply and cover the total energy demand.
Lead Institution	Military Inspection of Energy Economy
Point of Contact	Patryk KIERZKOWSKI, pa.kierzkowski@ron.mil.pl
Key words	Renewable sources, resilience, deployed camps

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SLOVENIA

Country	**Slovenia**
Action Plan area	Adaptation
Name or main objective of the project/activity/policy	**Establishment of new Energy Efficiency and Green Transition Division within MOD - established**
Description of the project/activity/policy	The division carries out tasks relating to increasing energy efficiency, reducing the emission footprint, increasing energy autonomy, and implementing renewable and alternative energy sources. It determines the methodology and measurement of energy consumption, greenhouse gas emissions, water consumption and waste produced, centrally collects data, and carries out analyses of current situation and progress. It elaborates the requirements for the development and deployment of digitization in the field. It carries out tasks relating to energy efficiency project proposals, development and research proposals and participation in investment, development and research projects. It coordinates activities in the national and international environment and cooperates in relevant NATO and EU bodies, as well as with scientific organizations and industry. It organizes training and promotion activities for internal and external audiences.
Lead institution	Ministry of Defense of the Republic of Slovenia, Logistics Directorate
Point of contact	seuzp@mors.si, 00386 (0)1 471 25 46
Key words	Adaptation of organization; energy efficiency; coordination

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Country	**Slovenia**
Action Plan area	Adaptation
Name or main objective of the project/activity/policy	**Building Energy Renovation & Photovoltaics**
Description of the project/activity/policy	Building Energy Renovation is one of the main measures for better energy efficiency at the Ministry, which has in possession almost 3,000 various real estate facilities in a numerous of locations. Building energy renovation means: building envelopes, building technical systems (pipework insulation, air condition, lighting, triple glassing windows), renewable heat generation systems (thermal solar systems, water or air source heating pumps, etc.), renewable electricity generation systems (photovoltaic systems, wind generation systems, etc.), other energy related measures (smart appliances). Exploitation of natural resources where possible (wind, solar technology etc.)
Lead institution	Ministry of Defense of the Republic of Slovenia
Point of contact	seuzp@mors.si, 00386 (0)1 471 25 46
Key words	Green Energy, Energy Efficiency, Electricity, Photovoltaics

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SPAIN

Country	**Spain**
Action Plan area	Adaptation
Name or main objective of the project/activity/policy	**Adaptation of the Spanish Armed Forces**
Description of the project/ activity/policy	From an analysis of the effects of climate change, different consequences for Defence can be deduced: • Greater frequency of use of the capabilities of the Armed Forces in national territory (more frequent extreme meteorological phenomena) and abroad (increased global instability). • Need to adapt means and infrastructures (general rise in temperatures, reduction in rainfall). • Changes in the way of operating motivated by all of the above, which in turn affect training, doctrine, etc. Actions regarding climate change must be guided by a series of principles that are set out below. • Improve the operability, efficiency and resilience of the Armed Forces. • Do not adopt measures that jeopardize the fulfilment of the legally established missions of the Armed Forces. • Actively cooperate with our allies and partners, particularly the European Union (EU) and the North Atlantic Treaty Organization (NATO). • Monitor the degree of compliance with the actions established later in this strategy and adapt them when deemed necessary. Faced with the challenges posed by climate change, the Armed Forces must adapt to its multiple implications. These adaptation measures are intended to reinforce the resilience capacities of the Armed Forces and guarantee their ability to fulfil their missions taking into account the consequences of climate change in its broadest sense.
Lead institution	Ministry of Defence
Point of contact	
Key words	Adaptation, resilience

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UNITED KINGDOM

Country	**United Kingdom**
Action plan area	Adaptation
Name or main objective of the project/activity/policy	**Army's Capability led Hybrid Electric Vehicles**
Description of the project/ activity/policy	Technology Demonstrator #6 (TD6) – Battlefield Electrification. The British Army has invested c£14m in Battlefield Electrification, with a further £13m programmed, which will inform hybrid-electric requirements for future capabilities. Electrification is one of five Army Futures Research and Experimentation strategies directing the technology-driven transformation of the Army. As part of the electrification strategy, Technology Demonstrator 6 (TD6) was initiated in 2018 to demonstrate the benefits from fitting experimental Hybrid Electric Drive (HED) drivetrains, similar to those found in hybrid cars, to three existing in-service wheeled platforms (MAN SV truck, FOXHOUND and JACKAL). TD6 is being delivered in three phases: Phase 1 completes the experimentation and proof of concept stage to validate assumptions and illustrate that Hybrid Electric Drivetrains can be successful in the three existing wheeled platforms. Phase 2 builds on the feedback from Phase 1 to refine the technology used across all three platforms prior to conducting robust military trials. Phase 3 will refine and deliver additional converted platforms for experimentation and trials with the end user community. This approach will provide robust evidence to support future decisions around in-service conversion through Mid Life Upgrades (MLUs) as well as future platform procurement. Trials will deliver robust military evidence and assessment, allowing Army to make financial commitments for both current (in-service) and future capability options. Testing has indicated that Hybrid Electric Drive (HED) drivetrains will offer significant improvements in tactical and operational advantage, reduce logistic need, and simplify the supply chain offering long term financial and non-financial savings to Defence.
Lead institution	MOD
Point of contact	Helen Randell helen.randell100@mod.gov.uk
Key words	

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Country	**United Kingdom**
Action plan area	Mitigation and Outreach
Name or main objective of the project/activity/policy	**Future Energy Provision Programme**
Description of the project/ activity/policy	Future Energy Provision seeks assess the widespread application of of decentralised renewable energy and storage systems to support the Ministry of Defence's Energy trilemma; the balance between utility cost, energy security and decarbonisation requirements. A key component of the workstream is challenging the current status quo thinking around funding and procurement routes to facilitate assets on/near MoD land. It therefore has a wide cross Governmental stakeholder group which seeks to share best practice thinking and develop cross departmental projects which ensure highest efficiency of energy supply and demand within a regional area. As FEP is working to de-risk MoD's energy requirements during the UK energy transition to a decentralised network, significant outreach is being made to Network Operators to gain knowledge of the wider environment future projects must work within. The 3 workstreams are: 1- Modelling and analysis 2- Pilots, Pipeline and Best Practice 3- Flexibility services
Lead institution	
Point of contact	Major Ashley Wilson & Anna Phillips Ashley.wilson444@mod.gov.uk & Anna.phillips137@mod.gov.uk
Key words	Energy security, decentralised renewables, private finance, storage

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UNITED STATES

Country	United States
Action Plan area	Adaptation
Name or main objective of the project/activity/policy	**Heat Stress Kits/Go-Bags**
Description of the project/ activity/policy	In June 2022, U.S. Customs and Border Protection (CBP) launched a new heat mitigation effort to advance its humanitarian mission and announced new training and equipment, including Heat Stress Kits, to reduce heat-related injuries along the U.S. Southwest Border. The Heat Stress Kits contain helpful items to mitigate potential heat stress injuries and illnesses for CBP agents and migrants alike. For more information: https://www.cbp.gov/newsroom/national-media-release/cbp-launches-new-heat-mitigation-effort-advance-humanitarian
Lead institution	U.S. Customs and Border Protection, U.S. Department of Homeland Security
Point of contact	BONNIE.P.HERRIOTT@cbp.dhs.gov
Key words	Adaptation, Cooling, Equipment, Distribution

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Country	**United States**
Action Plan area	Adaptation
Name or main objective of the project/activity/policy	**Building Community Resilience with Nature-Based Solutions: A Guide for Local Officials**
Description of the project/ activity/policy	Provides foundational information on the benefits associated with using nature-based solutions to advance natural hazard mitigation and climate adaptation.
Lead institution	FEMA, US Department of Homeland Security
Point of contact	FEMA-ClimateAdaptation@fema.dhs.gov
Key words	Adaptation, Mitigation, Green Infrastructure, Resilience

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Country	**United States**
Action Plan area	Adaptation
Name or main objective of the project/activity/policy	**Building Community Resilience With Nature-Based Solutions, Strategies for Success (Nature Based Solutions Guidebook 2023)**
Description of the project/ activity/policy	Builds upon the Guide for Local Communities and highlights five key strategies for implementing successful nature-based solution projects to advance natural hazard mitigation and climate adaptation.
Lead institution	FEMA, US Department of Homeland Security
Point of contact	FEMA-ClimateAdaptation@fema.dhs.gov
Key words	Adaptation, Mitigation, Green Infrastructure, Resilience

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Country	**United States**
Action Plan area	Adaptation
Name or main objective of the project/activity/policy	**Increase Hazard Mitigation Funding on Public Assistance Relocations and Reconstruction Projects**
Description of the project/ activity/policy	Increase opportunities to maximize public assistance (PA) mitigation by lifting the restriction of using PA mitigation funding on projections involving reconstruction and improved project relocations. This was issued in a policy waiver in September 2022 and will be codified in upcoming PA policy updates.
Lead institution	FEMA, US Department of Homeland Security
Point of contact	Robert Pesapane robert.pesapane@fema.dhs.gov; tod.wells@fema.dhs.gov
Key words	Funding, Public Assistance

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Country	**United States**
Action Plan area	Adaptation
Name or main objective of the project/activity/policy	**Issue Resilience Fact Sheet**
Description of the project/ activity/policy	Develop a communication tool to highlight the ways in which Public Assistance funding can be maximized to ensure resilient recovery.
Lead institution	FEMA, US Department of Homeland Security
Point of contact	Robert Pesapane robert.pesapane@fema.dhs.gov; tod.wells@fema.dhs.gov
Key words	Funding, Public Assistance

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MITIGATION

CANADA

Country	Canada
Action Plan Area	Awareness / Mitigation
Name or main objective of the project/activity/policy	**Advanced Sustainability Secure Energy Technologies (ASSET)**
Description of the project/activity/policy	ASSET is providing the Canadian Army with recommendations and advice on energy efficient camp design that would save approx. 30-40% of fuel cost for camp operations, as well as decision support tool/capability that will support (cost/efficiency) evaluation of future energy technologies to operate remotely, and subsequent procurement thereof.
Lead institution	Defence R&D Canada, Atlantic Research Center
Point of contact	DRDCPartnerships-PartenariatsRDDC@forces.gc.ca
Key words	Awareness, Camp sustains, energy efficiency, remote locations

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Country	**Canada**
Action Plan Area	Awareness / Mitigation
Name or main objective of the project/activity/policy	**Aircraft Emission Estimation Tools**
Description of the project/activity/policy	To evaluate the current efficiency of Royal Canadian Air Force (RCAF) missions and provide a standardized "theoretical efficiency impact evaluation" of existing missions, existing platforms, changes to platform procedures, platforms modifications/fuel substitutions, and new platforms/combination of platforms.
Lead institution	Defence R&D Canada Program, National Research Council
Point of contact	DRDCPartnerships-PartenariatsRDDC@forces.gc.ca
Key words	Awareness, Aircraft, Emission, Standards

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Country	**Canada**
Action Plan Area	Awareness / Mitigation
Name or main objective of the project/activity/policy	**De-Risk RCAF Alternative Fuel Adoption**
Description of the project/activity/policy	Understanding Combustion Instability with Sustainable Aviation Fuels (SAF), with a data-driven model (deep learning) development for combustion instability of SAF.
Lead institution	Defence R&D Canada Program, National Research Council
Point of contact	DRDCPartnerships-PartenariatsRDDC@forces.gc.ca
Key words	Awareness, Aircraft, Sustainable Aviation Fuels, Combustion Modeling

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Country	**Canada**
Action Plan Area	Awareness / Mitigation
Name or main objective of the project/activity/policy	**Hydrogen in the North**
Description of the project/activity/policy	The Hydrogen Strategy for Canada was released in late 2020 and proposes how hydrogen can help achieve Canada's net-zero goals. How does Hydrogen fit into DND and CAF operations and where should research be focused? Efforts in this activity are toward a DND-specific hydrogen strategy, specifically whether Hydrogen should be used to displace jet fuel at remote sites. Challenges such as intermittent availability of renewables, where and how hydrogen could be produced, storage, and transportation by sea and/or air, are considered to determine whether Hydrogen is a viable option to reduce overall GHGs.
Lead institution	Defence R&D Canada Program, National Research Council
Point of contact	DRDCPartnerships-PartenariatsRDDC@forces.gc.ca
Key words	Awareness, Hydrogen, North, GHG

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Country	**Canada**
Action Plan Area	Awareness / Mitigation
Name or main objective of the project/activity/policy	**Renewables in the North**
Description of the project/activity/policy	In support of the Federal Sustainable Development Strategy (FSDS), this activity aims to address reducing the reliance on diesel in remote and Northern communities, and to increase clean power generation. Long Range Radar (LRR) sites of the NWS combined currently use twice as much fuel as CFS Alert on an annual basis. With operations of 8 of the 10 LRR sites moving from unmanned to manned over the shortterm, GHG emissions are expected to double to over 20,000 tCO2e per year. The output of the project will inform investments required to meet deep GHG reductions at NWS sites and will feed into the Real Property business plan.
Lead institution	Defence R&D Canada Program, National Research Council
Point of contact	DRDCPartnerships-PartenariatsRDDC@forces.gc.ca
Key words	Awareness, North Warning Sites, renewables, GHG

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Country	**Canada**
Action Plan area	Mitigation
Name or main objective of the project/activity/policy	**Green Power Purchase Agreements and Renewable Energy Certificates Procurement Program**
Description of the project/ activity/policy	Renewable energy sources such as wind, solar, geothermal, synthetic fuels and other energy alternatives, will continue to evolve and offer more energy options, diversify the energy supply, increase the security of the fuel supply chain, and help reduce GHG emissions. We will continue to invest in renewable energy contracts to meet the government's target of using 100% clean electricity at all federal facilities by 2022, where available. We are also working with other federal departments to purchase clean electricity from new sources, like solar power, to run our bases in Alberta and New Brunswick.
Lead institution	Canadian Armed Forces / Department of National Defence, Canada
Point of contact	mnd.environment-environnement.mdn@forces.gc.ca
Key words	Mitigation, Renewable Sources, Private Sector Partnership, Procurement

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Country	**Canada**
Action Plan area	Mitigation
Name or main objective of the project/activity/policy	**Energy Performance Contracts (EPCs)**
Description of the project/ activity/policy	Implementing EPCs at our bases minimizes up-front costs to the taxpayer and guarantees that the upgrades produce real savings. Through an EPC, a company is hired to pay for and carry out an energy retrofit project at a base or wing. The money saved in energy costs is then used to pay the company back over a 5- to 15-year period. 85 % of eligible bases have been assessed for EPC implementation. 52 % of eligible bases have moved to implementation phase.
Lead institution	Canadian Armed Forces / Department of National Defence, Canada
Point of contact	mnd.environment-environnement.mdn@forces.gc.ca
Key words	Mitigation, Energy Efficiency, Procurement, Emissions Reduction

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Country	**Canada**
Action Plan Area	Mitigation
Name or main objective of the project/activity/policy	**SPEED (Ship Platform Exploitation of Energy Datasets) & SPEED 2.0**
Description of the project/activity/policy	This activity supports ship operators and fleet management for greater energy efficiencies, reduced-fuel use, and decarbonisation of RCN platforms. SPEED involves development and validation of ship energy models to aid in decision-making for ship operators and fleet management for reduced-fuel use and GHGs toward a validated decision-making algorithm for energy efficiency for the RCN. SPEED 2.0 will continue this work including the development of ship energy digital twins to inform enhanced decision-making regarding ship energy efficiency and support decarbonisation of RCN platforms as well as reduce greenhouse gas emissions by ~10% per year.
Lead institution	Defence R&D Canada Atlantic Research Center
Point of contact	DRDCPartnerships-PartenariatsRDDC@forces.gc.ca
Key words	Awareness, Naval, energy efficiency, fuels, decision support tools

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Country	**Canada**
Action Plan Area	Mitigation
Name or main objective of the project/activity/policy	**Naval Electric Ship Technologies (NEST)**
Description of the project/activity/policy	Assessing the feasibility of hybrid and/or all electric solutions for the Royal Canadian Navy (RCN) fleet for reducing GHG emission stemming from ship platforms and operations towards 2050 net-zero targets while ensuring operational capability is maintained.
Lead institution	Defence R&D Canada Atlantic Research Center, National Research Council
Point of contact	DRDCPartnerships-PartenariatsRDDC@forces.gc.ca
Key words	Mitigation, Naval, Hybrid, Electric, Propulsion

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Country	**Canada**
Action Plan Area	Mitigation
Name or main objective of the project/activity/policy	**Green Aviation Innovative Surfaces (GAINS)**
Description of the project/activity/policy	To evaluate the feasibility and efficiency gains of riblet technology on military aircraft
Lead institution	Defence R&D Canada Program, National Research Council
Point of contact	DRDCPartnerships-PartenariatsRDDC@forces.gc.ca
Key words	Mitigation, Aircraft, Aerodynamic Efficiency, Riblets

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Country	**Canada**
Action Plan Area	Mitigation
Name or main objective of the project/activity/policy	**IDEaS Challenge: Land to sea with low GHGs: Arctic eco-safe transit of personnel and cargo from ship to shore – Call for Proposal (CFP) to the Canadian innovation community (Private Sector and Academia)**
Description of the project/activity/policy	The Department of National Defence (DND)/Canadian Armed Forces (CAF) are seeking innovative solutions that can enable the safe transit of personnel and cargo between Arctic/Offshore Patrol Vessels (AOPV) and shore, in the absence of shore infrastructure (e.g., docks or jetties), with an emphasis on minimizing the greenhouse gas (GHG) emissions for any proposed solution. This focus area further enhances the CAF's mobility, reach and footprint in Canada's North to support operations and exercises, and its ability to project force in the region, as well as supporting the Government of Canada's Greening Government Strategy net-zero 2050 commitment.
Lead institution	Innovation for Defence Excellence and Security (IDEaS) Program, Defence R&D Canada
Point of contact	DND.IDEaS-IDEeS.MDN@forces.gc.ca
Key words	Mitigation, Naval, Emission Reduction, Critical Infrastructure

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Country	**Canada**
Action Plan Area	Mitigation
Name or main objective of the project/activity/policy	**IDEaS Challenge: A Cold Wind Blows: Seeking Smaller, Ruggedized Wind Turbines for the Arctic – Call for Proposal (CFP) to the Canadian innovation community (Private Sector and Academia)**
Description of the project/activity/policy	The Department of National Defence (DND)/Canadian Armed Forces (CAF) are seeking design concepts and technologies that can ruggedized wind turbines for the Arctic in order to increase electrical generation capacities and reduce the reliance on diesel fuel generated power. There are many hurdles in the use of wind turbines in the North, including high ultraviolet (UV) radiation, harsh winds, permafrost and ice-rimming of wind turbine blades. The size and scale of wind turbines also presents challenges in their potential use in remote and isolated northern locations given significant barriers related to transportation and installation.
Lead institution	Innovation for Defence Excellence and Security (IDEaS) Program, Defence R&D Canada
Point of contact	DND.IDEaS-IDEeS.MDN@forces.gc.ca
Key words	Mitigation, Energy Efficiency, Renewable Resources, Electricity

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Country	**Canada**
Action Plan Area	Mitigation
Name or main objective of the project/activity/policy	**Nature-Based Infrastructure for Coastal Resilience & Risk Reduction**
Description of the project/activity/policy	Nature-based Solutions (NbS, also known as Green Infrastructure) entail sustainable planning, design, environmental management, and engineering practices that weave natural features or processes into the built environment to build more resilient communities. In a Coastal environment, NbS uses living shorelines, dunes, wetlands and bio-engineered reefs to reduce the risks of coastal erosion. In the present project 3 Canadian sites employing NbS for coastal flooding risk reduction in diverse coastal environments were studied with physical and numerical modelling and field measurements. The research informed a design guide for NbS in a Canadian context and an improved understanding of the performance of nature-based infrastructure in Canadian coastal environments. The research demonstrated how nature-based approaches can be deployed in Canada within broader coastal hazard risk management frameworks to maximize societal and ecosystem benefits. The use of NbS can be applied in a NATO setting to protect NATO coastal infrastructure.
Lead institution	National Research Council of Canada, Defence R&D Canada Centre for Security Science
Point of contact	CSSP-PCSS@forces.gc.ca
Key words	Mitigation, Nature Based Solutions Coastal

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CZECHIA

Country	**Czechia**
Action Plan area	Mitigation
Name or main objective of the project/activity/policy	**Methodology**
Description of the project/ activity/policy	The Ministry of Defence only provides data on emissions to the overall reports it processes for EUROSTAT. Data for the Czech Republic are compiled by the Czech Hydrometeorological Institute
Lead institution	Ministry of Defence
Key words	Methodology

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DENMARK

Country	Denmark
Action Plan area	Mitigation
Name or main objective of the project/activity/policy	**Danish Ministry of Defence Power-t-X analysis**
Description of the project/activity/policy	The Danish MoD has made an analysis, which looks into the possibilities of using Power-to-X based drop-in fuels in the MoD's capabilities. The analysis covers technical, logistical and economics aspects as well as availability and others bindings. Fuel consumption is the largest source of CO_2-emissions in the Danish MoD. New fuels have the possibility to significantly reduce the climate impact of our armed forces and reduce our dependency on fossil sources. Therefore, the development of new, climate-friendly fuel types is an important way forward.
Lead institution	Danish Ministry of Defence Acquisition and Logistics Organisation
Point of contact	Camilla Mønsted Simonsen, special advisor, Danish MoD / cms@fmn.dk / +45 7281 0146
Key words	Sustainable fuels, emissions reduction, procurement

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FINLAND

Country	**Finland**
Action Plan area	Mitigation
Name or main objective of the project/activity/policy	**Academy of Finland research project: Interplay between National Defence, Security and Low Carbon Energy Policies: a Sustainability Transitions Perspective, 2019-2024**
Description of the project/activity/policy	Energy transitions bring security benefits and raise new security concerns, which need to be systematically analyzed and brought to the attention of decisionmakers. The (un)coordination energy policy and security/defence policies have impacts on the energy transitions and effectiveness of public resource use. This project has conducted empirical analysis of synergies and conflicts between national defence and security policy and energy policy, from the perspective of low-carbon energy transitions, in Finland, Estonia, Norway and Scotland, and the influence of Russian developments on energy policymaking in these countries prior to and post 2022. It has identified a range of positive and negative security impacts of the low carbon energy transitions (on defence, geopolitics, cyber security, energy security, electricity system operation and internal security).
Lead institution	Finnish Environment Institute (Syke)
Point of contact	Paula Kivimaa, Policies and Risks Group, Climate Solutions Unit paula.kivimaa@syke.fi
Key words	critical infrastructure, electricity, policy, research

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GERMANY

Country	**Germany**
Action Plan area	Mitigation
Name or main objective of the project/activity/policy	**The process of observing and evaluating green technologies within the field of military research**
Description of the project/ activity/policy	Observing and evaluating new civilian technologies is an important task of military research. Green technologies may offer new possibilities to increase resilience and self-reliance. Moreover, future capabilities of military forces may be supported or enhanced. Thus, this observation and evaluation process increases enabling the potential of new green technologies in a very efficient manner. This process is carried out by specialists as well as on research strategic level.
Lead institution	German MoD
Point of Contact	BMVgAIII5@bmvg.bund.de
Keywords	Military research, green technologies

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Country	**Germany**
Action Plan area	Mitigation
Name or main objective of the project/activity/policy	**Assessment of renewable energy potential and short- as well as long-term energy storage options for domestic military installations to increase resilience and autarky**
Description of the project/ activity/policy	Systematic assessment of solar and wind potential on domestic military installations is performed in order to develop distinct energy supply concepts based on real-life energy demands. To cover energy demands despite the volatility of renewable energies, appropriate energy-storage options are being evaluated suited for short- as well as long-term energy storage. Especially for long-term storage, conversion-technologies involving molecules like hydrogen, methane or higher hydrocarbons are taken into consideration.
Lead institution	German MoD
Point of Contact	BMVgIUDII5@bmvg.bund.de
Keywords	Renewable energies, energy storage

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GREECE

Country	Greece
Action Plan area	Mitigation
Name or main objective of the project/activity/policy	**Military Energy and Carbon Management**
Description of the project/ activity/policy	The Hellenic Ministry of National Defence (HMoD) run a program called "*Military Energy and Carbon Management*", under which specific measurements and calculations of CO2 emissions of non-tactical infrastructure and platforms took effective place. This project ran from 2012 till 2016 and was co-founded by national budget-line as well as an EU funding tool called LIFE+. The project for the first implementation year (2014) resulted in a 23% reduction of the total energy consumed for all the non-operational activities compared to the selected baseline year of 2011. Moreover, for 2016, the total energy consumption for non-operational activities was further reduced by 10% compared to 2015 and by 46% compared to the selected baseline year of 2011, and therefore all the set energy reduction targets were met.
Lead Institution	Hellenic Ministry of National Defence (HMoD)
Point of Contact	spaparizos@mod.mil.gr kpapadimitriou@mod.mil.gr
Key Words	Mitigation, Energy efficiency

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Country	**Greece**
Action Plan area	Mitigation
Name or main objective of the project/activity/policy	**Long-term Renovation Strategy**
Description of the project/ activity/policy	The Hellenic Ministry of National Defence (HMoD) has recently established (via an outsourced study) the long-term renovation strategy of the total of its non-operational building stock, with the ultimate goal to render this infrastructure carbon neutral, by 2050. Due to the study, it seems possible to fulfill the renovation of the total of non-operational building stock by 2044 and upgrade the energy efficiency of external lighting by 2028.
Lead Institution	Hellenic Ministry of National Defence (HMoD)
Point of Contact	spaparizos@mod.mil.gr kpapadimitriou@mod.mil.gr
Key Words	Mitigation, Energy efficiency

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Country	**Greece**
Action Plan area	Mitigation
Name or main objective of the project/activity/policy	**Upgrade the Energy Efficiency of Building Stock**
Description of the project/ activity/policy	The Hellenic Ministry of National Defence (HMoD) has developed a framework of cooperation with the Greek Ministry of Energy & Environment, under which a pipeline of projects aiming at gradually upgrade the energy efficiency of non-operational building stock of the Hellenic Armed Forces. In this pipeline, priority has been given to the military infrastructure which is publicly accessible (eg military schools and academies, hospitals, sport facilities, etc), according to the provisions of the Art 5 of EU Directive 27/2012 on Energy Efficiency. Till now, more than 15 such projects have been funded by EU structural Funds (covering a total surface area of approx 270.000m^2)
Lead Institution	Hellenic Ministry of National Defence (HMoD)
Point of Contact	spaparizos@mod.mil.gr kpapadimitriou@mod.mil.gr
Key Words	Mitigation, Energy efficiency

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Country	**Greece**
Action Plan area	Mitigation
Name or main objective of the project/activity/policy	**Energy Management Systems (EnMS)**
Description of the project/ activity/policy	Hellenic Armed Forces were among the very first EU/NATO pMS that designed, planned, implemented and effectively monitoring the application of Energy Management Systems (EnMS) in various military installations, according to the requirements of ISO 50001. Until now, twelve (12) installations have successfully undertaken such initiative, either through national or EU (European Defence Agency) respective schemes.
Lead Institution	Hellenic Ministry of National Defence (HMoD)
Point of Contact	spaparizos@mod.mil.gr kpapadimitriou@mod.mil.gr
Key Words	Mitigation, Energy efficiency

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ITALY

Country	**Italy**
Action Plan area	Mitigation
Name or main objective of the project/activity/policy	**Green barracks project**
Description of the project/ activity/policy	The “Green barracks” (Caserme Verdi) project is aimed at intervening on the infrastructure that determines the energy efficiency of the military installations, promoting the use of renewables and sustaining the auto-production of energy needs for single installation.
Lead institution	Ministry of Defense
Point of contact	Stato Maggiore Esercito, Dipartimento delle Infrastrutture, Ufficio politica e programmazione
Key words	Energy efficiency, renewable sources

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Country	**Italy**
Action Plan area	Mitigation
Name or main objective of the project/activity/policy	**Blue Airports**
Description of the project/ activity/policy	The “Blue airports” (Aeroporti Azzurri) project’s goal is the modernization of airbases, including the reinforcement of their resilience and the access to energy products. This project has a 10 years lifespan (until 2033) and it has already been funded with over 1.2 million euro this year.
Lead institution	Ministry of Defense
Point of contact	Air force Fuel, Comando Logistico
Key words	Resilience

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Country	**Italy**
Action Plan area	Mitigation / Adaptation
Name or main objective of the project/activity/policy	**SAF (Sustainable Aviation Fuels)**
Description of the project/ activity/policy	The Italian Airforce is taking forward its project to develop SAF (Sustainable Aviation Fuels) and the use of a biofuel derived from Hydrotreated Vegetable Oil (HVO)
Lead institution	Ministry of Defense
Point of contact	Air force Fuel, Comando Logistico
Key words	SAF / Biofuels

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Country	**Italy**
Action Plan area	Mitigation / Adaptation
Name or main objective of the project/activity/policy	**HVO-based biofuel for the Navy**
Description of the project/ activity/policy	The Italian Navy uses a mix of HVO-based biofuel on its platforms. Specific agreements have been reached in order to convert the existing production sites.
Lead institution	Ministry of Defense
Point of contact	Navy Fuel CF(GN) Antonio BIGNONE Stato Maggiore Marina Militare - 7° Reparto Navi Ufficio Sistema Nave
Key words	Biofuels

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NETHERLANDS

Country	**The Netherlands**
Action Plan area	Mitigation
Name or main objective of the project/activity/policy	**Bio-fuels**
Description of the project/ activity/policy	The MoD is working to gradually increase the use of sustainable fuel, with a goal of at least 30 percent per fuel type in 2030. This will reduce the reliance on fossil fuels and will reduce the ecological footprint. This is how the MoD will contribute to the government-wide objective of reducing CO2 emissions by 55 percent by 2030 compared to 1990. In the coming years, Defence will invest heavily in high-quality materiel. Fuel consumption is expected to increase. As a result, materiel will have an increasing impact on our total CO2 emissions. Therefore, efforts are needed to make materiel more sustainable. For our vehicles, we have already use 20% biodiesel. For our marine this year we will use 10% biofuels and for our aircrafts, we're still exploring to increase and make regular use of SAF. In the case of SAF, we are looking to cooperation with NATO and NATO partners.
Lead institution	Defence fuel department
Point of contact	j.evers@mindef.nl
Key words	Bio fuels, sustainable fuels, SAF

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Country	**The Netherlands**
Action Plan area	Mitigation
Name or main objective of the project/activity/policy	**Zero-emission vehicles**
Description of the project/ activity/policy	The replacement of non-military fossil fuel vehicles with zero-emission (electric) vehicles. The national goals is to have a fully zero-emission vehicle park by 2028. The MOD will contribute to this as much as possible and has a budget of 14M per year available to reach this goal.
Lead institution	Defence support commando
Point of contact	S.v.Dijk.09@mindef.nl
Key words	Non-military vehicles, fossil fuel reduction, procurement

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Country	**The Netherlands**
Action Plan area	Mitigation
Name or main objective of the project/activity/policy	**Generate renewable energy**
Description of the project/ activity/policy	Generate green energy on governmental buildings and terrains. By making our real estate more sustainable, the MoD can make a significant contribution to the sustainability of government real estate. That is why the MoD has participated since 2021 in government-wide programmes such as solar panels on government buildings (Zon op Rijksdaken) and generating energy on government land (Opwekking Energie op Rijksgronden). With the financial help of the ministry of Internal Affairs we will realise solar panels the upcoming years. The MOD has one of the largest real estate portfolios within the government with a lot of potential for realising solar panels, by which the use of gas and fossil energy will be reduced substantially. The ministry of internal affairs has given 92M million to the MOD to realise these solar panels and to implement other sustainable solutions on our real estate. This project has a timeline till 2025.
Lead institution	Sustainability department of the Defence policy department
Point of contact	HM.Klifman@mindef.nl
Key words	Generation green energy, solar panels

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NORWAY

Country	**Norway**
Action Plan area	Mitigation
Name or main objective of the project/activity/policy	**Reduce the climate gas emissions from the defence sector**
Description of the project/ activity/policy	Norway has implemented a number of targeted measures to reduce climate gas emissions from the defence sector. This includes increasing use of simulator training for the crews on aircrafts, naval vessels and heavier vehicles, and taking carbon rich nature into sustainable consideration during training. Other measures include phasing out fossil fuels for heating, energy-saving measures in buildings and recycling of waste.
Lead institution	Ministry of Defence
Point of contact	vegard.engh@fd.dep.no
Key words	Emissions Reduction

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POLAND

Country	**Poland**
Action Plan area	Mitigation
Name or main objective of the project/activity/policy	**Construction of large photovoltaic installations.**
Description of the project/activity/policy	In order to reduce reliance on fossil fuels polish armed forces invest in renewable energy sources. There is currently 1 pilot farm under construction. 1. Powidz – 2.7 MW PV installation with 2 energy storages 4,8 kW and 6,4 kW. If the project succeeds, more large installations will be considered to be implemented.
Lead Institution	Military Inspection of Energy Economy
Point of Contact	Patryk KIERZKOWSKI, pa.kierzkowski@ron.mil.pl
Key words	Renewable sources, resilience, deployed camps

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Country	**Poland**
Action Plan area	Mitigation
Name or main objective of the project/activity/policy	**GSE equipment**
Description of the project/activity/policy	Up to 2022, PLAF replaced 90% of its aircraft ground equipment reducing air pollution approximately 60% compared to previous period. By 2060, the most of GSE fleet will be powered by zero or low-emissions technologies. During acquisition new GSE requirements of cut down emission will added to manufacturer.
Lead institution	Avation Technique Division/Armed Forces Support Inspectorate/Poland's Ministry of Defence
Point of contact	se.urbanski@ron.mil.pl
Key words	GSE Emissions Reduction and Procurement

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Country	**Poland**
Action Plan area	Mitigation
Name or main objective of the project/activity/policy	**Low emission**
Description of the project/ activity/policy	From 2023, construction of several photovoltaic installations that will cover the electricity demand for the air base.
Lead institution	Military Board Infrastructure, Poland's Ministry of Defence
Point of contact	
Key words	Low emission, Environmental protection, Climate change

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PORTUGAL

Country	**Portugal**
Action Plan Area	Mitigation
Name or main objective of the project/ activity/ policy	**Energy efficiency and renewable measure implementation in buildings**
Descritpion of the project/ activity/ policy	In line with the Environmental Directive, DGRDN implemented energy efficiency measures (led lights, lighting presence sensors, double-glazed windows, for example). DGRDN also pushed for energy renovation projects in the Armed Forces, by financially supporting energy audits that were necessary for external funding applications. These projects include not only energy efficiency measures but also renewables, mainly, the installation of PV panels.
Lead Institution	DGRDN, Armed Forces, other MoD entities
Point of Contact	ana.correia@defesa.pt
Key Words	Electricity, Energy Efficiency, Renewable Sources

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SLOVAKIA

Country	**Slovakia**
Action Plan area	Mitigation
Name or main objective of the project/activity/policy	**Reduction of CO2 emissions of the vehicle fleet (non-tactical vehicles)**
Description of the project/ activity/policy	Objective is in a line with the adopted Action Plan on Clean Mobility at the MOD. By the year 2030 should be CO2 emissions produced by the MOD's non-tactical vehicle fleet reduced by 55% comparing to the year 2021 (set as a reference period). Objective should be achieved through several measures: electrification of the vehicle fleet, vehicle fleet utilization and better monitoring of its emissions. Supporting measure to the objective is developing infrastructure to charge electric vehicles.
Lead institution	Department of Investment Planning and Project Financing (Ministry of Defense of the Slovak Republic)
Point of contact	Attila.TOTH@mod.gov.sk ; Martin.BREZINA@mod.gov.sk
Key words	Fleet vehicles, Emissions reduction, Non-military vehicles

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Country	**Slovakia**
Action Plan area	Mitigation
Name or main objective of the project/activity/policy	**Increase a number of implemented energy efficiency projects in the buildings**
Description of the project/ activity/policy	Objective is in a line with the adopted Action Plan on Building Renovation at the MOD. Buildings should use 50% less energy for heating and cooling by 2030 compared with 2021. Where possible, renovation projects should aim for nearly zero-energy building. In each project should be considered a use of renewable energy sources – goal is to increase a share of RES technologies by 5% by the end of 2030.
Lead institution	Department of Investment Planning and Project Financing (Ministry of Defense of the Slovak Republic)
Point of contact	Attila.TOTH@mod.gov.sk ; Martin.BREZINA@mod.gov.sk
Key words	Buildings, Energy efficiency

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SLOVENIA

Country	Slovenia
Action Plan area	Mitigation
Name or main objective of the project/activity/policy	**RESHUB Network in EU – feasibility study - concluded**
Description of the project/activity/policy	The RESHUB project is a pan-European project providing self-sufficient and autonomous capabilities in support of defence capabilities, in support of reducing energy dependence on external sources, the use of renewable energy sources on infrastructure owned by the MOD, in support of the robustness of energy supply with self-sufficient and autonomous resources and energy storage, and electric and hybrid mobility. RESHUB aims to help build capacity for renewable energy, hydrogen (H2) energy storage and facilitate transport across Europe, which will reduce CO2 emissions and contribute to energy sustainability in the defense and security sector. RESHUB will provide a network of local hydrogen production for the autonomy of barracks operations and to support mobility. With the installation of the first five nodes in the SV barracks, a reduction of CO2 emissions of 10,000 tons per year is expected.
Lead institution	Ministry of Defense of the Republic of Slovenia, Logistics Directorate
Point of contact	seuzp@mors.si, 00386 (0)1 471 25 46
Key words	Defence facilities; Hydrogen; Resilience; Mobility

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Country	**Slovenia**
Action Plan area	Mitigation
Name or main objective of the project/activity/policy	**RESHUB pilot project on military barracks in Kranj – in progress**
Description of the project/activity/policy	The pilot project is the first out of five planned RESHUB nodes providing self-sufficient and autonomous capabilities in support of defence capabilities, in support of reducing energy dependence on external sources, the use of renewable energy sources, in support local energy storage, and electric and hybrid mobility. RESHUB in Kranj aims to build capacity of renewable energy capacity, hydrogen (H2) energy storage and support hydrogen mobility, which will reduce CO2 emissions and contribute to energy sustainability in the defense and security sector. With the installation of the first node in the military barracks, a reduction of CO2 emissions of 1,000 tons per year is expected. Public-private partnership model is applied for the implementing the capability.
Lead institution	Ministry of Defense of the Republic of Slovenia, Logistics Directorate
Point of contact	seuzp@mors.si, 00386 (0)1 471 25 46
Key words	Defence facilities; Hydrogen; Resilience; Mobility

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Country	**Slovenia**
Action Plan area	Mitigation
Name or main objective of the project/activity/policy	**Vehicle Fleet/ Vehicle Pool – general purpose vehicles and off-road vehicles**
Description of the project/activity/policy	In 2021, the Ministry of Defence of the Republic of Slovenia has started to centralise and rationalise its vehicle fleet and thus use of general-purpose vehicles for its employees. We are regularly removing old and environmentally polluting vehicles from the road and replacing them with electric and hybrid vehicles. Furthermore, we are setting up a network of charging points to support e-mobility in all regions of Slovenia.
Lead institution	Ministry of Defense of the Republic of Slovenia
Point of contact	seuzp@mors.si, 00386 (0)1 471 25 46
Key words	e-mobility

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Country	**Slovenia**
Action Plan area	Mitigation
Name or main objective of the project/activity/policy	**PamPIK (Smart Deployed Camps) – study - concluded**
Description of the project/activity/policy	The purpose of the study was to prepare a vision, concept and strategy for the development of smart camps for the next 10 years to address the broad spectrum of their use in military operations and to support the capacity building of the Slovenian Armed Forces and Civil Protection and Disaster Relive System of the Republic of Slovenia.
Lead institution	Ministry of Defense of the Republic of Slovenia, Logistics Directorate
Point of contact	seuzp@mors.si, 00386 (0)1 471 25 46
Key words	Deployed camps, Research, Resilience

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Country	**Slovenia**
Action Plan area	Mitigation
Name or main objective of the project/activity/policy	**Car Sharing**
Description of the project/activity/policy	In September 2021, The Ministry of Defence of the Republic of Slovenia introduced the Avant 2Go "Car Sharing" contract system for all employees. Employees use the Avant2Go car sharing system for business travel. For every kilometre with this (rented) vehicle, each employee saves 100 grams of CO2 emissions. The Ministry reduces mobility costs as employees travel without harmful emissions and noise.
Lead institution	Ministry of Defense of the Republic of Slovenia
Point of contact	seuzp@mors.si, 00386 (0)1 471 25 46
Key words	Car sharing; Mobility; Non-Military vehicles

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Country	**Slovenia**
Action Plan area	Mitigation
Name or main objective of the project/activity/policy	**HibroM (Development of hybrid mobile power generators and micro network for deployed camps) – in progress**
Description of the project/activity/policy	The project aims to improve the energy supply of temporary bases of the Slovenian Armed Forces in the medium term, when energy will still be mainly produced from fossil fuels with increasing support from alternative sources. The project represents a gradual change in the technology of production, storage and consumption of energy. It will reduce fuel consumption, reduce the need for redundant power generators, reduce maintenance costs, reduce the logistical and environmental footprint, ensure higher base resilience, ensure lower or zero operational noise, introduce energy storage and renewable technologies, ensure monitoring of energy production and consumption.
Lead institution	Ministry of Defense of the Republic of Slovenia, Logistics Directorate
Point of contact	seuzp@mors.si, 00386 (0)1 471 25 46
Key words	Energy efficiency, Deployed camps, Hybrid generator

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Country	**Slovenia**
Action Plan area	Mitigation
Name or main objective of the project/activity/policy	**ALENOS (Alternative Energy Supply for Shooting Ranges) - in operation**
Description of the project/activity/policy	Part of the smart camp development is the pilot deployment of energy self-supply for the Slovenian Armed Forces' exposed lower energy demanding facilities through the deployment of alternative sources, energy storage and long-term self-sufficiency. The possibility of upgrading and introducing new technologies in order to test them, as well as increasing energy storage capacities and integration into smart grids. By verifying and testing the applicability of alternative, hybrid and interoperable technologies, it enables decisions to be taken on their deployment and on the complementation of new technologies in the capabilities of the Slovenian Armed Forces and the Protection and Rescue Service in the territory of the Republic of Slovenia.
Lead institution	Ministry of Defense of the Republic of Slovenia, Logistics Directorate
Point of contact	seuzp@mors.si, 00386 (0)1 471 25 46
Key words	Deployed camps; Sustainable energy; Renewable sources; Storege

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Country	**Slovenia**
Action Plan area	Mitigation
Name or main objective of the project/activity/policy	**Participation at EDA CapTech Ground CatB project: HybriDT (Hybrid drive trains)**
Description of the project/activity/policy	The goal of this study was the identification and field of application for electric storage, conversion, and propulsion components for a specific range of military vehicles. Furthermore, it was attempted to show which classes of vehicles could be equipped with electric drive components. The study also aimed at describing standard requirements for each core subassembly of a (semi) electric propulsion system, in order to adapt resulting vehicle architecture to progress made in the state of the art.
Lead institution	Ministry of Defense of the Republic of Slovenia, Logistics Directorate
Point of contact	seuzp@mors.si, 00386 (0)1 471 25 46
Key words	Outreach, Mobility, Military vehicles

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Country	**Slovenia**
Action Plan area	Mitigation
Name or main objective of the project/activity/policy	**ELUVAT I (Innovative electric light utility all-terrain vehicle for defence purposes) EDA CatB project**
Description of the project/activity/policy	ELUVAT I (Innovative electric light utility all-terrain vehicle for defence purposes), involves the development of an all-terrain electrical light utility vehicle based on an existing legacy vehicle with a conventional driveline, to be modified by introducing an advanced electrified powertrain with in-wheel electric motors.
Lead institution	Ministry of Defense of the Republic of Slovenia, Logistics Directorate
Point of contact	seuzp@mors.si, 00386 (0)1 471 25 46
Key words	Mobility, Land vehicles, Hydrogen, Outreach

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Country	**Slovenia**
Action Plan area	Mitigation
Name or main objective of the project/activity/policy	**Participation at EDA CapTech Ground CatB project: IAPUNIT (Fuel cell system with standardized military fuel)**
Description of the project/activity/policy	The goal of the project is the development of a silent auxiliary power unit (APU) with a low thermal footprint, intended for the energy supply of military land vehicles. To reach the requirements, fuel cells are used to generate electricity. However, in this case, fuel cells are not fueled by hydrogen as usual, but by reforming of widely available military logistic fuel (diesel with up to 3000 ppm Sulphur content).
Lead institution	Ministry of Defense of the Republic of Slovenia, Logistics Directorate
Point of contact	seuzp@mors.si, 00386 (0)1 471 25 46
Key words	Hydrogen, Generator, Energy efficiency

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SPAIN

Country	**Spain**
Action Plan area	Mitigation
Name or main objective of the project/activity/policy	**Within the State's action on climate change, the Ministry of Defence contributes with the mitigation measures following the guidelines of the leading ministry, always with the priority of the operational requirements of the Armed Forces to be able to fulfil the missions that are legally established, on any other requirement.**
Description of the project/ activity/policy	These measures fall into three main areas: • Environmental awareness, training and instruction and training. - Include climate change in curricula as well as in instruction and training to raise awareness and train climate change experts. • Reduction of emissions. - Improve energy efficiency. - Improve logistics management and transport systems. - Minimize travel and transportation during training activities. - Develop the use of low emission fuels. - Contribute to the fight against forest fires. • Carbon absorption. - Creation of carbon sinks on Ministry of Defense land. - Protect the natural environments on Ministry of Defense land.
Lead institution	Ministry of Defence
Point of contact	
Key words	State action, whole of government, emissions

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Country	**Spain**
	Mitigation in emergency situations
Name or main objective of the project/activity/policy	**Contribution to the management of emergency situations**
Description of the project/ activity/policy	Within the State's action on climate change, in addition to what is stated in the previous section on mitigation measures, the Ministry of Defence also contributes by providing its support to civil authorities with means and personnel specialized in managing emergency situations, such as such as forest fires, floods, snowfall, etc., which may increase their frequency and duration, due to climate change. • Adapt and maintain the operational capacity of the Military Emergency Unit to support civil authorities in emergency management. These supports will foreseeably be more frequent as the effects of climate change intensify. • Maintain the principles of exceptionality, complementarity and subsidiarity in the use of military means in disaster intervention.
Lead institution	Ministry of Defence. Emergency Military Unit
Point of contact	
Key words	Emergency, disaster relief, civil defence

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TÜRKIYE

Country	**Türkiye**
Action Plan area	Mitigation
Name or main objective of the project/activity/policy	**Zero Waste Project**
Description of the project/activity/policy	"Zero Waste" concept, which is defined as a waste management philosophy that includes preventing or minimizing waste generation at source, is integrated into the current waste management activities. The Zero Waste Project is implemented in all TAF units.
Lead institution	Ministry of Environment, Urbanization and Climate Change (MoEUCC)/ Ministry of Defence / General Directorate of Logistic
Point of contact	
Key words	Zero waste, waste management

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Country	**Türkiye**
Action Plan area	Mitigation
Name or main objective of the project/activity/policy	**Low and Zero Green House Gas Emission**
Description of the project/activity/policy	Energy and water saving infrastructural models are taken into account, especially during the planning of the new buildings. Reduction of the energy consumption and green energy options are encouraged. Projects on renewable energy production especially on solar energy, are studied. Electrical and lighting equipment, providing energy savings are preferred. Using of low and zero green house gas emission technologies, primarily renewable energy (solar etc.) and green energy resources are encouraged.
Lead institution	Ministry of Defence (MoD)/ General Directorate of Logistic
Point of contact	
Key words	Zero emission, renewable energy, buildings

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Country	**Türkiye**
Action Plan area	Mitigation
Name or main objective of the project/activity/policy	**Reducing Emissions**
Description of the project/activity/policy	The use of vehicles with electric motors contributes to the fight against climate change by directly reducing CO2 emissions. For this reason, in the activities carried out in Naval Shipyards vehicles with electric motors are preferred in order to target a decrease in exhaust emissions. Exhaust gas filtration systems are used to control exhaust gas emissions resulting from activities carried out in Naval Shipyards. In addition, in accordance with environmental regulations, authorized companies by the Ministry of Environment, Urbanization and Climate Change carry out "exhaust gas emission" measurements every two years, and the compliance of emission values with the limit values defined in the legislation is checked.
Lead institution	Ministry of Defence (MoD)/ General Directorate of Naval Shipyards
Point of contact	
Key words	Electrical vehicles, gas emission

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UNITED KINGDOM

Country	**United Kingdom**
Action Plan area	Mitigation/outreach
Name or main objective of the project/activity/policy	**Sustainable Aviation Fuels (SAF)**
Description of the project/ activity/policy	Intending to increase the use of SAF within the UK by creating a demand amongst users, ensuring commercial and financial incentivisation, upscaling production capacity and facilitating smooth and quick support to clearance of fuel production pathways. A UK SAF mandate will be introduced in 2025 setting minimum levels of SAF blends for inclusion in aviation fuel within the UK. This will build to a minimum of 10% SAF incorporation from sustainable feedstocks by 2030 and increasing beyond. The UK MOD has cleared all of its aircraft platforms to use up to 50% SAF already and work is ongoing to look at clearance of greater levels. The Chief of Air Staff has committed to achieving Net Zero aviation by 2040. In November 2022, the RAF (with Air Tanker, Air Bus, Rolls Royce and Air BP) flew the first flight on 100% SAF for a wide-bodied jet. This has generated additional data which will inform the path to further platform clearances. SAF blended to 48% was also used in air to air refuelling from a Voyager aircraft to Typhoons. RAF VIP flights also use SAF blends for routine operations. Another world record was set by the RAF working in conjunction with a start-up firm (Zero Petroleum) in 2021 to operate a microlight on 100% green Synthetic Fuel that had been produced entirely by renewable energy.
Lead institution	MoD and RAF
Point of contact	Gp Capt Tom Stevenson & Gp Cpt Maurice Dixon Tom.Stevenson212@mod.gov.uk & Maurice.Dixon399@mod.gov.uk
Key words	Sustainable air fuel, sustainable feedstocks, Net Zero aviation

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UNITED STATES

Country	United States
Action Plan area	Mitigation
Name or main objective of the project/activity/policy	**Naval Reactors**
Description of the project/ activity/policy	The Naval Nuclear Propulsion Program provides militarily effective nuclear propulsion plants and ensures their safe, reliable, and long-lived operation. This mission requires the combination of fully trained U.S. Navy men and women with ships that excel in endurance, stealth, speed, and independence from supply chains. Nuclear energy is a zero emissions fuel. Presidential Executive Order 12344 , 42 U.S.C. Sec 7158, Public Law 98-525 and 50 U.S.C. Sec. 2406, Public Law 106-65 set forth the total responsibility of Naval Reactors for all aspects of the Navy's nuclear propulsion, including research, design, construction, testing, operation, maintenance, and ultimate disposition of naval nuclear propulsion plants.
Lead institution	U.S. Department of Energy, National Nuclear Security Administration, Department of the Navy
Point of contact	TBD
Key words	Nuclear Propulsion, Decarbonization, Energy Transition, Military Operations

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Country	**United States**
Action Plan area	Mitigation
Name or main objective of the project/activity/policy	**Multiple projects to advance alternative fuels for military operations on land.**
Description of the project/ activity/policy	U.S. Department of Energy National Laboratories are working with the U.S. Department of Defense to research and develop alternative renewable low-carbon, net-zero carbon, and potentially negative-carbon fuels for use in ground transportation. These technologies include generation of renewable electricity to be utilize in battery operated vehicles, generation of renewable hydrogen as a fuel for combustion or use in fuel cell driven vehicles, generation of sustainable fuels utilizing biomass and renewable hydrogen as feedstocks, or the generation of sustainable liquid fuels by reacting renewable hydrogen with CO2 captured from either the air, sea water, or point sources (Power to Liquid technologies). Besides research on these fuels, the Laboratories are also researching and developing battery technologies, recharging technologies, and hydrogen filling technologies.
Lead institution	U.S. Department of Energy
Point of contact	Randy D. Cortright, Ph.D., Strategic Lead for Electrons to Molecules, Senior Research Advisor Bioenergy Science and Technology, National Renewable Energy Laboratory (NREL), randy.cortright@nrel.gov
Key words	Decarbonization, Energy Transition, Military Operations

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Country	**United States**
Action Plan area	Mitigation
Name or main objective of the project/activity/policy	**Multiple projects to advance alternative fuels for military maritime operations.**
Description of the project/ activity/policy	U.S. Department of Energy National Laboratories are working with the U.S. Department of Defense to research and develop alternative renewable low-carbon, net-zero carbon, and potentially negative-carbon high energy fuels for use in maritime operation. This includes fuels for both ships as well as sustainable aviation fuel for aircraft. These technologies include generation of renewable hydrogen, generation of sustainable fuels utilizing biomass and renewable hydrogen as feedstocks, or the generation of sustainable liquid fuels by reacting renewable hydrogen with CO2 captured from either the air, sea water, or point sources (Power to Liquid technologies). Besides research on these fuels, the Laboratories are also researching the generation of alternative maritime fuels such as ammonia and methanol using renewable hydrogen.
Lead institution	U.S. Department of Energy
Point of contact	Randy D. Cortright, Ph.D., Strategic Lead for Electrons to Molecules, Senior Research Advisor Bioenergy Science and Technology, National Renewable Energy Laboratory (NREL), randy.cortright@nrel.gov
Key words	Decarbonization, Energy Transition, Military Operations

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Country	**United States**
Action Plan area	Mitigation
Name or main objective of the project/activity/policy	**Multiple projects to advance alternative fuels for military operations in the air.**
Description of the project/ activity/policy	U.S. Department of Energy National Laboratories are working with the U.S. Department of Defense to research and develop pathways to generate sustainable aviation fuel. These pathways include the generation of low-carbon high energy fuels utilizing biomass and renewable hydrogen as feedstocks, the generation of net-zero carbon high energy fuels by reacting renewable hydrogen with CO2 captured from either the air, sea water, or point sources (Power to Liquid technologies). These Power to Liquid technologies are also being investigated for generation of 100 % sustainable aviation fuel utilizing skid mounted process units in forward areas. Such deployment would alleviate logistics challenges of delivering large volumes of fuels to forward areas.
Lead institution	U.S. Department of Energy
Point of contact	Randy D. Cortright, Ph.D., Strategic Lead for Electrons to Molecules, Senior Research Advisor Bioenergy Science and Technology, National Renewable Energy Laboratory (NREL), randy.cortright@nrel.gov
Key words	Decarbonization, Energy Transition, Military Operations

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OUTREACH

CANADA

Country	Canada
Action Plan Area	Mitigation / Outreach
Name or main objective of the project/activity/policy	**LEAP - Canadian Low Emission Aircraft Platforms (CAN-LEAP)**
Description of the project/ activity/policy	Techno-economic and environmental feasibility study for the evaluation, advancement, and certification of aircraft hybrid and/or hydrogen/electric propulsion that may be suitable for the Royal Canadian Air Force (RCAF) current / future fleets as well as for Transport Canadas administrative air fleet.
Lead institution	Defence R&D Canada Atlantic Research Center, National Research Council
Point of contact	DRDCPartnerships-PartenariatsRDDC@forces.gc.ca
Key words	Air Force, hydrogen, electric, propulsion

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Country	**Canada**
Action Plan Area	Outreach
Name or main objective of the project/activity/policy	**Climate Change and Security Centre of Excellence (CCASCOE)**
Description of the project/ activity/policy	The CCASCOE will serve as a hub of expertise for decision makers and for relevant military and civilian practitioners to expand knowledge and increase capacity to adapt to the changing climate.
Lead institution	Global Affairs Canada, Department of National Defence
Point of contact	TBD
Key words	Outreach, Climate, Centre of Excellence, Research

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Country	**Canada**
Action Plan Area	Outreach
Name or main objective of the project/activity/policy	**Mobilizing Insights in Defence and Security (MINDS)**
Description of the project/ activity/policy	MINDS provides opportunities for collaboration between the Defence Team and the defence and security expert community through a program that: • responds to the needs for relevant and timely advice from defence and security experts; • fosters the next generation of experts and scholars; and, • contributes to Canadians' understanding of defence and security issues. MINDS offers a variety of unique tools by which the Defence Team can engage with external experts to access high calibre, relevant and timely research and expertise, which incorporates a diversity of viewpoints and provides well-rounded advice.
Lead institution	Department of National Defence, Canada
Point of contact	MINDS@forces.gc.ca
Key words	Outreach, Research

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CZECHIA

Country	**Czechia**
Action Plan Area	Outreach
Name or main objective of the project/activity/policy	**Collaboration with other partners**
Description of the project/activity/policy	Joint programs and projects in the defense sector are addressed through the European Defense Agency. The Ministry of Defense is addressing this issue with the University of Defense in the framework of security research. Currently we plan to cooperate on the national strategy with other partners.
Lead institution	Ministry of Defence
Point of contact	Veronika Jelínková, jelinkovav@army.cz, Marijana Šutová, sutovam@army.cz, Martina Nedvědová nedvedovam@army.cz
Key words	Outreach

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Country	**Czechia**
Action Plan Area	Outreach
Name or main objective of the project/activity/policy	**Highlighting the triple nexus of humanitarian, development and peace cooperation in the context of fragility and climate change, with special attention to disaster risk reduction**
Description of the project/activity/policy	Czechia has been strengthening cooperation of the EU with other international organisations such as the UN, NATO, OSCE and OECD, with a special focus on the EU Climate Ambassadors and / or with diplomats of the EU Green Diplomacy Network. In October 2022, Czechia became one of the founding members of the global initiative Climate for Peace. Disaster Risk Reduction in the context of climate change is in the centre of Czech participation in this initiative. Cooperation with the neighbourhood of the EU in the field of climate security was highlighted during Czech EU Presidency. During the 30th anniversary of the OSCE Economic and Environmental Forum in September 2022 in Prague, Czechia organised a side-event on the topic „Security Implications of Climate Change in the South-Eastern Europe, contributions to the regions´s climate resilience by the OSCE as well as by Czechia“. Czechia also continues to financially support the OSCE Project „Strengthening Responses to the Security Risks from Climate Change in the South-Eastern Europe, Eastern Europe, South Caucasus and Central Asia“ and promotes the project among other donors. Czechia is Member of the UN Group of Friends on Climate and Security and Member of the EU Team Europe on Climate Security. In 2022, the 2-years research project initiated by the Czech MFA on the geopolitics of climate change was finalised. One part of this project dealt also with climate security. Security implications of decarbonisation were also reflected in the project.
Lead institution	Ministry of Foreign Affairs
Point of contact	Bronislava Tomášová, bronislava_tomasova@mzv.cz
Key words	Awareness, UN, OSCE, NATO

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FRANCE

Country	**France**
Action Plan area	Outreach
Name or main objective of the project/activity or policy	**Biennial Regional Seminar on climate change and security in the Caribbean**
Description of the project	Biennial regional symposium on Climate change and security organized by the French Armed Forces in the Carribean. The first one took place in Fort de France on May 25th, 2023. It helped sharing information and foresight on climate change at the regional level, its security impacts and the role of the armed forces. It gathered about ten regional partners, including NATO allies, and helped discussion on international cooperation and the way forward.
Lead institution	France's MoD – Joint staff
Point of contact	Emia-antilles-bri.cmi.fct@intradef.gouv.fr
Key words	Seminar, Caribbean, climate security

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GERMANY

Country	Germany
Action Plan area	Adaptation
Name or main objective of the project/activity/policy	**Weathering Risk** https://weatheringrisk.org/en
Description of the project/ activity/policy	Weathering Risk is a multidisciplinary climate security initiative that brings together state-of-the-art climate impact data and expert conflict analysis. It provides analysis, tools, dialogues and training that promote peace and resilience in a changing climate. The forward-looking analysis builds upon scenarios, modelling and machine-learning methods to facilitate policies and interventions that take into account climate-security risks.
Lead institution	German Federal Foreign Office
Point of Contact	408-3@diplo.de
Keywords	Adaptation, Climate security data, analysis, modelling

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Country	**Germany**
Action Plan area	Outreach
Name or main objective of the project/activity/policy	**Berlin Climate and Security Conference (BCSC)** https://berlin-climate-security-conference.de/en
Description of the project/ activity/policy	Every year in fall, the Berlin Climate and Security Conference convenes high-level political actors, climate security experts and practitioners at the German Federal Foreign Office in Berlin. The conference has become a hub to jointly advance policy agendas and debates, to exchange on experiences and innovative solutions, to connect different communities from the security and climate field, and to initiate joint projects and initiatives. Conference participants examine approaches to risk analysis and early warning systems, and identify opportunities for intersectional cooperation. Training sessions to enhance skills and capacities round off the conference. In addition, the first-ever African edition will take place in Kenya in July 2023. BCSC-Nairobi will bring together practitioners and policy makers, and showcase the diverse projects on climate, peace and security conceptualized and implemented in the African region.
Lead institution	German Federal Foreign Office
Point of Contact	408-1@diplo.de
Keywords	Outreach, Climate & security hub, capacity building, policy

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GREECE

Country	**Greece**
Action Plan area	Outreach
Name or main objective of the project/activity/policy	**Turning 115CW into a "Green Camp"**
Description of the project/ activity/policy	TERNA ENERGY, made a significant donation of €3.5 million to the Hellenic Armed Forces. The donation refers to the conversion of the 115th Combat Wings (115CW) airport in Souda, Crete into a Zero Carbon Footprint installation (Net Zero Carbon Emissions Airport), to the 100% coverage of the airport's needs in electricity, heating and cooling by RES, as well as the "electrification" of the transport services within the airport. It is worth noting that the 115CW in Souda will be one of the first installations worldwide to receive the respective certifications, while the annual benefit of fully discharging the Unit from the cost of electricity supply and heating needs will exceed € 400,000.
Lead Institution	Hellenic Ministry of National Defence (HMoD)
Point of Contact	spaparizos@mod.mil.gr kpapadimitriou@mod.mil.gr
Key Words	Mitigation, Energy efficiency, Renewable sources, Private sector partnership

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NORWAY

Country	Norway
Action Plan Area	Outreach
Name or main objective of the project/activity/policy	**Collaboration with allies**
Description of the project/ activity/policy	Norway has decided to contribute to the NATO Climate Change and Security Centre of Excellence by staffing a leader position at the centre and contribute financially.
Lead institution	Ministry of Defence
Point of contact	Julie-Marie-Borna.Fossem@fd.dep.no
Key words	Centre of Excellence

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POLAND

Country	**Poland**
Action Plan area	Outreach
Name or main objective of the project/activity/policy	**Cooperation with European Defense Agency(EDA), scientific community**
Description of the project/ activity/policy	In terms of cooperation with the EDA new technologies are being presented, UE countries share their best practices regarding data collection and energy demand reduction. Scientific community improves education in the field of climate change and increase the awareness on topics related to environmental protection and energy efficiency.
Lead Institution	Military Inspection of Energy Economy
Point of Contact	Patryk KIERZKOWSKI, pa.kierzkowski@ron.mil.pl
Key words	Education, best practices, lessons learned

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PORTUGAL

Country	**Portugal**
Action Plan Area	Outreach
Name or main objective of the project/ activity/ policy	**Collaboration with NATO, European Defence Agency (EDA), European External Action Service (EEAS), and with allies, partner countries, and Academia.**
Descritpion of the project/ activity/ policy	DGRDN participates in NATO's Environmental Protection Working Group meetings, EDA's Energy and Environment Captech and Consultation Forum for Sustainable Energy in the Defence and Security Sector (CF SEDSS), Defence and Climate Network (lead by EEAS and EDA), PESCO, and the EU Defence Environmental Network (DEFNET). DGRDN is always open to collaborating and sharing best practices with allies and partner countries in environmental and climate matters and has done so on several occasions. For instance, in 2019, DGRDN organized a seminar dedicated to showcasing the best environmental management practices in the Portuguese Armed Forces to the Brazilian Army. With Academia, DGRDN established several collaboration protocols. As an example, researchers from the University of Coimbra were appointed as CapTech non-Governamental experts for EDA's Energy and Environment Captech.
Lead Institution	DGRDN
Point of Contact	ana.correia@defesa.pt
Key Words	Outreach, Awareness

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SLOVAKIA

Country	**Slovakia**
Action Plan area	Outreach
Name or main objective of the project/activity/policy	**Environmental Impact of Ammunition Disposal**
Description of the project/ activity/policy	Project is funded through the SVK MOD's Research and Development Budget and is coordinated by the state enterprise Military Forests and Estates of the Slovak Republic in cooperation with the private engineering company. Aim of the project is to gather information on the disposal of ammunition and the management of the effects of that disposal on the environment. It will also assess the environmental impacts of ammunition in each life cycle phase. Final report and conclusions should be used as inputs for the further development projects in different areas such as manufacturing or disposal. Results should be reflected in the production of ammunition that will be more sustainable and environemtnaly friendly.
Lead institution	Modernization Department of the Ministry of Defence of the Slovak Republic
Point of contact	Eva.BARANOVA@mod.gov.sk
Key words	Private sector partnership, Disposal, Research, Ammunition

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Country	**Slovakia**
Action Plan area	Outreach
Name or main objective of the project/activity/policy	**Environment-friendly Illuminating Pyrotechnic Compositions (Flare Ammunition)**
Description of the project/ activity/policy	Project is funded through the SVK MOD's Research and Development Budget and is led by the private company that deals with the development and production of sub-caliber ammunition for military purposes, pistol and shotgun ammunition for target shooting and hunting purposes. Aim of the project is to develop a type of a flare ammunition that would be in accordance with the REACH Regulation (the main EU law to protect human health and the environment from the risks that can be posed by chemicals). A safe environment-friendly novel pyrotechnic composition should perform in the same manner as currently used flare illuminant compositions which are toxic and environmentally harmful.
Lead institution	Modernization Department of the Ministry of Defence of the Slovak Republic
Point of contact	Eva.BARANOVA@mod.gov.sk
Key words	Private sector partnership, Research, Pyrotechnic Substances, Environmental Pollution

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SLOVENIA

Country	**Slovenia**
Action Plan area	Outreach
Name or main objective of the project/activity/policy	**Active cooperation within NORTH ADRIATIC HYDROGEN VALLEY – in progress**
Description of the project/activity/policy	The North Adriatic Hydrogen Valley initiative seeks to foster a cross-border hydrogen valley, boosting the energy transition, promoting sectoral integration between transport, industry and energy sector in an integrated ecosystem. It will promote collaboration to jointly define and implement a common innovation agenda and cooperation projects to accelerate the deployment of hydrogen-based solutions, strengthening local hydrogen ecosystems and building interregional value chains. The initiative is lead by the Governments of the Republic of Croatia, the Republic of Slovenia and the Autonomous Regione of Friuli Venezia Giulia n Italy with the active participation of the industry and research communities of all three territories.
Lead institution	Ministry of Defense of the Republic of Slovenia, Logistics Directorate
Point of contact	seuzp@mors.si, 00386 (0)1 471 25 46
Key words	Hydrogen valley, hydrogen, mobility

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Country	**Slovenia**
Action Plan area	Outreach
Name or main objective of the project/activity/policy	**Participating at PESCO EOF (Permanent Structured Cooperation Energy Operational Function)**
Description of the project/activity/policy	Based on lessons learnt from recent operations, the project “Energy Operational Function” has a double objective: developing together new systems of energy supply for camps deployed in the framework of joint operations and for soldier connected devices and equipment and ensuring that the energy issue is taken into account from the conceiving of combat systems to the implementation of the support in operations, and including in the framework of operational planning.
Lead institution	Ministry of Defense of the Republic of Slovenia, Logistics Directorate
Point of contact	seuzp@mors.si, 00386 (0)1 471 25 46
Key words	Deployed camps, Energy efficiency, Outreach

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Country	**Slovenia**
Action Plan area	Outreach
Name or main objective of the project/activity/policy	**Slovenian Partnership for Energy and Environment in Defence (SiEnE)**
Description of the project/activity/policy	The Slovenian Energy and Environment Partnership in Defence was established to provide a strategic and comprehensive approach for responding to energy and environmental challenges in defence. Strategic defence and civil stakeholder alliances represent an effective approach towards the integration of Slovenian partners in international defence programs and global defence value chains. Key tasks: (a) Supporting Ministry of Defence (SI MOD) and Slovenian Armed Forces in joining international defence programs and projects; (b) Active inclusion of Slovenian experts in international working and project groups; (c) Coordinated support for developing international research &development, technology, and demonstration projects; (d) Identification of key strategic and operative programs, in accordance with the needs of Slovenian stakeholders; (e) Promoting presentation of Slovenian partners' research & development and manufacturing capabilities. SiEnE - Domov (teces.si)
Lead institution	Ministry of Defense of the Republic of Slovenia, Logistics Directorate
Point of contact	seuzp@mors.si, 00386 (0)1 471 25 46
Key words	Partnership with industry and academia; Outreach

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Country	**Slovenia**
Action Plan area	Outreach
Name or main objective of the project/activity/policy	**CF SEDSS**
Description of the project/activity/policy	Slovenian Ministry of Defence is part of the CF SEDSS (Consultation Forum for Sustainable Energy in the Defence and Security Sector – resulting from the European Commission initiative). The idea of active participation is to exchange ideas and good practices (Improving energy efficiency, utilising renewable energy sources, increasing the resilience of defence related critical infrastructure). That means coordinated approach towards the cleaner, safer and more sustainable defence and security.
Lead institution	Ministry of Defence of the Republic of Slovenia
Point of contact	seuzp@mors.si, 00386 (0)1 471 25 46
Key words	Resilience, Footprint, Sustainable energy, Security

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Country	**Slovenia**
Action Plan area	Outreach
Name or main objective of the project/activity/policy	**Cooperation within EDA CapTech EnE (Capability Technology - Energy and Environment)**
Description of the project/activity/policy	The EnE CapTech addresses energy, environmental and climate change related challenges and vulnerabilities by identifying technological gaps and proposing collaborative projects. In addition, it promotes the environmental perspective and provide capability-aware and strategically-informed advice on energy and environmental factors affecting the Armed Forces, delivering tangible benefits in accordance with pMS guidance and the Climate Change and Defence Roadmap.
Lead institution	Ministry of Defense of the Republic of Slovenia, Logistics Directorate
Point of contact	seuzp@mors.si, 00386 (0)1 471 25 46
Key words	International cooperation, Energy Efficiency, Circular economy, Sustainable energy

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Country	**Slovenia**
Action Plan area	Outreach
Name or main objective of the project/activity/policy	**Active participation at IF CEED (Incubation Forum for Circular Economy in European Defence)**
Description of the project/activity/policy	The general objective of IF CEED is to extend the Circular Economy concept and policies, already present in the civil sector, also to the defence domain.
Lead institution	Ministry of Defense of the Republic of Slovenia, Logistics Directorate
Point of contact	seuzp@mors.si, 00386 (0)1 471 25 46
Key words	Circular economy

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SPAIN

Country	Spain
Action plan area	Outreach – Collaboration
Name or main objective of the project/activity/policy	**Whole of Government and multilateral approach**
Description of the project/ activity/policy	• Seek cooperation and coordination where appropriate with other countries, organizations or institutions, in particular the EU and NATO. • Seek the support of other ministerial departments that could contribute with scientific and technical knowledge and experience, in particular the Ministry for the Ecological Transition and the Demographic Challenge. • Collect and communicate the data considered necessary to carry out an adequate follow-up of the actions, in coordination with the rest of the ministries, the EU and NATO, always taking into account the necessary security and confidentiality in the communication of data. • Establish indicators that allow monitoring of compliance with actions and objectives.
Lead institution	Ministry of Defence
Point of contact	
Key words	Collaboration, cooperation, whole-of-government approach, multilateralism

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Country	**Spain**
Action Plan area	Outreach
Name or main objective of the project/activity/policy	**Strategic Communications - Communication of all Spanish actions**
Description of the project/ activity/policy	External and internal communication is a fundamental element of all State action at the present time, and must be addressed through two efforts: • Develop a strategic communication plan. • Develop an internal communication plan in order to make members of the Ministry of Defence aware of the importance and effects on the Armed Forces of climate change.
Lead institution	Ministry of Defence
Point of contact	
Key words	Narrative, STRATCOM

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UNITED STATES

Country	**United States**
Action Plan area	Awareness/Mitigation/Adaptation
Name or main objective of the project/activity/policy	**U.S. Defense Production Act to expand and expedite supply of materials and services from the domestic industrial base to meet national defense requirements.**
Description of the project/ activity/policy	DPA authorities may be used to: • Require acceptance and preferential performance of contracts and orders. • Engage in foreign investment review process to identify and address those investments that may present risks to U.S. national security (known as the Committee on Foreign Investment in the United States (CFIUS)). This includes a transaction's effect on resilience and security of critical U.S. supply chains, both within and outside of the defense industrial base.
Lead institution	U.S. Government Interagency
Point of contact	DPAS@bis.doc.gov; CFIUS@bis.doc.gov
Key words	Procurement, Resilience, Security of supply

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Country	**United States**
Action Plan area	Adaptation/Awareness
Name or main objective of the project/activity/policy	**Conduct a comprehensive risk assessment of Coast Guard infrastructure and prioritize improvements to fortify high-risk facilities.**
Description of the project/ activity/policy	Coast Guard facilities are increasingly vulnerable to extreme floods, fires, wind, and other climate-related risks. The Service recognizes that further analysis is needed; a comprehensive assessment will provide critical information to help prioritize Service-wide infrastructure improvements based on mission risk and criticality and assist with designing more resilient facilities.
Lead institution	U.S. Coast Guard, U.S. Department of Homeland Security
Point of contact	USCG Office of Emerging Policy, CG-DCO-X, strategy@uscg.mil
Key words	Critical Infrastructure, Military Facilities, Buildings, Adaptation

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Country	**United States**
Action Plan area	Mitigation
Name or main objective of the project/activity/policy	**Adopt enterprise-wide technologies and capabilities to enable onsite energy generation and enhance energy efficiency.**
Description of the project/ activity/policy	The Coast Guard's first responder role, as well as our commitment to stewardship, drives us to need resilient facilities and systems to ensure mission continuity. As the largest landowner within DHS, the Coast Guard leads the Department in energy performance contracts, energy reduction projects, and onsite renewable energy systems at installations nationwide. The Coast Guard will continue investments in renewable energy and energy storage systems at our facilities. We will also pursue vehicle fleet electrification and build out infrastructure for vehicle charging. The Service's current goal is to achieve 50 percent electrification within ten years.
Lead institution	U.S. Coast Guard, U.S. Department of Homeland Security
Point of contact	USCG Office of Emerging Policy, CG-DCO-X, strategy@uscg.mil
Key words	Electricity, Energy, Fleet vehicles, Mitigation

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Country	**United States**
Action Plan area	Mitigation/Outreach
Name or main objective of the project/activity/policy	**Facilitate and enable industry innovation in response to the quickening pace of change.**
Description of the project/ activity/policy	Reduced carbon fuels, offshore wind, port infrastructure modernization, and emerging technologies are all poised to change the Marine Transportation System (MTS). These innovations will revolutionize how the system, and the maritime industry, operates--presenting the Service with new regulatory, legal, and operational challenges. The Coast Guard will enable the transition of the maritime industry by identifying and addressing regulatory obstacles and ensuring the safety of new technologies and practices.
Lead institution	U.S. Coast Guard, U.S. Department of Homeland Security
Point of contact	USCG Office of Emerging Policy, CG-DCO-X, strategy@uscg.mil
Key words	Energy, Electricity, Mitigation, Outreach

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Country	**United States**
Action Plan area	Outreach
Name or main objective of the project/activity/policy	**Foster and leverage partnerships across government, public, and private stakeholders to build resilience in the maritime sector.**
Description of the project/ activity/policy	Strong partnerships at all levels of government enable the Coast Guard to best address climate-induced risks and support sustained resilience in coastal and riverine communities that serve as vital economic engines of the Marine Transportation System (MTS). The Coast Guard will integrate federal cooperation into local, tribal, territorial, and state governments and private sector partnerships through contingency planning, exercises, and regional coordinating mechanisms to facilitate a safe and resilient MTS.
Lead institution	U.S. Coast Guard, U.S. Department of Homeland Security
Point of contact	USCG Office of Emerging Policy, CG-DCO-X, strategy@uscg.mil
Key words	Private sector partnerships, resilience, Outreach

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Country	**United States**
Action Plan area	Outreach
Name or main objective of the project/activity/policy	**International Energy Agency**
Description of the project/ activity/policy	Through its membership in the International Energy Agency (IEA), the United States works with 30 other advanced economies to ensure energy security across multiple vectors (oil, gas, electricity, and increasingly, critical minerals), collectively respond to oil supply disruptions, and accelerate the clean energy transition to net-zero-emission economies. IEA members work with and through a Paris-based Secretariat (more than 300 strong) to share energy data, track markets, conduct modeling and analysis, develop policy recommendations, and pursue constructive engagement with and policy support for non-members, especially countries in accession to the IEA's underlying treaty or in a non-member Association status. All IEA members are also members of the Organization for Economic Cooperation and Development (OECD), reflecting the importance of shared values on energy security, market-based economies, and, increasingly, pursuit of net zero objectives.
Lead institution	U.S. Department of Energy and U.S. Department of State
Point of contact	Russel Conklin, DOE IEA Desk Officer, russell.conklin@hq.doe.gov
Key words	Energy Transition, Energy Security

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