

Linking climate and security? The integration of climate-related issues into a military's alliance mandate.

Introductory remarks

International organizations (IOs) are facing growing challenges and increasingly complex public policy issues, climate change being a prime example. However, the reaction of one type of IO has been partly neglected by the literature: military alliances, of which NATO is the most enduring to date. Our project thus aims to study how security multilateralism, within the specific framework of a Euro-Atlantic alliance, adapts and reconfigures itself to incorporate non-traditional security issues such as climate change; why and how this issue is being integrated into NATO's original mandate.

Thus, while climate change may at first appear to be a secondary risk compared with direct and traditional threats to Euro-Atlantic security, such as the Russian invasion of Ukraine, NATO is nevertheless gradually incorporating climate change into its considerations and identifying it as a strategic priority. Indeed, climate change appears as a delicate and unprecedented situation for the Alliance. Coining the term "crisis" is therefore justified in NATO's case, since climate change is an external crisis that is pressing upon the political-military organization, calling into question both the traditional concept of "threat" (Wallander et Keohane 1999), and the functioning of the Alliance (weakening its operational capabilities in the short and long term), and expanding its field of intervention in the context of post-natural disaster management.

Our research revolves around the following questions: What are the effects of climate change on the mandate and practices of a military alliance? How does a military alliance react to, and institutionalize climate change? What is the role of a military alliance in the climate change era?

We plan to build our research around three axes of analysis:

- 1) The institutionalization of climate-related issues into NATO's mandate: a conceptual perspective. In this first axis, we want to investigate how the relationship between climate change, security, and risk has been perceived, built up and developed over time from NATO's point of view. This axis will also comprise the different contests over conceptual framing between actors over climate change.
- 2) The institutionalization of climate-related issues into NATO's: an organizational perspective. The second axis will focus, in line with the latter, on the organizational developments which are part of the institutionalization process.
- 3) The institutionalization of climate-related issues into NATO's mandate: a functional perspective. In this matter, we want to investigate whether climate change is part of the renewal of NATO's *tasks* (as with Covid-19), or constitutes a new *role* (Baciu 2021)?

Theoretical framework

The reasoning behind this work is abductive, as we choose to go back and forth between empirical observations and theories to expand the understanding of both theory and empirical phenomenon.

Based on initial empirical observations drawn from the official documentation collected online, it would appear justified, in the first place, to follow the path of historical institutionalism (HI) applied to international relations (Fioretos 2011) since NATO's climatization is governed by pre-existing policies, bodies and concepts (environmental security; energy security). In fact, we believe that NATO entered a path-dependence phase from 1980 to 2010, when it comes to integrating climate-related issues into its mandate. However, the climate crisis seems to have opened the door to a more accelerated pace of change since 2010, marked by the publication of Strategic Concept mentioning climate change for the first time (NATO 2010).

At the same time, we feel that we need to adapt and reshape the classic HI concept of "critical juncture" in order to study the impact of climate change on an international organization and its subsequent answers and reactions. Indeed, although climate change marks a rupture, it seems not justified nor theoretically coherent to fit our work within the classic vision of HI, which maintains that the critical juncture introduces a sudden possibility of change for an institution. On this point, our work aligns with more recent versions of HI (Hanrieder 2015; Johnston 2017; Rixen et Viola 2016), which suggests a more gradual and progressive view of change, with endogenous sources of change within organizations, and not only exogenous sources of changes. Our aim is to follow the lead of recent versions of HI, and to carry on adapting the concept of critical juncture, to offer a conceptual variant that reflects the specific characteristics and challenges of the climate crisis. Unlike other critical junctures of an economic or more political nature, the climate juncture has no clear-cut ending, no definite closure, and implies spatial and temporary indeterminacy. The state of crisis is therefore both latent and omnipresent, with sometimes heightened awareness of the extent of the crisis for the organization in question.

In parallel, we assume, and take the theoretical and methodological stance, that studying the integration of climate issues into NATO's mandate requires combining an institutionalist approach with a sociological perspective, in order to reveal the social and political mechanisms at work underlying change processes in international organizations, since "change can only be talked about by situating it at the intersection between environmental constraints, institutions, and actors" (Bernoux 2004). The various "classical" theories of international relations do not comprehensively study or answer to the problematic of change in international and regional organizations, hence the need for a cross-disciplinary approach. Considering that "change in an organization, whether it comes from movements in society or from external constraints, whether it is driven by the hierarchy or the directorate, is a learning process of new practices and new rules" (Bernoux 2004: 10), it will be necessary for us to carry out an archaeology of social and political practices within NATO, to understand by whom and how change is initiated, as well as its pace, whether change processes are incremental (Mahoney et Thelen 2009), or disruptive.

In the sociology of organizations, and in the research field named "organizational institutionalism", the figure of the institutional entrepreneur is a cornerstone of the edifice of change (Greenwood et al. 2017). In the case of NATO, Secretary-General Jens Stoltenberg has certainly played, and continues to play, an important role in climatizing the organization, via a top-down model of governance. However, to grasp the full depth and nuances of organizational change, it is necessary to "place the reformers in the chains of past and present interdependence that inform their

activities” (Greenwood et al. 2017). The fact that climate issues have been placed on the agenda under Jens Stoltenberg's mandates should be considered in the broader context of attention to the effects of climate change since the 1980s, as part of an organization's institutional memory. This has been reflected, for example, in outputs from NATO's scientific programmes, such as the Science for Peace and Security Programme (SPS), which has been supporting projects focusing on environmental security and energy infrastructure, including climate issues, since the late 1970s.

The climatization of the various national and international defense sectors is achieved through the construction of a scientific expertise on the subject, produced by epistemic or learning communities (Estève 2021). However, given that NATO is a multi-actor security community, it is worth asking how the climatization process operates in the other civilian, military and political communities, since international and regional organizations are, above all, “the place and product of complex interactions between different types of actors, state, non-state, administrative, political, etc., who follow different logics of action and evolve in different universes of constraints” (Louis et Maertens 2014). Thus, at the intra-organizational level, different actors may well use different organizational strategies, responding to different degrees of openness to change. An approach rooted in the sociology of international organizations thus makes it possible to highlight the variety of actors involved in a deliberate process of transformation, or, on the contrary, resistance. In our case, examining the activities of the actors who make up NATO (their behavior) and identifying how and with whom they interact (the nature and content of their relations) will provide an opportunity to assess whether there are different rates of climatization at the intra-organizational level, between purely civilian and military bodies.

Initial general hypothesis

Drawing on the conceptual distinction made by Shemella (2006), we argue that, beyond a simple one-off mission such as Covid-19, climate change represents a macro-role that NATO is developing. We hypothesize that climate issues are gradually being integrated into NATO's mandate in two different ways: as part of other NATO's macro-roles (crisis management and cooperative security), or as part of new micro-roles that reflect the development of a distinct strategic thinking linked to “climate”: raising awareness, adaptation, mitigation, expertise, and disaster diplomacy.

Methodology

To complete this research, our empirical corpus is composed of four main sources of data: existing official documentation (NATO, NATO member countries, NATO partner countries and organizations), and unofficial documentations (press, think tanks, etc). Then, several series of semi-structured interviews will be conducted in Brussels from September to December 2024, with members of NATO's civilian pillar (such as the NATO Council, the NATO Parliamentary Assembly, the Euro-Atlantic Disaster Response Coordination Centre, the NATO Science for Peace and Security Programme, the NATO International Staff), members from the military pillar (the International Military Staff, Allied Command Operations...), as well as members from other NATO bodies and agencies (NATO Science and Technology Organization), and members from

national permanent representations. Interviews will also be conducted in Montreal within the framework of the NATO Climate Change and Security Center of Excellence; in Sofia within the framework of the NATO Crisis Management and Disaster Response Center of Excellence; and in Vilnius within the framework of the Energy Security Center of Excellence). Then, a third source of data comes from direct observations made during workshops and conferences co-organized by some NATO programmes and units. We have so far conducted two direct observations. The first was in Paris on February 9th 2024 during the SPS Concept Meeting on the “Indo-Pacific’s Regional Security Architecture. European and Asian Perspectives”, co-organized by the Centre for Security Diplomacy and Strategy (CSDS), CERI-Sciences Po, the Australian Strategic Policy Institute (ASPI), the National Institute for Defense Studies (NIDS), and the NATO Science for Peace and Security Programme (SPS). A second direct observation experience was conducted in Montreal on April 8-9th 2024, during the “Climate Security and its Challenges” conference organized by the FrancoPaix Centre, the Canadian Climate Security Association, and the NATO Science and Technology Organization among several partners. Finally, we hope to carry out a participant observation at the NATO Centre of Excellence on Security and Climate Change in Montreal.

As part of a process-tracing approach to understanding the ways in which a climate policy emerges and is constructed within NATO, we will carry out a multidimensional analysis of our empirical corpus:

- *Organizational analysis*: it is the process of reviewing the development, work environment, personnel, and operations of an organization, and how they can influence outputs.
- *Qualitative content analysis*: it allows to identify trends within one or more content elements. It will enable us to identify the frequency with which an idea is formulated, and the underlying models of interpretation;
- *Narrative analysis*: it encompasses analytical methods for interpreting texts or visual data that have a narrative form;
- *Discourse analysis*: it consists of analyzing language in a given social context. Using discourse analysis, we can identify how culture, history or power dynamics affect the way certain concepts are approached and constructed;
- *Thematic analysis*: it examines patterns of meaning in a large set of data (e.g. interviews), and groups them according to similarities in different thematic categories (Nowell et al. 2017).

After presenting the general theoretical and methodological framework of our work, we have chosen to focus the rest of the paper on an introduction to our first and second line of analysis: The institutionalization of climate-related issues into NATO’s mandate: a conceptual and organizational perspectives.

A conceptual perspective on institutionalization of climate issues into NATO’s mandate

Examining the integration of climate issues into NATO’s mandate is tantamount to studying the process of institutionalizing this topic into the organization. While there are many definitions of institutionalization, we have opted to base our analysis on Boin et al.'s (2013: 11) proposition: “Institutionalization refers to the process by which a norm, a law, a practice, or an organizational structure takes on institutional characteristics. It is the process through which processes and

structures emerge, become embedded in supranational rules, procedures, and patterns of interaction, and gain legitimacy”. Although this definition was initially conceived for the European Union and crisis management, its scope is sufficiently general to be applicable to NATO’s case. Historically, there are two environmental-related domains that NATO has taken on board: environmental security and energy security. From the outset, the organization’s work on the “environment” (taken in the general sense) focused on the environmental problems of various nations, such as environmental pollution (for example drinking water safety), helping to forge the concept of environmental security. Scientific research was notably organized by the NATO Committee on the Challenges of Modern Society (CCMS), which was a scientific research committee created in 1969 by the North Atlantic Council to study environmental problems of various kinds, and people’s quality of life; and the Science Committee. When it came to study the effects of climate change on security, those considerations have been grafted onto the environmental policy areas that were initially pre-established.

The first steps in the process of integrating climate change into NATO were taken through scientific channels. Indeed, at its meeting in the Hague on 18th May 1989, the NATO Science Committee decided to create a new Special Programme on the Science of Global Climate Change. The general objective of this Programme was “to promote interdisciplinary research dealing with potential global changes within the Earth’s environment system. Its primary goal is to advance our capability predict changes in the global environment [...]. The new programme is also expected to have an important catalytic effect on the numerous ongoing efforts in the field of global climate change, contributing thus to the development of truly integrated international effort in co-operation with already existing programmes” (NATO 1989). As a result, the organization became path-dependent in integrating climate issues through an environmental security focus, and therefore in NATO units with a primarily scientific focus.

It was not until 2010 that the issue of integrating climate issues into NATO took on a more political and strategic dimension. Indeed, a turning point occurred in the 2010 decade, when the security consequences of climate change were first acknowledged in a NATO Strategic Concept: “Key environmental and resource constraints, including health risks, climate change, water scarcity and increasing energy needs will further shape the future security environment in areas of concern to NATO and have the potential to significantly affect NATO planning and operations” (NATO 2010: 13). This statement was reiterated during the Chicago Summit in May 2012, where the nations declared that they “will work towards significantly improving the energy efficiency of our military forces” (NATO 2012). Other political decisions have also been adopted, but they fit into the crossroads of energy and environmental security, such as the Green Defense Framework adopted by the North Atlantic Council in February 2014, which states that “Green Defense could, at this stage, be defined as a multifaceted endeavor cutting across a wide range of activities, including operational effectiveness, environmental protection and energy efficiency” (NATO 2014: 1). In support of the Green Defense Initiative, the NATO Senior Joint Engineer Conference developed a Policy on Power Generation for Deployable Force Infrastructure. This policy responds to the “need to consider operational, environmental and strategic issues in enhancing the capability to improve energy efficiency of military forces” (NATO 2014b: 1). Climate change is thus indirectly

tackled in NATO's thinking about Green Defense, whose main focus and strategic priority is energy security.

Another turning point in NATO's approach to climate change comes in the 2020s, which suggests that the organization is moving away from its conceptual path-dependency. Indeed, more recently, the climate field within NATO has become "autonomous", gradually being separated from the considerations linked to the two areas of environmental security and energy security mentioned above. This observation is based on a series of documents adopted from 2020 onwards, all highlighting climate change as a key issue for the future. This conceptual move was initiated by the NATO Secretary-General Jens Stoltenberg in an Op-ed Article published by the German newspaper *Die Welt*, entitled "NATO must combat climate change" (NATO 2020). Since then, the NATO Foreign Ministers endorsed the NATO's Climate Change and Security Agenda in March 2021, which was followed by the adoption of the "Climate Change and Security Action Plan" at the NATO Summit in Brussels on 14 June 2021, with the aim of making NATO the leading international organization 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 clear adaptation and mitigation measures, and enhanced outreach, while ensuring a credible deterrence and defense posture. Finally, in 2023, NATO released three major reports on the margins of the Vilnius Summit, including the Alliance's second edition of the "Climate Change and Security Impact Assessment" (NATO 2023c), which demonstrates how extreme weather conditions create operational stress and shorten the life cycles of military equipment; the "Compendium of Best Practices" (NATO 2023a) which provides examples of Allied efforts to adapt to climate change; and the "Greenhouse Gas Emissions Mapping and Analytical Methodology" (NATO 2023b) which provides guidelines and tools to calculate emissions from the facilities of NATO as an organization.

Climate security is thus becoming an autonomous field from the two domains of environmental security and energy security, which initially provided the conceptual frameworks for the integration of climate-related concerns within NATO.

An institutionalist analysis framework: from greening to climatization

Since institutionalization is a process, it should be seen more as a continuum, with different stages milestone the formal and formalized integration of certain standards and norms into an institution and its organizational units. To gauge the level of institutionalization within a policy sector (climate change, in our case), we must formulate indicators of institutionalization. We look for these indicators on several dimensions:

- 1) Principal tasks and role: the core function assigned to the organizational unit under study;
- 2) Production of concepts, doctrines, guidelines: the conceptual work of the organizational unit;
- 3) Issues tackled: specific climate issues such as mitigation, adaptation; or broader topics that are not exclusively climate-related;
- 4) Knowledge production: on climate change, or not specifically.

- 5) Human resources: the composition of the unit’s human resources (with the inclusion of profiles specializing in climate change, or not);
- 6) Organizational resources and configurations: the organizational structure of the unit, with offices and sub-units dedicated to climate change, or not. This indicator can also include the existence of specific equipment and technologies;
- 7) Practices and activities: presence and development of activities that place climate change at their heart, or not;
- 8) Network configurations within the climate sector: “Some interaction patterns are loosely knit within a sector, representing the occasion gathering of national officials to share information and ideas. Other interaction patterners are more tightly knit. Closely linked officials rely on those networks not just for information sharing, but also for policy formulation. [...] As networks move from loose associations to tight communities, the network takes on institutional characteristics” (Boin et al. 2013: 16). Setting up partnerships and formal collaborations (with other NATO units or external partners) on climate change is also part of the indicator;
- 9) Regulatory outputs: NATO formulates rules in various ways. If NATO regularly produces collective rules and guidelines, a large part of them is non-binding. To Boin et al., (2013) the adoption of formal rules does suggest a higher level of institutionalization¹.

To understand the process and determine the degree of institutionalization of climate issues at NATO, we need to study the different components and units of the NATO organizational ecosystem. Indeed, in contrast to a monadic and monolithic vision of international organizations, we believe that IOs should be seen as complex and multiplex organizational worlds, where the institutionalization process is not homogeneous throughout the organization, but differentiated across units, offices and sociological profiles and communities.

For the purposes of this paper, we distinguish between three degrees and levels of institutionalization: the low institutionalization; the semi-institutionalization; and the full institutionalization².

Low institutionalization
Greening in surface

Semi-institutionalization
Between greening and environmentalization

Full institutionalization
Climatization

Climate change will be considered more as institutionalized into a unit if it produces documentation and activities specifically tackling climate change’s domain; whether the unit has departments and human resources dedicated to the study of climate change; the extent to which the unit’s activities produce collective rules and guidelines: whether they help to regulate and infuse the whole NATO organization with collectively shared standards (outward-oriented). Generally speaking, in our

¹ We would very much appreciate comments and advice on how I can improve and complete my indicators of institutionalization.

² We are well aware of the lack of systematization of this gradual approach to institutionalization, and are very much looking to improve this point.

sense, a unit cannot be considered as climatized if it has not made climate change a priority on its agenda, and has not established dedicated organizational and human resources.

The difference between the low and semi-institutionalization can be determined, for example, by the fact that an organizational unit has several sub-offices dealing, directly and indirectly, with climate change issues, and regularly produces documentation and activities on those subjects (see the International Staff's case below). An organizational unit that shows low institutionalization towards climate change has departments that deal only indirectly with climate change, and produces a relatively small amount of documentation (see the North Atlantic Council's case below).

In parallel, to better specify the appropriation of climate issues by the organization and to specify its forms, we surimpose a “green” triptych on institutionalization. Following the conceptual distinction made by Maertens et Louis (2016), we distinguish between the “greening” of international organizations, which refers to the superficial, sectoral or incomplete consideration of environmental and climate issues; and the “environmentalization” process, which refers to “a more deeper movement to redefine the organization’s mandate as a genuine environmental issue” (Maertens et Louis 2016: 7). Furthermore, we add another dimension, that of “climatization”, which “points to a powerful yet uneven social process in which climate change is increasingly becoming the frame of reference for the mediation and hierarchization of other global issues” (Aykut et Maertens 2021: 502). The last distinction allows to specify how an organization has included a field of specialization around climate change in its mandate and activities. To express the difference in degree and gradient when organizations “go green”, Jayaram (2021: 621) sequences the climatization process in four broad types to study the “greening” of the armed forces, “based on the motivations of the actor and nature cum intensity of the process” : (1) symbolic climatization (which includes soft climatization and/or greenwashing); (2) strategic climatization (which comprises climate bandwagoning for acquiring funds); (3) precautionary climatization (which includes climate mainstreaming for preparation); and (4) transformative climatization (which comprises deep climatization in the form of engagement with mitigation and adaptation-related actions). This distinction may be of interest to our work.

Institutionalization at the margins vs. Low and semi-institutionalization in the main political branches

Based on various virtual observations and document collections, we have so far noticed a differentiated integration of climate-related issues into the Alliance’s various organizational pillars. In the following sub-sections, we present the institutionalization process of two units of NATO’s civilian pillar, and two units of NATO’s other organizations and agencies’ pillar, to compare the extent to which they institutionalize climate-related issues.

Our initial observations suggest that the “full” institutionalization of climate issues is mainly unfolding “on the margins” of NATO. By using the term “margins”, we refer to organizational units that do not constitute the principal political and military decision-making bodies within NATO, i.e. the epicenter of power and agreement-making.

1. *Case studies in NATO's civilian pillar*

The North Atlantic Council (NAC) and its committees: an example of low institutionalization of climate-related issues

- 1) Principal tasks and role: it is the principal political decision-making body within NATO. It oversees the political and military process relating to security issues affecting the whole Alliance. It is the ultimate authority at the head of a network of committees. The NAC has effective political authority and powers of decision. It is the only body that was established by the North Atlantic Treaty, under Article 9. It issues declarations and communiqués explaining the Alliance's policies and decisions. These documents are usually published after ministerial or summit meetings.
- 2) Production of concepts and communiqués: interestingly, **while it is one of the top decision-making bodies embodying the highest authority of NATO, an important wheel in the chain of institutionalization, few decisions are specifically made on climate change.**

Among them:

- The NATO's Climate Change and Security Agenda, adopted in March 2021 by NATO Foreign Ministers (NATO 2024a);
 - The NATO Climate Change and Security Action Plan, adopted on June 14, 2021, at the NATO Brussels Summit by the Allied Heads of State and Government, with the aim of making the Alliance the leading international organization when it comes to understanding and adapting to the impact of climate change on security (NATO 2021b);
 - The NATO's 2022 Strategic Concept highlights climate change as a defining challenge of our time, with a profound impact on Allied security (NATO 2022a).
- 3) Issues tackled: broad topics related to security in general;
 - 4) Knowledge production: not concerned;
 - 5) Human resources: no visibility at the moment³;
 - 6) Organizational resources and configurations: there are several committees that report directly to the Council. Some of these are themselves supported by working groups. There are actually 21 committees which report to the NAC. Among them, there is none that is exclusively focused on climate or global environmental changes.
 - However, the **Resilience Committee** indirectly tackles subjects related to climate change. The Resilience Committee (RC) is the senior NATO advisory body for resilience and civil preparedness: "Each NATO member country needs to be resilient against military and non-military threats and challenges to the Alliance's security, such as natural disasters, disruption of critical infrastructure, or hybrid or armed attacks" (NATO

³ We will try to find out more about the composition and profiles of the people during the interview period in Brussels.

2022b). The work of the RC is supported by six specialized Planning Groups composed of subject matters experts nominated by Allies. Among them, two are indirectly dealing with climate-related issues: the **Energy Planning Group** (EPG) is responsible for the oversight of resilience energy supplies, grid resilience, undersea energy infrastructure, clean energy supply chains, and recruiting civil expertise. Then, the **Food and Agriculture Planning Group** (FAPG) addresses resilience matters in the food and water sector (NATO 2022b).

- 7) Practices and activities: The Resilience Committee sets the priorities for resilience activities within the Alliance⁴. It is responsible for maintaining a planning and review cycle for resilience at NATO, including the establishment, assessment, review, and monitoring of resilience objectives to guide nationally-developed resilience goals and related implementation plans.
- 8) Network configurations within the climate sector: no visibility;
- 9) Regulatory outputs: the decisions adopted by the Council are more broad guidelines and policy orientations than binding resolutions falling upon the nations. In the 2021 Brussels Summit Communiqué, the leaders agree to: “Aim for NATO to become the leading international organization in understanding and adapting to the impact of climate change on security; Significantly reduce greenhouse gas (GHG) emissions from military activities and installations, formulate a target for reducing GHG emissions by NATO political and military structures and facilities, and assess the feasibility of reaching net zero emissions by 2050; Initiate a regular high-level dialogue on climate and security to exchange views and coordinate further action; and Incorporate climate change considerations into NATO's full spectrum of work, including defense planning, capability development, and civil preparedness and exercises.” (NATO 2021a).

The NATO International Staff (IS): an example of semi-institutionalization of climate-related issues

- 1) Principal tasks and role: the primary role of the IS is to provide advice, guidance, and administrative support to the national delegations at NATO headquarters. It helps implementing decisions taken at the different committee levels.
- 2) Production of concepts and guidelines: the International Staff is also tasked to formalize and operationalize the decisions taken by the North Atlantic Council. An example is the collection and publication of the “Compendium of Best Practices” by the Emerging Security Challenges Division, as part of the NATO Climate and Security Action Plan (NATO 2023a).

⁴ Documents detailing the activities of the North Atlantic Council and its committees are declassified only to a very limited extent.

- 3) Issues tackled: broad topics related to security in general;
- 4) Knowledge production: the SPS Programme (see below) funds and supervises scientific projects aimed at understanding climate change effects;
- 5) Human resources: Head of the Climate and Energy Security section (Samu Paukkunen) and one “Climate Security Officer” in the IHC Division (Katarina Kertysova, policy fellow) (pers. observations).
- 6) Organizational resources and configurations: the IS built around 8 divisions. Among them, there is none that is exclusively focused on climate or global environmental changes. However, two divisions deal with climate issues, directly and indirectly. The first is the **Innovation, Hybrid and Cyber (IHC) Division**⁵, which deals with a growing range of non-traditional risks and challenges. For instance, it focuses on terrorism, hybrid threats, cyber defense, artificial intelligence, and climate and energy security. Then, the **Operations Division** provides the operational capability required to meet NATO’s deterrence, defence and crisis management tasks. Responsibilities include NATO’s crisis management and peacekeeping activities, civil preparedness and exercises (NATO 2024c).
- 7) Practices and activities:
 - science activity and diplomacy**: the IHC Division runs the NATO’s **Science for Peace and Security Programme (SPS)**. It promotes dialogue and practical cooperation between NATO member states and partner countries based on scientific research, technological innovation, and knowledge exchange. Among the SPS key priorities, “Environment, Climate Change and Security” is first listed. In this matter, the SPS has four objectives:
 - “a) Understanding, mitigating, and adapting to the impact of climate change on security, including military operations and missions;
 - b) Increased awareness on security issues arising from key environmental and climate change challenges, including health risks, scarcity of resources, increasing energy needs, and space weather events;
 - c) Approaches to reduce the environmental impact of military activities;
 - d) Disaster forecast and prevention of climate-related natural catastrophes.” (NATO 2024d).
 - disaster management and diplomacy**: the Operations Division (as part of the International Staff) manages the Euro-Atlantic Disaster Response and Coordination Centre (EADRCC), which is NATO’s principal civil emergency response mechanism in the Euro-Atlantic Area (NATO 2024b). Although climate change is not directly and explicitly mentioned on the EADRCC’s agenda, this unit does, however, have indirect contact with climate policies, since it manages natural disasters exacerbated by climate change.

⁵ The former name of this division was “Emerging security challenges”.

- 8) Network configurations within the climate sector: if the International Staff, taken as a whole, is not fully involved in the climate networks, one of its scientific sub-units, the SPS has close links with the climate sector, as it finances and supervises climate-related projects. One example is the NATO SPS project MilClimATech “Mitigation of Climate Change through Advanced Phytotechnology for Military Lands”, conducted by Lviv Polytechnic National University (Ukraine), the University of Applied Science Zittau/Görlitz (Germany), the National University of Life and the Environmental Sciences (Ukraine), among other partners (Kaznu 2023).
- 9) Regulatory outputs: the NATO International Staff (and the IHC Division) has the potential to disseminate climate-related norms and standards throughout the organization and its members states, being responsible for the preparation and follow-up of action of the North Atlantic Council. A prime example is the publication by the Emerging Security Challenges Division of the “NATO Greenhouse Gases Emission Mapping and Analytical Methodology” in 2023 (NATO 2023b). However, the other sub-unit dealing with climate-related issues, the EADRCC (included in the International Staff’s portfolio) do not produce formal rules regarding climate change that could be disseminated within the organization. The impact of their activities is largely more sector-specific.

2. Case studies in NATO’s other agencies and organizations pillar

NATO’s Centres of Excellence (COEs) are international military organisations that train and educate leaders and specialists from NATO member and partner countries. They assist in doctrine development, identify lessons learned, improve interoperability and capabilities, and test and validate concepts through experimentation. COEs work alongside the Alliance even though NATO does not directly fund them and they are not part of the NATO Command Structure. They are nationally or multi-nationally funded and are part of a supporting network, encouraging internal and external information exchange to the benefit of the Alliance. The overall responsibility for COE coordination and utilization within NATO lies with Allied Command Transformation (ACT), in coordination with the Supreme Allied Commander Europe (SACEUR).

The NATO Crisis Management and Disaster Response Centre of Excellence (CMDR COE): an example of a full institutionalization of climate-related issues

The CMDR COE, located in Sofia, was established on 28 August 2013, and received official accreditation as the 21st NATO COE on 31 March 2015.

- 1) Principal tasks and role: the main objective and principle *raison d’être* of the CMDR COE is to support and contribute to the enhancement of NATO’s crisis management and disaster response capabilities, and as a corollary, to improve the Alliance’s interoperability.

- 2) Production of concepts and guidelines: the CMDR COE provides “support to concept development and experimentation”;
- 3) Issues tackled by the Center: “The CMDR COE primary area of responsibility - crisis management and disaster response (CMDR), is coupled by a broad thematic portfolio including relevant cross-cutting topics such as resilience, climate change, protection of civilians, gender mainstreaming.” (CMDR COE 2024a).
- 4) Knowledge production: “Despite not being an operational body, the CMDR COE provides research and analysis” (CMDR COE 2024a). In 2017, and as a result of an Advanced Research Workshop (ARW) under the NATO SPS, the CMDR COE produced a publication addressing regional considerations on the implications of climate change and disasters on military activities: Orlin, Nikolov, et Swathi Veeravalli, éd. 2017. *Implications of Climate Change and Disasters on Military Activities Building Resiliency and Mitigating Vulnerability in the Balkan Region*. Dordrecht: Springer. <https://link.springer.com/book/10.1007/978-94-024-1071-6>. (Orlin et Veeravalli 2017).
- 5) Human resources: there is a permanent staff of to ensure the functioning and activities of the COE, composed of 54 people (CMDR COE 2024c). Among them, there is a “point of contact” person dedicated to climate change issues (Major Ralitsa Bakalova, Concept and Development Expert) (CMDR COE 2024b).
- 6) Organizational resources and configurations: there is no specifically dedicated department on climate change in the CMDR COE. However, climate change is grasped in a cross-cutting way in the Capabilities, Transformation, Education and Training, and Support Branches.
- 7) Practices and activities:
 - Exercises and Training**: in close cooperation with the European Security and Defense College, the Centre developed a topical “Climate Change and Security Course”, which explores way of addressing climate change by improving awareness and enhancing decision-making.
 - Mapping**: the Centre is engaged in mapping the activities and analysis related to the implications of climate change and disasters on military activities (CMDR COE 2024b).
- 8) Networks configurations within the climate sector: the CMDR COE plays a significant role in coordinating some climate security networks. One example is the co-organization of an “International conference addressing global challenges: NATO’s approach to climate change” on November 17th 2021, with the Sofia Security Forum, with the sponsorship of the NATO Public Diplomacy Division (CMDR COE 2021).
- 9) Regulatory outputs: “in close cooperation with the Joint Analysis and Lessons Learned Centre (JALCC), the CMDR COE serves as a repository for international, national and

NATO shared information, analysis and lessons-learned on crisis management and disaster response” (CMDR COE 2024d). If climate change is well institutionalized at the core of this unit, its potential for disseminating climate-related norms throughout the whole organization is still difficult to assess. Indeed, the Centre’s main output is not to produce formal rules, but rather guidelines for nations wishing to participate in, or benefit from the Centre’s activities.

The NATO Climate Change And Security Center of Excellence (CCASCOE): an example of a soon-to-be climatized unit in NATO

At the July 2023 NATO Summit in Vilnius, Canada’s Minister of National Defense, Anita Anand and representatives from 11 other Sponsoring Nations signed the founding document of the NATO CCASCOE (Government of Canada 2024).

- 1) Principal tasks and role: This COE will be a platform through which both military actors and civilians will develop, enhance, and share knowledge on climate change security impacts.
- 2) Production of concepts and guidelines: included;
- 3) Issues tackled by the Center: climate change security impacts.
- 4) Knowledge production: included;
- 5) Human resources: around forty people dedicated to studying climate change are expected to work at this Center. The members of which we are already aware are: Mathieu Bussi eres (Director of the CCASCOE); Colonel Fran ois Tinjod (France); Katie Woodward; Ulrich Seidenberger (pers. observations).
- 6) Organizational resources and configuration: although for the moment there is no further information on the Centre’s organizational structure (sub-offices and departments), the entire structure will be specifically devoted to the study of climate change security impacts (in comparison to the other units previously mentioned).
- 7) Practices and activities: “CCASCOE’s mission will be to “enhance knowledge and understanding of the ways that climate change will affect the security interests of NATO, NATO Allies and Partners through research, experimentation, doctrine and concept development, education and training, as well as analysis in support of developing lessons learned” (NATO ACT 2024: 15).
- 8) Network configurations: although the Centre is not yet officially accredited and operational, it is already involved in several climate security networks, particularly at the academic and research levels. Indeed, several of its members took part in the conference

“Climate Security and its Challenges” presented by the Centre FrancoPaix and the Climate Security Association of Canada, on April 8-9, 2024, in Montreal (CSAC 2024).

- 9) Regulatory outputs: “[The Center] will also allow participants to work together to build required capabilities and best practices and contribute to NATO’s goal of reducing the climate impact of our military activities” (Government of Canada 2024). We will have to wait until the Centre is fully operational to assess this indicator. However, just like the previous Centre of Excellence, the guidelines and lessons-learned activities will be mainly distributed and shared within the participating nations, and not within the whole NATO architecture.

At first sight, the process of institutionalizing climate issues within NATO has been proceeding at different rates and shapes depending on the organizational unit evolved. A salient element emerges from the data analysis: practical thinking on climate change mitigation and adaptation as such is outsourced in two ways, in other NATO agencies⁶ (and also expert groups mandated by NATO). Based on the previous case studies, it seems that it is the organizational units that are furthest from the political and decision-making nerve centre, and the most autonomous (in terms of resources and agenda), that institutionalize climate issues most extensively.

These four case studies are not representative of the various institutional processes that can be found in NATO. We need to include more examples within the civilian and other agencies’ pillars, and also incorporate comparisons within the military pillar in order to get a comprehensive picture of the differentiated character of the institutionalization process.

Concluding remarks

In conclusion, this paper tried to present a general overview of the research project we are currently undertaking as part of our PhD thesis. There are still many aspects to be consolidated, both from a theoretical point of view thanks to an in-depth study of several specialized literatures, and from a methodological point of view, by conducting fieldwork and interviews during the second year of the PhD. Nevertheless, the aim of this paper was mainly to present our research design and the way in which we intend to structure the second axis of our research, centered upon the organizational perspective of the institutionalization process of climate-related issues into NATO’s mandate.

⁶ For the sake of brevity, we have not included the cases of the NATO Parliamentary Assembly, nor the NATO Science and Technology Organization, or other NATO Centers of Excellence. However, these latest examples point in the direction of a full institutionalization of climate issues into their policy orientations and activities.

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