Maria Mälksoo & Jens Wenzel Kristoffersen

# CLIMATISING SECURITY POLICY

A Panorama and Implications for Denmark

> DJØF PUBLISHING IN COOPERATION WITH THE CENTRE FOR MILITARY STUDIES

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Djøf Publishing In cooperation with the Centre for Military Studies 2022 Maria Mälksoo & Jens Wenzel Kristoffersen Climatising Security Policy: A Panorama and Implications for Denmark

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This publication is peer reviewed according to the standards set by the Danish Ministry of Higher Education and Science.

> Cover: Kelly Chigozie Kjelsø Arazu Print: Ecograf, Brabrand

> > Printed in Denmark 2022

ISBN 978-87-574-5526-7

Djøf Publishing Gothersgade 137 1123 København K

Telefon: 39 13 55 00 e-mail: forlag@djoef.dk www. djoef-forlag.dk

### Editor's preface

The publications of this series present new research on defence and security policy of relevance to Danish and international decision-makers.

This series is a continuation of the studies previously published as CMS Reports. It is a central dimension of the research-based services that the Centre for Military Studies provides for the Danish Ministry of Defence and the political parties behind the Danish defence agreement. The Centre for Military Studies is subject to the University of Copenhagen's guidelines for research-based services, including academic freedom and the arm's length principle. As they are the result of independent research, the studies do not express the views of the Danish Government, the Danish Armed Forces, or other authorities.

Our studies aim to provide new knowledge that is both academically sound and practically actionable. All studies in the series have undergone external peer review. And all studies conclude with recommendations to Danish decision-makers. It is our hope that these publications will both inform and strengthen Danish and international policy formulation as well as the democratic debate on defence and security policy, in particular in Denmark.

The Centre for Military Studies is a research centre at the Department of Political Science, University of Copenhagen. The centre conducts research into security and defence policy as well as military strategy. Read more about the centre, its activities, and other publications at: https://cms.polsci.ku.dk/english/.

> Copenhagen, November 2022 Kristian Søby Kristensen

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## List of Abbreviations

AU: African Union **BMVg:** Bundesministerium der Verteidigung **CCDR:** Climate Change and Defence Roadmap **CIA:** Central Intelligence Agency **COP:** Conference of the Parties (Global climate summit) **CO**<sub>2</sub>: Carbon dioxide **CSDP:** Common Security and Defence Policy **DoD**: Department of Defense **EADRCC:** Euro-Atlantic Disaster Response Coordination Centre **ENVSEC:** Environment and Security Initiative **EPWG:** Environmental Protection Working Group **EU:** European Union **EUGS:** European Union Global Strategy FIIA: Finnish Institute of International Affairs **GHG:** Greenhouse gases **G7:** Group of Seven **INSSG:** Interim National Security Strategic Guidance **IPCC:** Intergovernmental Panel on Climate Change **LNG:** Liquefied Natural Gas MEDEA: Measurements of Earth Data for Environmental Analysis MENA: Middle East and North Africa MoD: Ministry of Defence **NAP:** National Adaptation Plan NATO: North Atlantic Treaty Organization **NORDEFCO:** Nordic Defence Cooperation NRA: National Risk Assessment **NSC:** National Security Concept NSS: National Security Strategy **OSCE:** Organisation for Security and Cooperation in Europe **PSF:** Peace and Stabilisation Fund

- **REC:** Regional Environmental Center for Central and Eastern Europe
- SAF: Swedish Armed Forces

SPS: Science for Peace and Security programme

**SSP:** Shared Socio-Economic Pathways

**SSPP:** Strategic Sustainability Performance Plan

**STEEEP:** Specialist Team on Energy Efficiency and Environmental Protection

**UNDP:** United Nations Development Programme

**UNFCCC:** United Nations Framework Convention on Climate Change **UNSC:** United Nations Security Council

## Abstract and Recommendations

How have the political discourses about climate change influenced security policies? This report investigates the emerging international landscape on 'climatising' security policies that Denmark must navigate. The study maps the current state and the emerging developments at the crossroads of global climate change governance efforts and national and international security policies. The report develops a taxonomy of various state and interstate profiles to tackle the global challenge of climate change as part of the actors' security and defence policies along their declared intentions, levels of ambition and delivery in practice. The analysis covers NATO and the EU, along with the important states from the Danish security policy perspective (i.e. USA, Russia, China, UK, France, Germany, the Nordic countries). Methodical stock-taking of the emerging trends in climate change management through security policies globally, regionally, and nationally provides a basis for forward thinking in the Euro-Atlantic area, helping to set the parameters of security policy planning and action for Denmark.

The emerging typology of state and international actor profiles on the climate change-security connection offers insights into the readiness of various global and regional security actors to 'green' their security and defence sectors (e.g., by limiting emissions) and to treat climate change as a security issue more generally (e.g., changing their planning of missions, intervening in climate-induced conflicts). The report demonstrates how the integration of climate change into security strategies and action plans is widespread yet often generic and declaratory. Many actors have explicit leadership ambitions regionally and/or globally (e.g., NATO as an *aspirational mitigator*, the EU as an *exemplary leader*, the US as yet another *aspirational global leader*, the UK as a *global trailblazer*, France as an *environmental security pioneer*, the Nordics as *global frontrunners*). Others, such as Germany, are more emphatically committed to advancing climate diplomacy internationally instead of setting concrete climate change-related domestic targets in their defence planning and policy. Yet others, notably Russia (as a *climate sovereign*) and China (as a voice for an *ecological civilisation*), oppose addressing climate change through the lens of security politics, staunchly resisting attempts to address the issue as a matter of international peace and security via the UN Security Council.

While many actors claim frontrunner status in addressing the climatesecurity nexus, the emerging security policies and practices in response to climate change vary significantly in terms of their comprehensiveness, level of specificity, concreteness of measures, and their relationship to actors' overall self-positioning in the wider climate change-action landscape. State actors are generally struggling with the demands to revisit the standard referent object of national security, setting bounds on their sovereign agency. A fundamental challenge for traditional security actors is not to have their security, operational effectiveness, and the stability of their strategic environment compromised, either by climate change or its national and international mitigation efforts.

Consequently, the report argues that in order to manage the security repercussions of climate change effectively, careful attention must be paid to diverging concepts, referent objects, and types of climate-related security. There is no commonly agreed definition today on what 'climate security' entails. Climate change sets a moving agenda for international and national security actors, providing them both with manifold trials but also with an opportunity to rethink the deficiencies and bottlenecks of their existing security policies, practices, and relationships.

Accordingly, Euro-Atlantic security policy experts and practitioners could:

 Distinguish between direct and indirect security impacts of climate change in shaping collective policy responses in short- and long-term perspectives alike. Taking note of the varied understandings of 'climate security' worldwide, the 'climatisation' of security policies should build on sensitivity towards distinct dimensions and contextual implications of the term. Consistent monitoring and analysis of global developments in climate action should be accompanied with the assessment of the related consequences for climate security at multiple levels of analysis.

- Integrate a climate change sensibility (or responsiveness to climate change) into all levels of security and defence policy planning and delivery. Such effort should range from systematic, context-specific analysis to tailored foresight-building, preparedness, and improved coordination on climate security between different sectors of government domestically.
- 3. Coordinate climate change-related monitoring, information exchange, and cooperation activities systematically through NATO and the EU, and advance the synergistic collaboration via a permanent consultation format between the two organisations for tackling the issue. Within NATO, concrete allied guidelines for net-zero carbon emissions on the part of allied military forces could be considered to be implemented in the next few decades alongside NATO's existing expectation to spend 2% of the GDP for defence, with a related encouragement of allies to report their militaries' carbon output to NATO to increase mutual accountability in climatising security and defence.

Denmark has a good standing to capitalise on its green pioneer country profile when implementing climatisation measures in its security and defence policies. The Danish candidature for a seat on the UN Security Council in 2025-2026 provides an immediate political impetus and a window of opportunity to leave a mark on the global climate security management agenda. Calling for an international conference to address the security dimensions of climate change methodically and to develop a functional definition of climate security could be a good political start. Denmark's strategic profile in relation to climate action through security and defence policies should be advanced with an integrated approach since the challenge of climate change demands a coordinated response from different ministerial competencies, calling for a comprehensive engagement of multiple dimensions (energy transition, risk anticipation, conflict prevention, disaster response) and modalities of action (risk monitoring, analysis, policy coordination, practical response) concurrently. This includes the potential of utilising the Danish Peace and Stabilisation Fund as a catalyst for change in promoting climate change initiatives in the states hit hardest by climate change and where the related effects could destabilise the overall security situation. This could

supplement the UN as an umbrella forum for defining and tackling the security implications of climate change while at the same time keeping an eye on and relating the Danish efforts to climatise security policy to the respective developments in NATO and the EU.

## Resumé og anbefalinger

Hvilken betydning har den politiske debat om klimaforandringerne haft for sikkerhedspolitikken? Denne rapport undersøger, hvordan klimatisering af sikkerhedspolitikken medfører, at Danmark skal navigere i et nyt sikkerhedspolitisk landskab. Studiet kortlægger den nuværende tilstand af og nye udviklinger i krydsfeltet mellem globale tiltag og indsatser mod klimaforandringerne samt nationale og internationale sikkerhedspolitikker. Rapporten bidrager ved at udvikle en taksonomi for forskellige mellemstatslige og statslige aktørers håndtering af klimaforandringerne som en del af aktørernes forsvars- og sikkerhedspolitik, herunder deres erklæringer, deres ambitionsniveau og graden af implementering i politisk praksis. Analysen dækker NATO og EU samt de for Danmark sikkerhedspolitisk vigtigste stater (USA, Rusland, Kina, Storbritannien, Frankrig, Tyskland samt de nordiske lande). Rapporten foretager herudover en metodisk opgørelse af de forskellige globale, regionale og nationale trends med hensyn til sikkerhedspolitisk at håndtere klimaforandringerne. Med det udgangspunkt tænker rapporten fremad, og gennem sin analyse af udviklingen i det euro-atlantiske område sætter rapporten rammer for fremadskuende dansk sikkerhedspolitisk planlægning og handling i relation til den fortsatte klimatisering af sikkerhedspolitikken.

Rapportens typologi vedrørende staters og internationale aktørers profiler i relation til klimasikkerhed giver indsigt i, i hvor høj grad forskellige globale og regionale sikkerhedsaktører er i gang med at gøre deres forsvars- og sikkerhedspolitiske sektorer "grønne" (begrænsning af  $CO_2$ -udledninger), og i hvor høj grad de ser klimaforandringerne som et mere generelt sikkerhedspolitisk emne (fx i forbindelse med missionsplanlægning og evt. intervention i klimabaserede konflikter). Rapporten viser, hvordan klimaforandringernes betydning mere end bare usystematisk og retorisk faktisk i vidt omfang integreres i sikkerhedspolitiske strategier og handleplaner. Mange aktører har eksplicitte lederskabsambitioner på såvel regionalt som globalt niveau (fx NATO som "aspirerende leder", EU som "eksemplarisk leder", USA som endnu en "aspirerende leder", Storbritannien og Frankrig som "klimasikkerhedspolitiske pionerer" og endelig de nordiske lande som "globale foregangslande"). Andre lande som Tyskland har et klarere fokus på at fremme internationalt klima-diplomati fremfor at sætte konkrete nationale klimabaserede mål for forsvarspolitik og forsvarsplanlægning. Atter andre, og her særligt Rusland (som "klima-suveræn") og Kina (som en stemme for "økologisk civilisation"), modsætter sig direkte at adressere klimaforandringerne gennem sikkerhedspolitik ved at obstruere forsøg på at rejse emnet som et spørgsmål om international fred og sikkerhed i rammen af FN's Sikkerhedsråd.

På trods af at mange aktører proklamerer sig som førende med hensyn til adresseringen af klimaforandringerne som sikkerhedspolitik, viser det sig, at aktørernes forskellige politikker og praksisser i betydelig grad varierer i omfang, i grad af specificitet, med hensyn til faktiske aktuelle tiltag og med hensyn til aktørernes selvpositionering i et bredere klimapolitisk perspektiv. De statslige aktører er generelt udfordrede med hensyn til at gentænke traditionel national sikkerhed som andet end statens suveræne prærogativ. En fundamental udfordring for traditionelle sikkerhedspolitiske aktører er at undgå klimaforandringernes påvirkning af deres sikkerhed, deres strategiske omgivelser og deres operative effektivitet. Det gælder, hvad enten der er tale om klimaforandringernes direkte påvirkninger eller om forskellige foranstaltninger til at imødegå dem.

Derfor er det rapportens argument, at hvis man ønsker effektivt at imødegå klimaforandringernes sikkerhedspolitiske konsekvenser, må man have fokus på forskellige begreber om og forskellige typer af klimarelateret sikkerhed. Der er ingen fælles definition af, hvad klimasikkerhed betyder. Klimaforandringerne sætter imidlertid en ny retning for nationale og internationale sikkerhedspolitiske aktører med mange udfordringer, men også med muligheder for at gentænke mangler og flaskehalse i deres nuværende sikkerhedspolitikker samt i deres sikkerhedspolitiske praksisser og indbyrdes relationer.

I overensstemmelse hermed kunne euro-atlantiske sikkerheds- og policyeksperter overveje at:

- Skelne mellem direkte og indirekte sikkerhedsrelaterede effekter af klimaforandringerne i forsøget på at forme fælles politikker og svar på de kort- og langsigtede klimaforandringsperspektiver.
- 2. Integrere responsivitet i forhold til klimaforandringerne i relation til alle aspekter af forsvars- og sikkerhedspolitisk planlægning. Disse bør omfatte alt fra systematiske og kontekstspecifikke analyser til målrettet forudseenhed, parathed og forbedret koordination på klimaforandringsområdet mellem de forskellige sektorer af regeringen på nationalt niveau.
- 3. Koordinere klimaforandringsrelateret monitorering, udveksling af informationer og samarbejdsinitiativer på tværs af NATO og EU. Herunder fremme de to organisationers evne til samarbejde gennem fælles konsultationer mellem de to organisationer med henblik på at adressere klimaforandringerne. I NATO bør det i løbet af de kommende årtier overvejes at implementere konkrete målsætninger for nedbringelse af CO<sub>2</sub>-udledningerne mod nul for samtlige NA-TO-styrker, samtidig med at der sigtes mod, at 2 % af medlemmernes BNP investeres i forsvar. Herudover kan alle medlemmer opfordres til at rapportere deres CO<sub>2</sub>-aftryk til NATO for at fremme et fælles ansvar for at klimatisere forsvars- og sikkerhedspolitikken.

Danmark har gode muligheder for at kapitalisere på sin position som klimaforegangsland ved at implementere nye foranstaltninger inden for det forsvars- og sikkerhedspolitiske område. Ligeledes udgør Danmarks kandidatur til FN's Sikkerhedsråd i 2025-2026 en enestående mulighed for at fremme en global klimatisk sikkerhedsagenda. Det kan ske ved, som en ambitiøs politisk start, at invitere til en international konference med det formål at adressere de sikkerhedspolitiske aspekter af klimaforandringerne, og hvilken rolle de spiller, samt at definere en fælles opfattelse af, hvad klimasikkerhed reelt betyder.

Danmarks strategiske profil med hensyn til at adressere klimaforandringerne gennem forsvars- og sikkerhedspolitikken bør i bredere forstand fremmes gennem en tværministeriel integreret tilgang. Dette åbner for et samtidigt og omfattende engagement i flere dimensioner inden for bl.a. energi og grøn omstilling, konfliktforebyggelse og katastrofehjælp foruden yderligere aktiviteter såsom klima- og sikkerhedspolitisk orienteret risikohåndtering og -analyse samt politisk og praktisk koordinering heraf. Dette inkluderer en mulig anvendelse af Freds- og Stabiliseringsfondens mekanismer og finansiering (klimabistand) som katalysator for forandringer ved at fremme klimaforandringsinitiativer i områder af verden, hvor man er hårdest ramt af klimaforandringerne som en destabiliserende faktor. Her er der mulighed for, at klimabistanden vil kunne forandre dette. Dette kunne ligeledes supplere FN's initiativer, hvor FN kunne fungere som paraply og forum for at definere og håndtere de sikkerhedsmæssige implikationer af klimaforandringerne, samtidig med at de danske bestræbelser fokuserer på også at presse på for fortsat at arbejde på at klimatisere sikkerhedspolitikken i NATO og EU.

## Introduction

'[S]ecurity and climate, [those are] two sides of the same coin,' and 'we have to effectively deal with both sides of the coin... [for] it's circular. If you don't have security, you can't deliver some of the mitigations that we're going to have to deliver to take on both the effects of climate change and to reduce towards the 1.5 percent target. And if you don't do that, you get more conflict and then you don't get more security.'<sup>2</sup> Hence, 'we need to make sure that climate and security becomes an integral part of foreign and security policy.'<sup>3</sup>

Thus spoke the leaders of the Western security policy establishment at the 2021 UN Climate Change Conference (COP26) in Glasgow, UK. Dubbed by the EU 'an existential threat to humanity and biodiversity',<sup>4</sup> climate change has manifold yet nebulous security implications: the nexus appears as a spectrum rather than a relationship with unequivocal causal vectors. Widespread securitisation of climate change aside,<sup>5</sup> the level of actual 'climatisation' of security policies has consequently remained less clear. Whereas climate change securitisation refers to the linking of changes in the climate to a range of security concerns and the

Jens Stoltenberg, NATO Secretary General at the high-level roundtable "Climate, Peace and Stability: Weathering Risk through COP and Beyond" in Glasgow, UK, November 2, 2021, https://www.nato.int/cps/en/natohq/opinions\_188262.htm?selectedLocale=en.

<sup>2.</sup> Ben Wallace, UK Secretary of State for Defence, ibid.

<sup>3.</sup> Miguel Berger, State Secretary, German Federal Foreign Office, ibid.

European External Action Service, "Towards a Climate-Proof Security and Defence Policy: A Roadmap for EU Action," December 11, 2020, https://eeas.europa.eu/headquarters/headquarters-homepage/90320/towards-climate-proof-security-and-defence-policyroadmap-eu-action\_en.

For a foundational text on securitisation theory, see Barry Buzan, Ole Wæver, and Jaap de Wilde, Security: A New Framework for Analysis (Boulder, CO: Lynne Rienner, 1998).

legitimisation of pertinent policy measures to counter the challenge, the climatisation of security pertains to the extension of 'climate logic' to the domains of security and defence. The latter can entail a general reshaping of security and defence policy issues and objects through a climate lens (sometimes also labelled 'climate mainstreaming'),<sup>6</sup> a reframing of existing security narratives through a climatic perspective (e.g., relating to migration and armed conflicts),<sup>7</sup> and the introduction of concrete new practices from the field of climate policy into the security field.<sup>8</sup> But the securitisation of climate change also contributes to a transformation of the conceptions of security used in the securitisation process.<sup>9</sup> Bringing formerly non-security issues (e.g., climate change) to the realm of security politics is thus also influencing the security and defence field. Hence, the securitisation of climate change and the climatisation of security are interrelated processes, albeit successful securitisation of climate change is not solely (or even foremost) dependent on the climatisation of the defence sector. States and alliances grapple with navigating the effects of climate change as the 'code red for humanity',<sup>10</sup> for their primary purpose is to keep themselves safe in the first place. How has the political discussion about the climate-security nexus trickled down to the concrete security and defence policies of the important actors of reference for Denmark? This question motivates the current report.

The report maps the present state and the emerging developments at the crossroads of global climate change governance efforts and national and international security policies. Its overarching goal is to offer a condensed overview of how the global climate change issue is currently

Stefan C. Aykut and Lucile Maertens, "The Climatization of Global Politics: Introduction to the Special Issue," *International Politics* 58, no. 4 (2021): 501-18.

See further Adrien Estève, "Preparing the French Military to a Warming World: Climatization through Riskification," *International Politics* 58, no. 4 (2021): 600-18.

Angela Oels, "From 'Securitization' of Climate Change to 'Climatization' of the Security Field: Comparing Three Theoretical Perspectives," in *Climate Change, Human Security and Violent Conflict: Challenges for Societal Stability*, eds Jürgen Scheffran, Michael Brzoska, Hans Günter Brauch, Peter Michael Link, Janpeter Schilling (Berlin: Springer, 2012): 185-205.

Franziskus von Lucke, The Securitisation of Climate Change and the Governmentalisation of Security. (Cham: Palgrave Macmillan, 2020), 29.

United Nations, "Secretary-General Calls Latest IPCC Climate Report 'Code Red for Humanity', Stressing 'Irrefutable' Evidence of Human Influence," August 9, 2021, https:// www.un.org/press/en/2021/sgsm20847.doc.htm.

featured in the security policies and practices of major<sup>11</sup> state actors and international security organisations.<sup>12</sup> The report develops a taxonomy of various state and interstate profiles to tackle the global challenge of climate change as part of security policies along the actors' declared intentions, level of ambition, and observable actions in addressing the climate change-security nexus in practice. Our analysis covers international organisations (NATO, the EU) and states that are important in global (USA, Russia, China, UK, France, Germany) and regional security politics (Norway, Sweden, Finland), as well as particularly consequential from the Danish perspective as either challengers or partners and benchmarks for best practice. Methodical stock-taking of the emerging trends in climate change management through security policies globally and regionally provides the basis for forward thinking in the Euro-Atlantic area. Our enquiry helps to clarify the parameters of security policy planning and future action for Denmark.

#### 1.1. Overview and Research Strategy

Climate change is emerging as one of the defining political agenda-setters of our time: it is transforming how we think about the planet, our economies, political communities, and responsibilities in the world. It is increasingly realised that climate change has a range of security implications at human, communal, interstate, international, and global levels. But will climate change indeed 'change everything?'<sup>13</sup> Or will it rather act as a 'threat multiplier'<sup>14</sup> and conflict accelerant, with varying and uneven security-political consequences in different parts of the world?

The answer to this question depends on how we understand who can meaningfully act in the realm of national and international security

<sup>11.</sup> That is, from a Danish perspective.

For an earlier study of climate change in various security policies, see Michael Brzoska, "Climate Change as a Driver of Security Policy," in *Climate Change, Human Security*, 165-84.

<sup>13.</sup> Naomi Klein, *This Changes Everything: Capitalism vs. the Climate* (New York: Simon & Schuster, 2015).

Simon Dalby, "Climate Change and the Insecurity Frame," in *Reframing Climate Change:* Constructing Ecological Geopolitics, eds Shannon O'Lear and Simon Dalby (London: Routledge, 2015): 83-99.

politics and whose security is ultimately considered to matter.<sup>15</sup> While scholars and activists continue debating these questions, a systematic account of how traditional security actors (e.g., states, international organisations) consider climate change in relation to security remains absent.<sup>16</sup> This report seeks to bridge this gap by examining how national and international security actors of strategic significance for Denmark have linked the emerging global climate change governance agenda with their security and defence policies, as traditionally conceived.

Climate change challenges the existing accounts and practices of security in fundamental ways. Whereas mainstream understandings of security focus on the role of the military instruments of the state in protecting its sovereignty and territorial integrity from intentional external military threat, climate change presents a partially self-inflicted problem, even if the production of greenhouse gas (GHG) emissions is causing harm mostly unintentionally. Climate change further defies borders in its security implications and accordingly calls for cooperative, cross-border solutions for the limited effects of any unilateral action in redressing its effects. Climate change is also gradual by nature, and its long-term significance makes it difficult to grasp the related risks and to politically recommend the necessary solutions. Climate change presents a complex collective action problem - indeed, 'a super wicked problem'<sup>17</sup> - probing the fit for purpose of the existing institutional arrangements and security practices.<sup>18</sup> The climate change problem contests dominant accounts

<sup>15.</sup> Matt McDonald, "Climate Change and Security: Towards an Ecological Security Discourse?" *International Theory* 10, no. 2 (2018): 153-80.

<sup>16.</sup> The most comprehensive comparable exercise to date is an account of how the UNSC members of 2020 have approached the climate-security nexus. See Judith Nora Hardt and Alina Viehoff, "A Climate for Change in the UN Security Council? Member States' Approaches to the Climate-Security Nexus," University of Hamburg Institute for Peace Research and Security Policy Research Report no. 5, 07/2020, https://ifsh.de/file/publication/Research\_Report/005/200818\_IFSH\_Research\_Report\_005\_01.pdf.

Lassi Heininen, "Before Climate Change, 'Nuclear Safety' Was There: A Retrospective Study and Lessons Learned of Changing Security Premises in the Arctic," in *Climate Change and Arctic Security*, eds Lassi Heininen and Heather Exner-Pirot (London: Palgrave Macmillan, 2020): 107-30, https://doi.org/10.1007/978-3-030-20230-9\_7.

<sup>18.</sup> Compared to the relatively contained problem of the ozone layer hole, successfully tackled by the 1989 Montreal Protocol which banned the use of chlorofluorocarbons (CFCs) that had caused the problem, climate change presents a much, much more intricate collective action challenge. In comparison, it involves a number of public and private contributing actors, including established worldwide industries that are existentially challenged by switching from fossil fuels to new energy sources and technologies. See further Anja

of the nature of threats, the capacity of traditional agents of security to address the climate-related contingencies, and the means through which security can be sustained and advanced.<sup>19</sup>

This report takes stock of the major state and international organisation discourses and emerging practices along the climate change-security nexus.<sup>20</sup> We map the present record of addressing climate change as a security challenge by key states and international organisations, to the extent that such a connection can be detected. To provide a structured account of the manifestations of global climate change in international and national security discourses, and the related mitigation, adaptation, and/or capacity-building efforts in the security policies of significant state and international actors, the research strategy of this report is threefold:

- 1. Mapping the presence, representation, and role of the global climate change management agenda in central international and national security policy frameworks.
- 2. Providing a taxonomy of the emerging patterns subsuming climate change in the security policies of major state actors and international organisations along the distinct definitions of security operationalised, and the pertinent strategies envisioned and adopted to tackle the challenge.
- 3. Synthesising the short- and medium-term implications of climate change for security and defence policies, as currently identified by strategically significant international and regional actors, and outline pertinent implications for the Danish security and defence policy-making community.

The report demonstrates how the integration of the climate change thematic into security strategies and action plans is widespread yet of-

Schmidt and Ryan Neely, "Shrinking Hole in the Ozone Layer Shows What Collective Action Can Achieve," *The Conversation*, July 4, 2016, https://theconversation.com/ shrinking-hole-in-the-ozone-layer-shows-what-collective-action-can-achieve-62007.

Matt McDonald, Ecological Security: Climate Change and the Construction of Security (Cambridge: Cambridge University Press, 2021).

<sup>20.</sup> Our research effort is self-consciously presentist, as the space constraints do not allow us to factor in the evolution of actor positions and policies over time.

tentimes generic, rather unsystematic, and declaratory. The emerging security policies and practices in response to climate change vary significantly in terms of their comprehensiveness, level of specificity, concreteness of measures, and their relationship to actors' overall self-positioning in the wider climate change action landscape. State actors are generally struggling with the demands to revisit the standard referent object of national security, setting bounds on their sovereign agency. A fundamental challenge for traditional security actors is not to have their security, operational effectiveness, or the stability of their strategic environment compromised either by climate change or its national and international mitigation efforts. Consequently, the report argues that in order to effectively manage the security repercussions of climate change, diverging concepts, referent objects, and types of security attached to climate must be accorded careful attention. There is no commonly agreed definition today on what 'climate security' entails.<sup>21</sup>

#### 1.2. Methodology

This report relies on systematic desk research of open source data, ranging from security strategies and other relevant official documents from NATO, the EU, the US, the UK, France, Germany, the Nordics (Norway, Sweden, Finland, and Denmark), and not least Russia and China, to applicable academic publications and think tank reports.<sup>22</sup> The study combines the basic content mapping (*What kind of a security problem is global climate change identified as*?) with discourse analysis (*Which understanding of security is operationalised in the context of managing climate change*?). A discourse-analytic approach acknowledges the political

See also Nicole Detraz and Michelle Betsill, "Climate Change and Environmental Security: For Whom the Discourse Shifts," *International Studies Perspectives* 10, no. 3 (2009): 303-20; Brzoska, "Climate Change"; Thomas Diez, Franziskus von Lucke, Zehra Wellmann, *The Securitisation of Climate Change: Actors, Processes and Consequences* (London: Routledge, 2016).

<sup>22.</sup> For further global context, see the ASEAN State of Climate Change Report (2021), African Union Commission "Agenda 2063" (2015), https://au.int/sites/default/files/documents/36204-doc-agenda2063\_popular\_version\_en.pdf, and the African Union Commission's "Draft Africa Climate Change Strategy 2020-2030" (2020), https://archive.uneca.org/sites/default/files/uploaded-documents/ACPC/2020/africa\_climate\_change\_strategy\_-\_revised\_draft\_16.10.2020.pdf.

performativity and non-neutrality of language along with the practices and institutions it thus enables and constrains; that is to say, how problems are described has an effect on the world. Accordingly, specific framings of social issues can function as a form of social action. Hence, the framing of climate change as 'an unprecedented global threat'<sup>23</sup> implies a distinct political urgency compared to the depiction of climate change on the laundry list of 'new security risks'. Consequently, whether actors view the challenge through a threat or risk/challenge prism has different implications for their projected course of action. The report will accordingly unpack how the security dimensions of a changing climate have been identified and operationalised in national and international security politics,<sup>24</sup> the urgency in the representation of the related risks and threats, and the collectively envisioned horizon for the future in light of global climate change.

Based on the initial mapping of the climate security discourses of the actors included in this study, the report systematises actor profiles along their *declared intention* (i.e. announced policy or strategy; or what is planned to be done),<sup>25</sup> *level of ambition* (national, regional, international, and/or global; or at which scale the action is intended to be taken),<sup>26</sup> and *actual delivery* on the ambition in relation to addressing the challenge of global climate change via security-political tools and means (what is actually done) (see Figure 1). The aggregate level of securitisation refers to an actor's combined intention, ambition, and respective action with regard to addressing climate change through security and defence policies. The qualitative measure of the overall level of securitisation includes the

<sup>23.</sup> McDonald, Ecological Security, 197.

<sup>24.</sup> The scope of the report does not allow for highlighting any intra-actor politics and inter-agency struggles behind the strategic documents and plans within our purview. Suffice it to say that the actors observed here are less unitary in practice in their takes on the security implications of climate change than their internationally oriented vision documents would otherwise indicate.

<sup>25.</sup> The outlining of an actor's intentions includes an overview of a general diagnosis of (and approach to) climate change, with a focus on the declared plan of action to address the climate change-security nexus.

<sup>26.</sup> In practice, 'intended scope of action' (or level of ambition) tends to be embedded in an actor's declared policy, which makes the line of distinction between intention and ambition rather fuzzy. For a classification of developed states according to their general climate policy ambition levels, see Paul Tobin, "Leaders and Laggards: Climate Policy Ambition in Developed States," *Global Environmental Politics* 17, no. 4 (2017): 28-47.

degree of climatisation of security and defence policies: that is, an actor's rendering of climate change governable as a security issue through mitigation, adaptation, and capacity-building measures in the security and defence sector. We thus refer to the climatisation of security and defence policy as entailing all policy changes in the security and defence sector due to the recognition of the climate-security nexus, and not just limited to immediate mitigation measures (e.g., 'greening'/'greenwashing' the military). The climatisation of security and defence policies contributes to the overall securitisation of climate change, albeit it is not necessarily instrumental to the success of the overall securitisation of climate change.



#### 1.3. Outline of the Report

The report is divided into four main chapters. Having contextualised the study in the opening chapter, Chapter 2 provides a compact state of the art of the global climate change-security nexus in the literature, followed by the state-of-the-world synopsis on the multi-level security repercussions of the contemporary climate change management agenda among the chosen international and state actors. The analytical scaffolding of the empirical actor-mapping exercise is linked to the concepts of securitisation of climate change and climatisation of security policy; distinct

referent objects and conceptualisations of security. The ensuing Chapter 3 delivers a matricised summary of the specified overview offered in Chapter 2. The reader thus has a choice to skim through the heavily itemised actor mapping in Chapter 2, possibly revisiting its subsections of interest upon engaging with the comparative discussion of Chapter 3 first. Chapter 3 systematises the international and national instances of making climate change part of the security agenda, policy, and practice with an eye on the convergences and divergences among the highlighted actors. Chapter 4 concludes the report with the discussion of major implications of the emerging climate change governance trends in security and defence policy for Denmark, offering some policy recommendations and points of consideration to the country's expert community.

# 2

## The Climate Change-Security Nexus

This chapter opens with a short background summary of the state of the art regarding the climate change-security nexus drawing on the academic debates. To provide a basic glimpse into the international governance context surrounding the issue, a brief contextual backgrounder of the UN framework on the climate change-security connection is presented next. The bulk of the chapter consists of the detailed mapping of international and national actors' respective repertoires along the axis of their declared intentions (*what is to be done*), level of ambition (*at which* level), and delivery of the announced aims (what is actually done) in securitising climate change and *inter alia* climatising their security policies. The profile descriptions produced in the course of the actor-mapping exercise follow the actors' own self-presentation in addressing the climate-security nexus instead of constituting a normative assessment on the analysts' part. This explains why most of the actors examined in this report end up in a self-proclaimed category of some type of climate security leadership. The largely self-congratulatory actor profiles will be critically revisited in Chapter 3.

#### 2.1. Climate Change as a Security Issue

While increasingly acknowledged as 'a first-order security issue',<sup>27</sup> a scholarly consensus on the exact character of the climate change-secu-

<sup>27.</sup> McDonald, Ecological Security.

rity relationship has remained elusive.<sup>28</sup> From a state perspective, climate change exacerbates the pressure on the institutional capacities of states and raises the bar regarding access to vital natural resources, decreasing their quality and quantity. Due to its potential to induce migratory movements, climate change can aggravate already unstable areas and deepen existing conflicts.<sup>29</sup> Yet certain manifestations of global climate change (e.g., the melting Arctic icecap) also mean the opening of new sea routes due to more ice-free days and the access to fossil fuel reserves previously buried under ice. The human, ecological, and economic security implications of the unfolding climate change are therefore further intertwined with the traditional geopolitical competition for new resources, influence, and status in critical regions; as can be witnessed in the Arctic case by Russian investment in ice-fleet capabilities and the Chinese 'Polar Silk Road' ambitions.

Consequently, as a security issue, climate change features somewhat distinctly when viewed from a traditional national security perspective as compared to a human security prism or a planetary security lens. The immediate concerns, risk perceptions, threat framings, and referent objects vary accordingly. The effects of climate change vary on the national, human, international, and global levels, and the policy responses are geared respectively. Whereas the traditional approach to security is adhered to the state and the intactness of its national territory and sovereignty, to be ensured by military means, if necessary; human security focuses on the individual and pertains to basic human needs (incl. food, energy, and

<sup>28.</sup> The literature on climate change as a security issue is vast and growing. For key contributions to the securitisation debate on climate change, see Maria Julia Trombetta, "Environmental Security and Climate Change: Analysing the Discourse," *Cambridge Review of International Affairs* 21, no. 4 (2008): 585-602; Maria Julia Trombetta, "Rethinking the Securitization of the Environment: Old Beliefs, New Insights," in *Securitization Theory: How Security Problems Emerge and Dissolve*, ed. Thierry Balzacq (London: Routledge, 2011): 135-49; Maria Julia Trombetta, "Linking Climate-Induced Migration and Security vithin the EU: Insights from the Securitization Debate," *Critical Studies on Security* 2, no. 2 (2014): 131-47; Delf Rothe, *Securitizing Global Warming: A Climate of Complexity* (Abingdon, Oxon: Routledge, 2017); von Lucke, *Securitisation of Climate Change*; Rita Floyd and Richard A. Matthew (eds), *Environmental Security Approaches and Issues* (Abingdon, Oxon: Routledge, 2013); Chris Methmann and Angela Oels, "Securing the Environment: From Defence to Resilience," in *Transformations of Security Studies: Dialogues, Diversity and Discipline*, eds Julian Junk, Christopher Daase, and Gabi Schlag (London: Routledge, 2017): 142-55.

Salla Kalliojärvi, "Age of Changes: Threat of Climate Change and Its Meaning for Security," in *Climate Change*, eds. Heininen and Exner-Pirot, 9.

environmental safety).<sup>30</sup> On a planetary scale, climate security pertains to the global ecological resilience and the survival of the Earth's species, including ethical considerations on human-nature relations in security thinking more generally.<sup>31</sup>

#### **Textbox 1: Climate change**

Global climate change is an umbrella term for the manifold human influence on the planet's atmosphere, ocean, and land. GHG emissions caused by human activity and fossil-fuelled economies have led to a range of climate changes, including the increase of the earth's average temperatures, warming of oceans, sea level rise, ocean acidification, changing rainfall patterns, desertification, and the frequency of extreme weather events (e.g., droughts, floods, heat waves, wild fires, and hurricanes). Global warming damage and can eventually lead to the loss of entire ecosystems and biodiversity, inducing related food shortages. The sea-level rise and thawing permafrost in the traditionally colder areas of the world, such as the Arctic, threaten to awaken some long-buried deadly viruses. The increases in vector-borne disease, the shrinking of arable land, and the resulting economic deprivation have a direct impact on most vulnerable populations, their crops, and infrastructure, contributing - if not unequivocally - to the global migration and conflict dynamics. The likely increase of 3-4°C of the global atmosphere by the end of this century would have catastrophic implications, rendering large swathes of the currently populated territories uninhabitable and leading to significant biodiversity loss.

**Greenhouse Gases.** In 2019, global atmospheric concentrations were higher than at any time in at least the last 2 million years, reach-

United Nations Development Programme, Human Development Report (New York: Oxford University Press, 1994); Jon Barnett, "Environmental Security," in Contemporary Security Studies, ed. Alan Collins (Oxford: Oxford University Press, 2007): 182-203.

Simon Dalby, "Environmental Dimensions of Human Security," in Environmental Security: Approaches and Issues, eds Rita Floyd and Richard Matthew (New York: Routledge, 2013): 121-38; Jonna Nyman and Anthony Burke (eds), Ethical Security Studies: A New Research Agenda (New York: Routledge, 2016); McDonald, "Climate Change."

ing levels of 410 ppm (parts per million)  $CO_2$ , 1866 ppb (parts per billion) for methane ( $CH_4$ ), and 332 ppb for nitrous oxide ( $N_2O$ ). This compared to  $CO_2$  emissions alone of 285.5 ppm in 1850 as the current strongest driver of anthropogenic climate change. Anthropogenic GHG emissions have perturbed the Earth's climate balance by increasing average surface air temperatures. Increased heat stress changes water availability and heightens flooding probabilities.

**Global temperature rise.** Global temperatures were 1.09°C higher in the period 2011-2020 compared to the pre-industrial period (1850-1900). 1.07°C alone is estimated to have been caused by human activity.

**Sea level rise.** The heating of the planet has caused sea levels to rise through ice loss on land and through thermal expansions from oceans warming. Consequently, global sea level has risen by 0.20 m in the period 1901 to 2018. In the period 2006 to 2018, the yearly sea level rise has increased by 3.7 mm/year compared to 1.3 mm/ year from 1901 to 1971.

The climate future. In order to assess the future climate or the behaviour of the atmosphere over relatively long periods of time,<sup>32</sup> the Intergovernmental Panel on Climate Change (IPCC) has created a set of illustrative scenarios, defined as 'Shared Socio-Economic Pathways' (see Table 1 below). These scenarios of projected socioeconomic global changes up to 2100 depict the predicted climate future in terms of global surface temperatures, ocean warming, and sea levels by combining multi-model projections (with observational constraints) based on past simulated warming.<sup>33</sup>

<sup>32. &</sup>quot;What's the Difference between Weather and Climate?" NASA, February 1, 2005, https://www.nasa.gov/mission\_pages/noaa-n/climate/climate\_weather.html.

<sup>33.</sup> IPCC, "Summary for Policymakers," in: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, eds V. Masson-Delmotte, P. Zhai, A. Pirani, S. L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M. I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T. K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (Cambridge: Cambridge University Press. In Press).
Table 1. Global temperature rise estimates						
Near term, 2021-2040			Mid-term, 2041-2060		Long term, 2081-2100	
Scenario	Best estimate (°C)	<i>Very likely</i> range (°C)	Best estimate (°C	<i>Very likely</i> range (°C)	Best estimate (°C	<i>Very likely</i> range (°C)
SSP1-1.9	1.5	1.2 to 1.7	1.6	1.2 to 2.0	1.4	1.0 to 1.8
SSP1-2.6	1.5	1.2 to 1.8	1.7	1.3 to 2.2	1.8	1.3 to 2.4
SSP2-4.5	1.5	1.2 to 1.8	2.0	1.6 to 2.5	2.7	2.1 to 3.5
SSP3-7.0	1.5	1.2 to 1.8	2.1	1.7 to 2.6	3.6	2.8 to 4.6
SSP5-8.5	1.6	1.3 to 1.9	2.4	1.9 to 3.0	4.4	3.3 to 5.7

Source: IPCC (2021), p. 17.

# 2.2. The International Governance Context of the Climate Change-Security Nexus

#### Textbox 2. The UN Framework on the climate change-security nexus

The UN has played a prominent role in leading the international debate on climate security.<sup>34</sup> The UN Security Council (UNSC) held its first discussion on the security implications of climate change in 2007, sponsored by the UK, one of the permanent five UNSC members. Subsequent discussions followed in 2011, 2018, 2019, 2020, and 2021 (sponsored by Germany, Sweden, the Dominican Republic, and the UK), with informal (Arria-formula) meetings on climate security running in parallel since 2013.<sup>35</sup>

The UN Framework Convention on Climate Change (UN-FCCC) provides the foundation for the global climate change governance regime. The multilateral process of addressing climate change at the international level is additionally embodied in the Kyoto Protocol and the 2015 Paris Agreement, and the decisions taken by the parties under these instruments. In the meantime, due to

<sup>34.</sup> See further Shirley V. Scott, "Implications of Climate Change for the UN Security Council: Mapping the Range of Potential Policy Responses," *International Affairs* 91, no. 6 (2015): 1317-33; Judith Nora Hardt, "The United Nations Security Council at the Forefront of (Climate) Change? Confusion, Stalemate, Ignorance," *Politics and Governance* 9, no. 4 (2021): 5-15; Hardt and Viehoff, "Climate for Change."

<sup>35.</sup> McDonald, Ecological Security, 50-51.

the objections of developing countries (alongside Russia and China among the UNSC permanent member states), the UNSC has been rather reluctant as an institution to deal with climate change in the framework of international peace and security concerns.<sup>36</sup> Throughout the UNSC efforts to more systematically integrate climate-related security risks into Security Council's work, China, Russia and India have opposed the inclusion of climate change on the Council's agenda as a thematical issue, preferring to keep it tackled under the sustainable development agenda and addressed by other parts of the UN system instead.<sup>37</sup>

# 2.3. Securitising Climate Change/Climatising Security Policies: Actor Mapping

To determine the climatisation efforts of the selected actors' security policies ensuing from their respective framing of climate change as a security problem, our analytical work follows five steps:

- 1. Mapping *where* climate change is in the security policy documents of the actors under observation in the first place.
- 2. Delineating *what* climate change is identified *as* in the security policy documents within our purview.<sup>38</sup>
- 3. Outlining *what is said to be done* by the actors in their security strategies in order to manage the challenge of global climate change.

Don Wallace, "The UN Regime on Global Climate Change," in *Climate Change, Policy and Security: State and Human Impacts*, eds Donald Wallace and Daniel Silander (Abingdon, Oxon: Routledge, 2018): 42.

<sup>37. &</sup>quot;Climate and Security: Arria-Formula Meeting on Sea-Level Rise," What's in Blue: Security Council Report, October 15, 2021, https://www.securitycouncilreport.org/what-sinblue/2021/10/climate-and-security-arria-formula-meeting-on-sea-level-rise.php. See also the Group of Friends on Climate and Security in the United Nations, https://www.auswaertiges-amt.de/en/aussenpolitik/themen/klima/climate-and-security-new-group-of-friends/2125682, and the UN Climate Security Mechanism, https://www.unssc.org/ news-and-insights/blog/joint-efforts-sustaining-peace-meet-un-climate-security-mechanism.

<sup>38.</sup> This entails specifying what is seen as the threat (e.g., extreme weather events, food, and water scarcity, conflict); what is seen as the referent object of the threat and the ensuing category of security (e.g., states, people, nature); and which security conceptions are used (e.g., national, human, ecological; threat or risk).

- 4. Demarcating what is *actually done* by comparing the strategic goalposts with tangible actions, practices, and policies on the ground (e.g., operational plans, funding streams; to the extent these can be identified by relying only on the publicly available information).
- 5. Determining *the level of securitisation* climate change has achieved in respective defence and security policy contexts by evaluating the combined intent and ambition declared in the respective documents and the actual performance of the set goals in policies and practices on the ground.

The resulting actor profile classification includes their distinct definitions of security<sup>39</sup> as operationalised in the context of climate change management alongside the actors' implemented strategies to tackle the challenge of global climate change.<sup>40</sup> The composite view of actor profiles on the climate change-security nexus, as distilled in Tables 2-7 in Chapter 3, indicates the understanding of security underpinning the climatisation of their respective security policies.<sup>41</sup> The typology of state and international actor profiles on the climate change-security connection thus also provides a bird's-eye view on the level of readiness of the key global and regional security actors from the Danish perspective to 'green' their profile; that is, to include environmentally responsible behaviour among their core duties when navigating the effects of global climate change.<sup>42</sup>

# 2.3.1. International Organisations: NATO and the EU

NATO and the EU have both engaged in notable securitisation efforts of global climate change. Such efforts range from acknowledging the security-political significance of climate change in official documents and communication (e.g., speeches and statements) as well as the gradual

<sup>39.</sup> E.g., traditional military (or national/state) security, environmental, ecological, human, economic, and/or energy security.

To wit, mitigation, adaptation, capacity-building; cf. Don Wallace, "Introduction: Security and Global Climate Change," in *Climate Change, Policy and Security*, ed. Wallace and Silander, 1-40.

<sup>41.</sup> Or distinct answers to the fundamental questions, such as: Security for whom? Security by whom? Which security? By what means?

<sup>42.</sup> Karen T. Litfin (ed.), *The Greening of Sovereignty in World Politics* (Cambridge, MA: The MIT Press, 1998).

climatisation of their respective strategic documents and policies. Both institutions have further sought to carve out distinct global leadership profiles for themselves to address the challenge via their respective security policies, forces, and ongoing and future missions. Each declares the ambition to go beyond the basic requirement of successfully coping with the security implications of climate change, offering concrete initiatives for pertinent mitigation and capability-building. Either has yet to comprehensively deliver on the declared intentions and goals.

#### 2.3.1.1. NATO: An Aspirational Mitigator

NATO's efforts and emerging record in climate change management in its core security missions point to an *aspirational mitigator* profile. In its own words, NATO aims 'to become the leading international organisation when it comes to understanding and adapting to the impact of climate change on security'.<sup>43</sup> Meanwhile, NATO's more conservative adaptation bias is evident in its qualified goal to 'significantly reduce greenhouse gas emissions from military activities and installations *without* impairing personal safety; operational effectiveness and [NATO's] deterrence and defence posture'.<sup>44</sup> Accordingly, we have given NATO a 'medium' score in all categories (intention and ambition, delivery/ action, overall securitisation of climate change) (see Figure 2, p. 106).

#### Intention

NATO has publicly committed to both the 'greening' effort of its climate footprint as well as an integration of climate change-induced security risks into its policy and missions planning. On the first front, the North Atlantic Alliance has pledged its commitment to energy efficiency and environmental sustainability in an institutionalised manner since the 2010 Strategic Concept.<sup>45</sup> On the second, NATO's sustained efforts can be observed since the establishment of the Emerging Secu-

<sup>43.</sup> NATO, "Brussels Summit Communiqué," June 14, 2021, https://www.nato.int/cps/en/ natohq/news\_185000.htm

<sup>44.</sup> Ibid.; emphasis added.

<sup>45.</sup> The energy efficiency of military forces has been consistently highlighted in the Alliance's summit declarations since the Chicago Summit (2012), paving the way for the NATO Green Defence Framework (GDF, 2014), aimed at saving energy, demonstrating environmental awareness, utilising green technologies, and thereby contributing to NATO's 'green profile'. The GDF led to the establishment of a working group, the Smart Energy Team

rity Challenges Division, with a goal to monitor and anticipate threats arising from non-traditional risks and challenges.<sup>46</sup> Yet climate change has become a more notably sustained part of NATO's political agenda only recently, with the peer-pressure from the EU and the personal investment on the issue by Secretary General Jens Stoltenberg. NATO's landmark Climate Change and Security Action Plan (2021) acknowledges that better emissions data would help guide member states' military planning, and it declares the Alliance's commitment to reduce the environmental impact of military activities, to adapt and become more resilient in response to security risks posed by climate change. The independent Experts Group, which penned the report NATO 2030: United for a New Era, have recommended the incorporation of climate change into the Alliance's future Strategic Concept; to enhance situational awareness across the High North and the Arctic; to include climate change in NATO defence planning, including planning on resilience and crisis management; and to revise the GDF and establish a Centre of Excellence on Climate and Security to improve information-sharing.

NATO identifies climate change as an 'urgent threat'; 'a threat multiplier that impacts Allied security, both in the Euro-Atlantic area and in the Alliance's broader neighbourhood', and 'one of the defining challenges of our times'.<sup>47</sup> And yet the North Atlantic Alliance has qualified its commitment to dealing with the challenge by admitting not to be the 'first responder' in the area.<sup>48</sup> NATO's take on the impact of climate change is threefold, ranging from the immediate operational difficul-

<sup>(</sup>SET) which advises NATO on its efforts to help lower fuel and electricity consumption and identify practical energy-efficient solutions to the Alliance's military forces.

<sup>46.</sup> The recent NATO summit declarations (Wales (2014), Warsaw (2016), Brussels (2018), and Madrid (2022)) have consistently underlined the growing threat of climate change to all NATO member states. See also NATO Parliamentary Assembly's Resolution 427 on Climate Change and International Security.

<sup>47.</sup> NATO Climate and Security Action Plan 2021.

<sup>48.</sup> NATO Climate and Security Action Plan, para. 7. Compare with the recent Brookings Foundation report, which describes climate change as 'the primary existential threat faced by allies [...] which will of course affect NATO operations (including through its impacts on low-lying military bases) and the livelihoods - and potentially political systems - of NATO nations'. Agneska Bloch and James Goldgeier, "Finding the Right Role for NATO in Addressing China and Climate Change," *The New Geopolitics Europe Report* (Brookings-Robert Bosch Foundation Transatlantic Initiative, October 2021), 1.

ties<sup>49</sup> to the broader effects on the geopolitical environment and the consequent state behaviour, and human security and mobility worldwide. Operationally, climate change and the related extreme weather events impact the capacity of the militaries to carry out their tasks.<sup>50</sup> Geopolitically, the opening up of new shipping lines due to the melting icecap potentially increases instability, new economic pressures, and geostrategic competition.<sup>51</sup> Human security-wise, adverse implications are considered to have a disproportionate impact on women and girls, poor and vulnerable populations, potentially exacerbating state fragility, fuelling conflicts and leading to displacement and migration - which could become part of the future threats and challenges facing NATO.<sup>52</sup> The prospect of humanitarian disasters, regional tensions, and violence is tied to NATO's understanding of environment-related security challenges.

#### Textbox 3. NATO Climate Change and Security Action Plan (2021)

NATO Climate Change and Security Action Plan (2021), with the expected delivery of the first progress report at the Alliance's 2022 Summit, aims to:

- (i) increase *awareness* by conducting annual assessments of the impact of climate change on its strategic environment, missions, and operations.<sup>53</sup>
- 49. Climate change has the most immediate effect on NATO's air and maritime operations; e.g., increased sand and dust storms create visual flight restrictions, whereas the Alliance's critical infrastructure remains vulnerable to flooding in places like Norfolk, Virginia. Bloch and Goldgeier, "Right Role for NATO," 9.
- 50. '[T]est the resilience of our military installations and critical infrastructure, impair the effectiveness of our capabilities, and may create harsher conditions for our military operations and missions'. NATO Climate Change and Security Action Plan, para. 2. On specific operational impact of climate change for NATO, see further: Rene Heise, "NATO Is Responding to New Challenges Posed by Climate Change," *NATO Review*, April 1, 2021, https://www.nato.int/docu/review/articles/2021/04/01/nato-is-responding-to-new-challenges-posed-by-climate-change/index.html.
- 51. NATO Climate Change and Security Action Plan, para. 3. Note, however, that for the time being most shipping through the northern sea route still remains internal, not from Shanghai to Rotterdam, for example.
- 52. NATO Climate Change and Security Action Plan, para. 4.
- 53. 'To this end, NATO will conduct an annual Climate Change and Security Impact Assessment. This Assessment will analyse the impact of climate change on NATO's strategic environment and NATO's assets, installations, missions and operations. To support this work, NATO will also integrate climate change considerations into security risk and re-

- (ii) adapt to *climate change* by incorporating pertinent consideration into its 'full spectrum of work, ranging from defence planning and capability development to civil preparedness and exercises'.
- (iii) contribute to the mitigation of climate change by developing a mapping methodology to help member states measure GHG emissions from military activities and installations with a goal to formulate voluntary goals to reduce such emissions.
- (iv) enhance outreach via strengthening exchanges with partner countries and international and regional organisations (incl. the EU and UN); civil society, academia, and industry to 'contribute to the global response to climate change.<sup>54</sup>

# Level of Ambition

NATO's declared scope of climate change-related activities falls under the categories *environmental security*<sup>55</sup> and *environmental protection*.<sup>56</sup> NATO aspirations regarding climate change go beyond the adaptation of its armed forces to a security environment impacted by the effects of climate change in various ways: The declared aim is to cut military emissions by using more sustainable technologies and 'consider[ing] voluntary targets for Allies to progressively cut those emissions.<sup>57</sup> The NATO 2021 Brussels Summit Communiqué invited the Secretary General 'to formulate a realistic, ambitious and concrete target for the reduction of greenhouse gas emissions by the NATO political and military structures and facilities', with an assessment of 'the feasibility of reaching net zero emissions by 2050'.<sup>58</sup> Yet even though the Alliance's climate change-re-

silience assessments and civil advice on the security situation in regions of key interest to the Alliance. In addition, NATO will leverage its science and technology programmes and communities to support research on the impact of climate change on security, including gender perspectives in the context of NATO's Women, Peace and Security policy'. NATO Climate Change and Security Action Plan, para. 9.1.

<sup>54.</sup> NATO Climate Change and Security Action Plan.

<sup>55.</sup> That is, addressing security challenges emanating from the physical and natural environment, such as extreme weather conditions, depletion of natural resources, and pollution.

Namely, protecting the physical and natural environment from the harmful and detrimental impact of military activities.

<sup>57.</sup> Jens Stoltenberg's NATO 2030 speech, 2020.

<sup>58.</sup> NATO, "Brussels Summit Communiqué."

lated outreach activities are globally oriented in principle, NATO's specific initiatives are currently more bound to managing the environmental imprint of its activities, installations, and forces in a narrower sense.

#### Delivery/Action

The climate change-related NATO activity portfolio includes disaster response; awareness-raising, training, and education of Allied military officers; local capability-building support to partner countries; work on enhancing energy efficiency and fossil fuel independence; building environmentally friendly infrastructures; protecting the environment from the damaging effects of military operations; and adapting the military assets and capabilities to cope with extreme weather conditions.<sup>59</sup> At the policy level, it is postulated that NATO-led forces 'must strive to respect environmental principles and policies under all conditions'.<sup>60</sup> NATO measures pertain to safeguarding hazardous materials (incl. fuels and oils), treating waste water, reducing fossil fuel consumption, managing waste, and putting environmental management systems in place during NATO-led activities.

There are two dedicated NATO groups currently addressing environmental protection: the Environmental Protection Working Group (EPWG) (under the Military Committee Joint Standardization Board, which reports to the Military Committee) and the Specialist Team on Energy Efficiency and Environmental Protection (STEEEP) (under the Maritime Capability Group 'Ship Design and Maritime Mobility', which reports through the NATO Naval Armaments Group to the Conference of National Armaments Directors). The overarching policy document stipulating NATO military principles and policies for environmental protection (2003, updated in 2011) delineates the responsibilities of military commanders for environmental protection during the preparation and execution of military activities. Respective training is part of the Allied forces' curriculum at strategic, operational, and tactical levels.

Symbolically, NATO Secretary General Jens Stoltenberg, as a former Norwegian Minister of the Environment and former UN Special Envoy

<sup>59.</sup> NATO, "Environment, climate change and security", https://www.nato.int/cps/en/natohq/ topics\_91048.htm.

<sup>60.</sup> Ibid.

on Climate Change, personally embodies the significance of the climate change management agenda for the Alliance, which helps to boost NA-TO's 'green' actor profile. NATO's pertinent initiatives are conducted via its Science for Peace and Security (SPS) programme, the Euro-Atlantic Disaster Response Coordination Centre (EADRCC) and Partnership for Peace Trust Fund projects. Discussions on enhancing NATO efforts in civil emergencies and regarding energy efficiency and renewable power are ongoing. Since 2004, NATO has been an associated partner of the Environment and Security Initiative (ENVSEC, est. 2003), which is a partnership between the OSCE, the Regional Environmental Center for Central and Eastern Europe (REC), the UNDP, the UN Economic Commission for Europe, and the UN Environment Programme.<sup>61</sup>

In sum, there is an inevitable incompatibility between NATO's global climate change mitigation ambitions and its effectively more bounded adaptation bias towards climate change. Eventually, being a progressive climate actor is bound to take a back seat for a security alliance with a core mission to deter and defend against clearly identifiable opponents. Regardless, as Rene Heise from the NATO Emerging Security Challenges Division and the Global Military Advisory Council on Climate Change has recently noted, NATO response is already 'overdue'.<sup>62</sup> Consequently, the Allies' measurement and provision of standardised environmental data to improve predictability and climate modelling, as well as the probing of innovative technologies in aviation and in the maritime domain, are deemed crucial in the immediate perspective for NATO. Yet as Agneska Bloch and James Goldgeier rightly note in a recent report, 'NATO should not and will not become the primary forum through which allies seek to tackle climate change', nor would militarising the transatlantic response to climate change be the best way to address the problem. Practically speaking, NATO has only begun to 'climatise' its mission by gradually integrating climate change responsiveness in its full spectrum of activities.<sup>63</sup> While NATO clearly acknowledges the security implications of climate change, its level of ambition towards tackling the

<sup>61.</sup> Ibid.

Rene Heise, "NATO Is Responding to New Challenges Posed by Climate Change," NATO Review, April 1, 2021, https://www.nato.int/docu/review/articles/2021/04/01/nato-isresponding-to-new-challenges-posed-by-climate-change/index.html.

<sup>63.</sup> Bloch and Goldgeier, "Right Role for NATO," 8-13.

climate-security nexus, as well as the actual delivery on the climatisation measures of its policies, remains more limited (see Figure 2). The Russian invasion of Ukraine in February 2022 has made the imperative to tackle energy security in conjunction with the Alliance's climate change policies ever more compelling.<sup>64</sup>

#### 2.3.1.2. The European Union (EU): 'An Exemplary Leader'

General climate action-wise, the EU stands out as a vocal and committed international actor, also on global climate justice:<sup>65</sup> it has led on the implementation of the Paris Agreement and the Sustainable Development Goals, financing the green economy, and energy transition around the world.<sup>66</sup> However, many of its relevant initiatives are either too recent or yet to be put in practice. The EU's coherent record on climatising its security policy is further constrained by its perennially debated security actor profile in the first place. Consequently, as a security actor, the EU is not quite on par with states and military alliances like NATO.<sup>67</sup> Consequently, the EU scores 'high' on its declared intention and ambition and the higher end of medium on the granularity of the action plans in relation to the climate change-security nexus (see Figure 2).

#### Intention

Climate change has a prominent presence in EU strategic documents, with the early recognition of the related risks 'not just of a humanitarian nature', but also including 'political and security risks that directly affect European interests'.<sup>68</sup> The EU Global Strategy (EUGS, 2016) identifies

<sup>64.</sup> Jamie Shea, "NATO and Climate Change: Better Late than Never," *The German Marshall Fund of the United States*, March 11, 2022, https://www.gmfus.org/news/nato-and-climate-change-better-late-never.

<sup>65.</sup> Franziskus von Lucke, Thomas Diez, Solveig Aamodt and Bettina Ahrens, *The EU and Global Climate Justice: Normative Power Caught in Normative Battles* (Abingdon, Oxon: Routledge, 2021).

<sup>66.</sup> European External Action Service, "The European Union's Global Strategy Three Years On, Looking Forward (EUGS)," 2019, 53.

<sup>67.</sup> See further Nilsson, Martin, "The European Union and Global Climate Change," in *Climate Change, Policy and Security*, ed. Wallace and Silander, 131-49.

<sup>68.</sup> High Representative and the European Commission, *Climate Change and International Security*, Report to the European Council, S113/08, March 14, 2008, https://www.consilium.europa.eu/uedocs/cms\_data/docs/pressdata/en/reports/99387.pdf. The report noted that '[c]limate change will heavily affect Europe's natural environment and nearly all sections of society and the economy' (p. 3).

global climate change as a 'threat multiplier'. The umbrella framework for climatising EU security and defence policies is provided by the European Green Deal (2019), geared to make the EU economy environmentally sustainable and with a goal to reach climate neutrality by 2050.

The Commission's European Green Deal (2019), stipulating the aspiration for Europe to be the first climate-neutral continent, acknowledges 'the global climate and environmental challenges as significant threat multipliers and sources of instability', taking note of the geopolitical effects of 'the ecological transition', along with the impacts on 'global economic, trade and security interests'. The related challenges are accordingly recognised as potential sources of conflict, food insecurity, population displacement, and forced migration. The EU Climate Change and Defence Roadmap (CCDR, 2020)<sup>69</sup> delineates actions to deal with the climate change along both the civilian and military dimensions of the Common Security and Defence Policy (CSDP).<sup>70</sup> It identifies three distinct, yet interlinked, areas of action:

- the operational dimension (i.e. weighing the climate change impact on the frequency of deployment, the implementation of CSDP tasks, and operating conditions)
- 2. capability development
- 3. strengthening multilateralism and partnerships

The new EU strategy on adaptation to climate change, adopted in February 2021, further specifies how the EU can adapt to the 'unavoidable impacts of climate change' and become 'climate resilient' by 2050.

The 2016 EUGS describes climate change as 'a threat multiplier that catalyses water and food scarcity, pandemics and displacement'; indeed, as more of a potential 'conflict exacerbator' among a wide repertoire of challenges (incl. terrorism, hybrid threats, economic volatility, and en-

<sup>69.</sup> CCDR contributes to the goals of the European Green Deal by seeking to reduce the emissions in the defence sector as part of the collective effort towards climate neutrality by 2050. European External Action Service. "Climate Change and Defence Roadmap (CCDR)," November 9, 2020, https://data.consilium.europa.eu/doc/document/ST-12741-2020-INIT/en/pdf

<sup>70.</sup> See also the Council conclusions on Climate Diplomacy (January 2020), which acknowledge climate as a threat multiplier to international stability and security, 'in particular affecting those in most fragile and vulnerable situations'.

ergy insecurity)<sup>71</sup> than an urgently compelling threat. The more recent EU documents have switched gears, referring to climate change as 'an existential threat to humanity and biodiversity'.<sup>72</sup> Today, the EU acknowledges the climate-security nexus as an important area for further deepening the Union's trademark 'joined-up approach' (cf. the humanitarian-development-peace and internal-external nexuses) for 'the ecological crisis we are facing is driving and exacerbating insecurity and conflict'.<sup>73</sup> Hence, the declared goal of the 'mainstreaming of climate in the EU's energy, trade, development as well as foreign and security policies'.<sup>74</sup> Climate change is recognised as a transnational challenge, the addressing of which can only be effective through 'multilateral action supporting sustainable development'.<sup>75</sup>

From the EU perspective, climate change is predominantly viewed as a human security challenge, affecting peace and security across the globe by increasing sea-levels, driving up temperatures, and increasing the frequency, intensity, and impact of extreme weather events. 'These developments might have a geopolitical impact, including as regards global maritime security. They will limit the availability of food and water, undermine human health, cause people displacement and degrade infrastructure and economies, biodiversity and resources'.<sup>76</sup>

Operationally, the EU is concerned about the potential of climate change and environmental degradation to lead to increased violence in the existing conflict settings, generating additional humanitarian needs and, hence, potentially a growing demand for military and civilian Common Security and Defence Policy (CSDP) missions and operations, alongside increased calls for disaster management and relief efforts on

European External Action Service. "Shared Vision, Common Action: A Stronger Europe." A Global Strategy for the European Union's Foreign and Security Policy (EUGS), 2016, 29, 9, https://eeas.europa.eu/archives/docs/top\_stories/pdf/eugs\_review\_web.pdf

<sup>72. &#</sup>x27;It acts as a threat multiplier with serious implications for international stability and security across the globe, in particular affecting those in most fragile and vulnerable situations. Climate change is also a wake-up call for the security and defence community to anticipate, prepare and prevent the security challenges of a warming planet and more extreme weather events'. European External Action Service, "Climate-Proof Security," 2020.

<sup>73.</sup> EUGS, 2019, 29.

<sup>74.</sup> Ibid.

<sup>75.</sup> EUGS, 2019, 8.

<sup>76.</sup> CCDR, 2020, 4.

the EU's part, both within the Union and externally.<sup>77</sup> The prospect of 'large swaths of inhospitable territories' and becoming a 'safe haven for adverse forces' is noted and viewed with trepidation. Further note is taken of climate change likely generating new opportunities for organised crime (via deforestation and illegal logging) that the EU feels bound to address.<sup>78</sup>

#### Level of Ambition

The EU has declared its commitment to climate change mitigation (i.e. actions that reduce GHG emissions) and adaptation (i.e. actions aimed at increasing the ability to adapt to the adverse impacts of climate change and foster 'climate resilience').<sup>79</sup> Climate resilience has emerged as an EU priority, forming an integral part of the Union's work on conflict prevention and sustainable security, and including EU support to the 'Great Green Wall' against desertification in the Sahara and Sahel, disaster risk reduction in small islands, investment in clean energy in developing countries, and the engagement of the Arctic states and indigenous peoples.<sup>80</sup>

The EU list of climate fragility-related 'paths to resilience' is extensive.<sup>81</sup> There is a persistent promise to deepen cooperation with just about every other actor to ensure effective climate action in the EU playbook.<sup>82</sup> Energy and environmental sector reform policies mirroring security sector reform efforts are envisioned as assistance tools to support partner countries along a path of energy transition and climate action.<sup>83</sup> Systematical work on the climate-security nexus is declared 'crucial'.<sup>84</sup>

The declared aspiration is to 'lead by example'; that is, by implementing the EU's own commitments regarding sustainable development and

79. EUGS, 2016; see also CCDR, 2020, 12, annex.

<sup>77.</sup> CCDR, 2020, 5.

<sup>78.</sup> CCDR, 2020, 3.

<sup>80.</sup> EUGS, 2019, 40.

<sup>81.</sup> EUGS, 2016, 9.

<sup>82.</sup> For example, the EUGS, 2016, 43 vows to partner with the UN and the G20, as well as new donors, civil society and the private sector on humanitarian action, sustainable development, and climate change.

<sup>83.</sup> EUGS, 2016, 27.

<sup>84.</sup> EUGS, 2019, 26.

climate change.<sup>85</sup> Less explicitly declared, yet an equally palpable aspiration for the EU Green Deal and its overall climate focus, is to serve as a foreign policy tool and a distinct global identity provider for the Union.<sup>86</sup> The scope and substance of the climate challenge enables the EU thus to increase its geopolitical relevance, enabling use of its green profile for leverage in its international relations in the immediate neighbourhood and beyond.<sup>87</sup>

# Textbox 4. EU Climate Change and Defence Roadmap (CCDR, 2020): the EU Areas of Action

- *Operational dimension*: situational awareness, early warning, and strategic foresight are to be enhanced, alongside mainstreaming climate change and environmental aspects into the planning and implementation of CSDP civilian and military missions and operations.<sup>88</sup>
- *Capability development*: the effectiveness of military equipment under extreme weather conditions and more energy efficient technologies for the EU missions and operations is to be guaranteed, together with overall reduction of the carbon and environmental footprint of the defence sector. The gist is to reduce armed forces energy demand and to increase their energy resilience, integrating climate change mitigation and adaptation into EU training and exercises together with environmental protection aspects.<sup>89</sup>

- On the ontological (in)security in the EU, see the *European Security* special issue, eds Catarina Kinnvall, Ian Manners, and Jennifer Mitzen, 27, no. 3 (2018), https://www.tandfonline.com/doi/full/10.1080/09662839.2018.1497977.
- 87. On the geopolitical repercussions of the EU Green Deal for oil- and gas-producing countries in the EU neighbourhood on global energy markets (and for the European energy security and global trade), see Mark Leonard, Jean Pisani-Ferry, Jeremy Shapiro, Simone Tagliapietra, and Guntram Wolff, "The Geopolitics of the European Green Deal," *Policy Contribution* 4 (February 2021) (Bruegel Foundation and the European Council on Foreign Relations), https://www.bruegel.org/wp-content/uploads/2021/02/PC-04-GrenDeal-2021-1.pdf.
- 88. CCDR, 2020, 5.
- 89. CCDR, 2020, 7.

EUGS, 2016, 40. The EUGS (2016) promised to increase climate financing, drive climate mainstreaming in multilateral fora, raise the ambition for review foreseen in the Paris agreement, and work for clean energy cost reductions.

The future plans include allocating funding for improved resource efficiency- and defence-oriented solutions for energy generation, storage, efficiency, and management, and on applications to operate under extreme conditions. EU member states are accordingly called to increase the energy efficiency of their armed forces by developing a national action plan, establishing a defence energy task force, introducing respective benchmarks, or deploying an 'Energy Action Officer'. The aim is to include a climate and environmental assessment in procurement and capability development processes, along with taking climate, energy, and environmental consideration into account when building new or renovating existing military infrastructure within and outside the EU (the use of the Energy Efficiency First principle).<sup>90</sup>

• *Diplomatic outreach*: the EU's by default emphasis on *diplomatic outreach* in multilateral fora (e.g., the UN, NATO) and partnership frameworks dealing with climate change and defence ('while highlighting the EU's global leadership in this regard') completes the list key areas of action to be advanced in addressing the climate change-security nexus.<sup>91</sup>

#### Delivery/Action

The EU praises its own performance on climate action ('a strong record')<sup>92</sup> yet admits the need to urgently scale up the global ambition and response to tackle 'the climate emergency'.<sup>93</sup> As a frontrunner in establishing and advancing various global climate agreements<sup>94</sup> and with the status as the world's largest climate funder, the EU seeks to stand

<sup>90.</sup> CCDR, 2020, 9.

<sup>91.</sup> European External Action Service, "Climate-Proof Security," 2020.

<sup>92.</sup> European External Action Service, "Climate-Proof Security," 2020.

<sup>93.</sup> EU Council conclusions on Climate Diplomacy, 2020, 3. The Council conclusions encourage the UNSC and the UN system 'to create a comprehensive information basis for the UNSC on climate-related security risks, to fully integrate short and long-term climate and environmental risk factors in the assessment and management of threats to peace and security, at country, regional and international levels, and to draw on the expertise of the whole UN system in order to find operational responses to these risks and strengthen UN missions on the ground', ibid., para. 10.

<sup>94.</sup> EUGS, 2019, 15.

out as *an exemplary leader* by assuming its share of the responsibility for climate change mitigation and paving the way for others to follow in its aspiration to become the first climate-neutral continent.<sup>95</sup> The EU has provided a concrete roadmap towards that goal, including the necessary investment and financial tools.<sup>96</sup>

The EU Ocean Governance Agenda and the Global Pact for Environment are cited as key examples of new multilateral initiatives to that effect.<sup>97</sup> In Africa, the EU has worked together with the African Union through disaster risk management and reduction, addressing the illegal exploitation of natural resources and wildlife trafficking, and the overall promotion of sustainable management (particularly in West Africa, as a partner of the Global Alliance for Resilience).<sup>98</sup> Climate change is also one of the top priorities for EU-NATO cooperation.

#### 2.3.2. State Actors on the Climate Change-Security Nexus

# 2.3.2.1. The United States: An Aspirational Global Leader

The US is yet another aspirational global leader in climatising its security policy - emphatically again in its declared goals under the current administration of President Joe Biden, which has marked the US recommitment to the Paris Agreement.<sup>99</sup> Committed to steer the world on a sustainable climate pathway and build domestic and international

- 97. Ibid., 16.
- 98. EUGS, 2019, 23-24.

<sup>95.</sup> On the EU as the leader in tackling climate change, see Rüdiger KW Wurzel and James Connelly (eds), *The European Union as a Leader in International Climate Change Politics* (London: Routledge, 2010); Rüdiger KW Wurzel, James Connelly, and Duncan Liefferink (eds), *The European Union as a Leader in International Climate Change Politics: Still Taking a Lead?* (Abingdon, Oxon: Routledge, 2017); Sebastian Obertühr and Claire Roche Kelly, "EU Leadership in International Climate Policy: Achievements and Challenges," *The International Spectator* 43, no. 3 (2008): 35-50.

<sup>96.</sup> European External Action Service, "Climate-Proof Security," 2020.

<sup>99.</sup> For the evolution of the US policy profile on climate change, see Rita Floyd, Security and the Environment: Securitisation Theory and US Environmental Security Policy (Cambridge: Cambridge University Press, 2006); Franziskus von Lucke, "United States: Climate Change, National Security and the Climatisation of the Defence Sector," in Securitisation of Climate Change, 59-116; Betsy Hartmann, "Lines in the Shifting Sand: The Strategic Politics of Climate Change, Human Security and National Defense," in A Changing Environment for Human Security: Transformative Approaches to Research, Policy and Action, eds Linda Sygna, Karen O'Brien, and Johanna Wolf (London: Routledge, 2013): 72-81; Betsy Hartmann, "Rethinking Climate Refugees and Climate Conflict: Rhetoric, Reality and the Politics of Policy Discourse," Journal of International Development 22, no. 2 (2010): 233-46.

resilience against the impacts of climate change, the US acknowledges the security implications of climate change at operational, humanitarian, and geopolitical levels. The Biden administration policy emphasis is accordingly geared towards building climate resilience, with climate change further incorporated into national security planning and policymaking.<sup>100</sup> Yet while climate change is politically prioritised by the current executive hand of the US government, marking a substantive change from the previous administration, the political declarations thus far stand without the legislative branch's backing of the plans (incl. a loosening of the purse strings). The effectiveness of Biden's pledges remains yet in the delivery of the appropriate climate financing from the Congress, potentially impeded by the looming mid-term elections where the Republicans are predicted to win back the majority. Any current US aspiration in relation to climatising its security policy further faces the prospect of being potentially upset by the re-election of Donald Trump or another climate change denialist in 2024 - albeit institutional persistence of pursuing a more progressive climate security agenda in the security sector than at the federal level already under the presidency of George W. Bush may mitigate this possible backlash. The vulnerability of the world's leading polity to political divisions in Congress and domestic upheaval highlights the performative nature of its current aspirational actor profile label - as deduced from the political pledges of the Biden administration (which include the commitment to reduce US GHG emissions by at least 50% below 2005 levels by 2030). Consequently, for the time being we have scored the US at the higher end of the medium bracket regarding its current level of securitisation of climate change, declaratorily and in practice (see Figure 2).

#### Intention

The US has been cognisant about the environmental changes caused by climate change and the related influences on security politics since the late 1970s, when the CIA commissioned a study to explore the security

<sup>100.</sup> For earlier steps, see von Lucke, "United States;" Daniel Abrahams, "From Discourse to Policy: US Policy Communities' Perceptions of and Approaches to Climate Change and Security," *Conflict, Security & Development* 19, no. 4 (2019): 323-45; Peter H. Gleick, A History of U.S. Defense, Intelligence, and Security Assessments of Climate Change, March 6, 2019, https://www. gleick.com/blog/a-history-of-u-s-defense-intelligence-and-security-assessments-of-climate.

implications of climate change. The next major initiative was taken in 1992, when the US launched the MEDEA programme, bringing the US scientists together in an effort to evaluate satellite images and data and use this in understanding the developments in the earth's environment. Climate change was mentioned in the National Security Strategy as early as in 1991.<sup>101</sup> Since 2010, climate and environmental factors have featured consistently in US military and defence strategies, and they are increasingly incorporated into national security planning and policymaking.<sup>102</sup>

The 2010 Quadrennial Defense Review of the US Department of Defense (DoD) maintained that 'Climate change and energy will play significant roles in the future security environment', with climate change affecting DoD in two broad ways: shaping the operating environment, roles, and missions that the US undertakes, and calling for DoD adjustment to the impacts of climate change on the US facilities and military capabilities. The DoD Climate Change Adaptation Roadmap followed in 2014.<sup>103</sup> The annual Strategic Sustainability Performance Plans (SSPPs) further articulate the DoD's sustainability programme.

The US securitisation of climate change has been gradual, with the most significant pushback at the federal level occurring during the Trump presidency (2017-2021). The 2014 Quadrennial Defence Review took note of climate change primarily as a threat multiplier; whereas the 2014 DoD Climate Change Adaptation Roadmap framed climate change as a challenge and threat to national security, both internally and externally,

<sup>101.</sup> See further Peter Schwartz and Doug Randall, "An Abrupt Climate Change Scenario and Its Implications for United States National Security," *A Pentagon Study on Climate Change* and US National Security, October 2003, https://www.iatp.org/documents/abrupt-climate-change-scenario-and-its-implications-united-states-national-security; CNA, National Security and the Threat of Climate Change, Alexandria, VA, 2007, https://www.cna.org/ cna\_files/pdf/national%20security%20and%20the%20threat%20of%20climate%20change. pdf.

<sup>102.</sup> For example, the 2010 US National Security Strategy identified climate change explicitly as a 'danger': 'real, urgent, and severe. The change wrought by a warming planet will lead to new conflicts over refugees and resources; new suffering from drought and famine; catastrophic natural disasters; and the degradation of land across the globe'. For discussion, see Joshua W. Busby, "Climate Change and US National Security: Sustaining Security amidst Unsustainability," in *Sustainable Security: Rethinking American National Security Strategy*, eds Jeremy Suri and Benjamin Valentino (Oxford: Oxford University Press, 2016).

DoD, "2014 Climate Change Adaptation Roadmap," 2014, https://www.acq.osd.mil/eie/ downloads/CCARprint\_wForward\_e.pdf.

setting forth a series of actions in order to raise the Department's resilience to the impacts of climate change, encompassing (i) plans and operations, (ii) testing and training, (iii) built and natural infrastructure, and (iv) acquisition and supply chain.<sup>104</sup> The 2015 National Security Strategy followed suit by identifying climate change as an 'urgent challenge' and 'a threat', prioritising climate change as the sixth of eight highlighted efforts.<sup>105</sup> The Biden administration's Interim National Security Strategic Guidance of 2021 (INSSG) recognised climate change as a threat to national security, to be confronted as such.

After a systematic backlash towards national and international climate change management efforts during the presidency of Donald Trump,<sup>106</sup> the pendulum swung back when President Biden took office and the US promptly returned to the Paris Accord. Climate change figures predominantly in the Biden administration's INSSG of March 2021, as it is featured among the top four US priorities. The Interim NSS does not mince words when depicting the security repercussions of climate change, describing it in terms of 'the escalating climate crisis' and 'a deepening climate emergency'. Accordingly, the pledge has been made to 'prioritize defense investments in climate resiliency and clean energy,'<sup>107</sup> with a promise to build 'an equitable, clean, and resilient energy future, which is urgently required to head off the existential risk posed by the climate crisis'.<sup>108</sup>

<sup>104.</sup> DoD, "2014 Climate Change."

<sup>105. &#</sup>x27;Climate change is an *urgent and growing threat to our national security*, contributing to increased natural disasters, refugee flows, and conflicts over basic resources like food and water. The present day effects of climate change are being felt from the Arctic to the Midwest. Increased sea levels and storm surges threaten coastal regions, infrastructure, and property. In turn, the global economy suffers, compounding the growing costs of preparing and restoring infrastructure'. The White House. "National Security Strategy", February 2015. Washington D.C. https://obamawhitehouse.archives.gov/sites/default/files/docs/2015\_national\_security\_strategy\_2.pdf

<sup>106.</sup> Famously resisted by states such as California, which declared the environment its 'foreign policy'. See California Governor Gavin Newsom quoted in Dana Goodyear, "Trump's War on California and the Climate," *The New Yorker*, September 21, 2019, https://www.newyorker.com/news/california-chronicles/trumps-war-on-california-and-the-climate.

President Joseph R. Biden, Jr., *Interim National Security Strategic Guidance* (Washington, D.C.: The White House, 2021): 14, https://www.whitehouse.gov/wp-content/up-loads/2021/03/NSC-1v2.pdf.

<sup>108.</sup> INSSG, 17.

Textbox 5. US National Intelligence Estimate on the security impacts of climate change<sup>109</sup>

Key Judgment 1: Geopolitical tensions are likely to grow as countries increasingly argue about how to accelerate the reductions in net GHG emissions necessary to meet the Paris Agreement goals. Debate will centre on who bears more responsibility to act and to pay - and how quickly - and countries will compete to control resources and to dominate the new technologies needed for the clean energy transition. Most countries will face difficult economic choices and will likely count on technological breakthroughs to rapidly reduce their net emissions later. China and India will play critical roles in determining the trajectory of temperature rise.

**Key Judgment 2:** The increasing physical effects of climate change are likely to exacerbate cross-border geopolitical flashpoints as states take steps to secure their interests. The reduction in sea ice is already amplifying the strategic competition in the Arctic over access to its natural resources. Elsewhere, as temperatures rise and more extreme effects manifest, there is a growing risk of conflict over water and migration, particularly after 2030, and an increasing chance that countries will unilaterally test and deploy large-scale so-lar geoengineering - creating a new area of disputes.

**Key Judgment 3:** Scientific forecasts indicate that intensifying physical effects of climate change out to 2040 and beyond will be most acutely felt in developing countries, which are also assessed as the least able to adapt to such changes.

These physical effects will increase the potential for instability and possibly internal conflict in these countries, in some cases creating additional demands on US diplomatic, economic, humanitarian, and military resources. Despite geographic and financial resource advantages, the United States and partners face costly challenges that will become more difficult to manage without concerted effort to reduce emissions and cap warming.

<sup>109.</sup> National Intelligence Council, National Intelligence Estimate: Climate Change and International Challenges to US National Security through 2040, mNIC-NIE-2021-10030A, 2021, https://www.dni.gov/files/ODNI/documents/assessments/NIE\_Climate\_Change\_and\_National\_Security.pdf. For discussion, see Carol Dumaine, "Redefining Security," Issues in Science and Technology 38, no. 2 (2022): 81-83, https://issues.org/ redefining-security-national-intelligence-estimate-climate-dumaine/.

#### Level of Ambition

Acknowledged since the Clinton-Gore administration, with significant movement under George W. Bush's presidency, an emphatic priority for Obama, and utterly downplayed and ignored by the Trump administration: Climate change has boldly returned to the US executive agenda as of 2021. On 27 January 2021, President Biden issued the 'Executive Order on Tackling the Climate Crisis at Home and Abroad', declaring climate considerations to be 'an essential element of United States foreign policy and national security' and setting out the provisions for the administration to act on each of the national security issues threatened by climate change.<sup>110</sup> The Biden administration has pledged to 'work with other countries and partners, both bilaterally and multilaterally, to put the world on a sustainable climate pathway' and to 'move quickly to build resilience, both at home and abroad, against the impacts of climate change that are already manifest and will continue to intensify according to current trajectories.<sup>2111</sup>

#### Delivery/Action

The executive branch of the US government has identified concrete steps forward in addressing the climate change-security nexus,<sup>112</sup> and it has declared its renewed aspiration to become the world's leading nation on addressing both the domestic and international security implications of climate change. Yet as the new political leadership remains relatively recent in the country, the declared intentions and ambitions are being institutionalised on the go. President Biden appointed John Kerry as a Special Presidential Envoy for Climate, with the purpose of elevating the

<sup>110.</sup> The White House, "Executive Order on Tackling the Climate Crisis at Home and Abroad", January 27, 2021, Presidential Actions, https://www.whitehouse.gov/briefing-room/ presidential-actions/2021/01/27/executive-order-on-tackling-the-climate-crisis-at-homeand-abroad/.

<sup>111.</sup> Executive Order, 2021.

<sup>112.</sup> See also the DoD Climate Change Risk Analysis. For additional reading and latest updates on US initiatives see: DoD, "Defense Climate Risk Analysis," October 2021, Washington D.C., https://media.defense.gov/2021/Oct/21/2002877353/-1/-1/0/DOD-CLI-MATE-RISK-ANALYSIS-FINAL.PDF; National Intelligence Council, *National Intelligence Estimate*; The White House, "Report on the Impact of Climate Change on Migration," October 2021, Washington D.C., https://www.whitehouse.gov/wp-content/uploads/2021/10/Report-on-the-Impact-of-Climate-Change-on-Migration.pdf; Department of Homeland Security, "Strategic Framework for Addressing Climate Change," October 21, 2021, Washington D.C., https://www.dhs.gov/sites/default/files/publications/dhs\_strate-gic\_framework\_10.20.21\_final\_508.pdf.

climate change issue and the commitment of his administration to tackle it. Further, to facilitate the organisation and deployment of a government-wide approach to combating the climate crisis, a National Climate Task Force has been put in place. As per President Biden's pertinent 2021 Executive Order, the security implications of climate change are to be considered and annual updates provided by the Secretary of Defence, the Chairman of the Joint Chiefs of Staff, and the Secretary of Homeland Security for the relevant strategy, planning, and programming documents, and processes of the US as of January 2022.<sup>113</sup> In the meantime, the US military remains a major polluter, emitting more GHGs than entire countries, like Denmark and Portugal, with the Department of Defense accounting for nearly 80% of the federal government's fuel consumption.<sup>114</sup>

#### 2.3.2.2. The UK: A Global Trailblazer

Regarded as a leading country for its overall climate policy,<sup>115</sup> the UK is also seeking status as a global trailblazer in climatising its security and defence. Considering climate change as one of the most important issues of our time, the UK has an ambitious climate change management agenda and has spearheaded relevant diplomatic initiatives, including holding the first ever high-level meeting on the impact of climate change on peace and security at the UN Security Council under the UK chairmanship in 2021. Pledging world leadership in climate action in general, the UK has promised to commit £11.6bn to International Climate Finance, including £3bn for nature financing from 2021 to 2026. It has further established the Climate Change and Energy Network as a dedicated diplomatic green structure.<sup>116</sup> Considering the UK's declared intentions,

<sup>113.</sup> See section 102 of the Executive Order.

<sup>114.</sup> Neta C. Crawford, "Pentagon Fuel Use, Climate Change and the Costs of War," Costs of War Project, Brown University: Watson Institute, November 13, 2019, https://watson.brown.edu/costsofwar/files/cow/imce/papers/Pentagon%20Fuel%20Use%2C%20Climate%20 Change%20and%20the%20Costs%20of%20War%20Revised%20November%202019%20 Crawford.pdf; Sonner Kehrt, "The U.S. Military Emits More Carbon Dioxide into the Atmosphere than Entire Countries Like Denmark or Portugal," *Inside Climate News*, January 18, 2022, https://insideclimatenews.org/news/18012022/military-carbon-emissions/.

<sup>115.</sup> The UK was the first advanced economy to set a net zero target for 2050. See Climate Change Performance Index, https://ccpi.org/country/GBR/.

<sup>116.</sup> HM Government, "Global Britain in a Competitive Age," The Integrated Review of Security, Defence, Development and Foreign Policy (London: March 2021), https://assets.pub-

ambitions, and actual delivery on climatising its security and defence, we have given a high score to its overall level of securitisation of the challenge in the defence and security policy domain (see Figure 2).

#### Intention

The UK initiated the first debate on climate security at the UNSC in 2007. Climate change first made an appearance in the UK National Security Strategy in 2008 as an area of growing concern for national security.<sup>117</sup> Flooding English rivers during the summer of 2007, together with other extreme weather events, contributed to the growing British awareness of the security implications of climate change. The 2008 NSS accordingly identified the issue as 'potentially the greatest challenge to global stability and security, and therefore to national security.<sup>118</sup> Meanwhile, climate change was recognised as a driver for change, providing an opportunity to actually do something in terms of resilience-building and international cooperation.<sup>119</sup> The 2014 Ministry of Defence 'Strategic Trends Programme: Future Operating Environment 2035'<sup>120</sup> and its related predictions recognised climate change as a challenge to society as well as the military for the increasing requests to support the humanitarian assistance around the globe. In the latest respective UK policy

- 118. Cabinet's Office, "National Security Strategy," 18.
- 119. Cabinet's Office, "National Security Strategy," 20.

lishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/975077/ Global\_Britain\_in\_a\_Competitive\_Age-\_the\_Integrated\_Review\_of\_Security\_\_Defence\_\_Development\_and\_Foreign\_Policy.pdf

<sup>117.</sup> Cabinet's Office, Crown Documents 2008, "The National Security Strategy of the United Kingdom: Security in an Interdependent World," 20, https://assets.publishing.service.gov. uk/government/uploads/system/uploads/attachment\_data/file/228539/7291.pdf. Accord-ingly, '[c]limate change is potentially the greatest challenge to global stability and security, and therefore to national security. Tackling its causes, mitigating its risks and preparing for and dealing with its consequences are critical to our future security, as well as protecting global prosperity and avoiding humanitarian disaster'. It was Margaret Thatcher's iconic speech at the UN General Assembly on 8 November, 1989, the day before the Berlin Wall fell, whereby the UK put climate change on the global diplomatic agenda. See the UN General Assembly, Environmental Issues, British PM Margaret Thatcher, November 8, 1989, Speech, https://www.youtube.com/watch?v=VnAzoDtwCBg.

<sup>120.</sup> Accordingly, climate change is seen as the most important driver of changes in the Arctic and sub-Sahara, due to its connections to changes in demography and migration moves, specifically in coastal areas. UK MoD, 2014, "Strategic Trends Programme Future Operating Environment 2035," https://assets.publishing.service.gov.uk/government/uploads/system/ uploads/attachment\_data/file/646821/20151203-FOE\_35\_final\_v29\_web.pdf.

document, climate change is identified as a phenomenon that threatens peace: 'a significant challenge and something which will ... affect the way we protect, operate and fight - from the warming of our oceans through to the increased requirement for humanitarian and disaster relief'.<sup>121</sup> Published in March 2021, the MoD Climate Change and Sustainability Strategic Approach sets the goal and horizon towards 2050, outlining the ambition, the principles, and the methods needed to meet the related challenges.<sup>122</sup>

#### Level of Ambition

These ambitions are set around adaptation and resilience, sustainability and net zero, and last but not least: global leadership. On the one hand, the UK has pledged a continued 'leading international role in collective security, multilateral governance, tackling climate change and health risks, conflict resolution and poverty reduction.<sup>123</sup> On the other, the country admits the need to be 'realistic and adapted to circumstances.<sup>124</sup> Viewing its resilience 'intertwined with global resilience', the UK is committed to multilateral solutions in tackling climate change among other transnational challenges, such as biodiversity loss, biosecurity, and energy security crises. Tackling climate change and biodiversity loss is consequently declared the UK's foremost international priority.<sup>125</sup>

#### Delivery/Action

The repercussions of climate change are increasingly seen as challenging the existing defence and security planning assumptions for basing, logistics, or the environmental envelope for capability development.<sup>126</sup> The UK response to climate change-related challenges is outlined in

- 123. HM Government, Integrated Review, 11.
- 124. HM Government, Integrated Review, 16.
- 125. HM Government, Integrated Review, 87; see further 89-93.

<sup>121.</sup> United Kingdom Ministry of Defence, "Ministry of Defence Climate Change and Sustainability Strategic Approach," 2021, 4, https://assets.publishing.service.gov.uk/ government/uploads/system/uploads/attachment\_data/file/973707/20210326\_Climate\_ Change\_Sust\_Strategy\_v1.pdf.

<sup>122.</sup> UK MoD, "Climate Change and Sustainability," 8.

<sup>126.</sup> United Kingdom Ministry of Defence, "Global Strategic Trends: The Future Starts Today", sixth edition, https://assets.publishing.service.gov.uk/government/uploads/system/ uploads/attachment\_data/file/771309/Global\_Strategic\_Trends\_-\_The\_Future\_Starts\_Today.pdf, 61.

its Climate Change and Sustainability Strategic Approach,<sup>127</sup> with an initial action plan (for 2021-2025) designed to deal with twelve specific areas, ranging from sustainable culture and behaviour, governance to operational capability, support, maintenance, logistics, procurement, and research and development (R&D). The related British actions are to be monitored by a climate change and sustainability directorate, which coordinates and coheres the defence approach, owning the carbon and sustainability target process and policy. The directorate is designated to oversee the delivery of the strategic approach and a future implementation plan. The UK sees the core strategic implications of climate change for its defence and security touching upon a range of areas, including: (i) concepts and doctrine, (ii) training, (iii) personnel, (iv) infrastructure, (v) equipment, (vi) information, (vii) organisation, (viii) logistics, and (ix) interoperability.<sup>128</sup> The country's climate finance has leveraged £4.1bn public and £2.2bn private finance for climate action across Africa, Asia, and Latin America.<sup>129</sup> The UK has pledged to maintain its contribution to Arctic science, with an aim to understanding the implications of climate change.<sup>130</sup>

#### 2.3.2.3. France: 'An Environmental Security Pioneer'

France has also been among the states spearheading diplomatic efforts to frame climate change as a threat to international peace and security, not least due to its prominent security interests and presence in the Sahel region – one of the most immediately climate change-affected areas of the world.<sup>131</sup> Along with Germany, the UK, and other partners, France hosted an Arria-formula meeting in the UN Security Council in April 2020 to assess climate-related security risks and exchange views on the role of the UN in preventing climate-related conflicts. French President Emmanuel Macron has called for the UNSC to appoint a special envoy

<sup>127.</sup> UK MoD, "Climate Change and Sustainability," 20.

<sup>128.</sup> See Kate Cox, Anna Knack, Martin Robson, Neil Adger, Pauline Paille, Jon Freeman, James Black, and Ruth Harris, A Changing Climate: Exploring the Implications of Climate Change for UK Defence and Security (Santa Monica, CA: RAND Corporation, 2020), https:// assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/ file/930787/dcdc\_report\_changing\_climate\_gsp\_RR-A487.pdf.

<sup>129.</sup> HM Government, Integrated Review, 9.

<sup>130.</sup> HM Government, Integrated Review, 64.

<sup>131.</sup> See further Estève, "French Military."

for climate security, 'for the fight against climate change and for the protection of the environment is a matter of peace and security'.<sup>132</sup>

The self-declared French aspiration is to be 'a pioneer in environmental security' and to 'contribut[e] to human security'.<sup>133</sup> Conceptually, France has advanced the notion of 'environmental security anticipation' in order 'to prevent the consequences of ecosystem and climate changes when they are likely to increase pressure on our armed forces or to raise regional tensions'.<sup>134</sup> For its intention and ambition, we have scored France high, whereas its delivery on the declared goals puts France's overall securitisation level of climate change in the security and defence domain into the higher end of the medium bracket (see Figure 2).

#### Intention

For France, the 2015 UN Climate Change Conference (COP21) in Paris represented a turning point in the climatisation of security and defence. Previously, no acknowledgements of the security implications of climate change were present in French security policy documents.<sup>135</sup> Nevertheless, climate change had already figured prominently in the French Defence and National Security Strategic Review (2017) among 'the multiple weaknesses aggravating crises' (alongside demographic and migration pressures, sanitary risks, energy rivalries, and organised crime).<sup>136</sup> The effects of climate change are accordingly seen among the phenomena exacerbating vulnerability and destabilisation. The document notes the increasing frequency of 'major climate events' and acknowledges the particular vulnerability of the French overseas departments and territories to the related risks. Specifically, the Sahel region (Niger, Mauritania, Mali, and Chad), Southeast Asia (Pakistan and Bangladesh), as well as the Pacific island states are highlighted as be-

<sup>132.</sup> Reuters, "France's Macron proposes appointment of UN climate security envoy", February 23, 2021, https://www.reuters.com/article/us-climate-security-france-idUSKBN2AN1R3. Germany has also done this repeatedly.

<sup>133.</sup> Défense et Climat: La France s'engage/Defence and Climate: France is Committed, 2018, https://www.planetarysecurityinitiative.org/news/france-includes-climate-change-key-feature-its-defence-activities.

<sup>134.</sup> Défense et Climat, 11.

<sup>135.</sup> Consider, for example, the 2008 White Paper: http://archives.livreblancdefenseetsecurite. gouv.fr/2008/IMG/pdf/white\_paper\_press\_kit.pdf

<sup>136.</sup> Ministère des Armées, "Defence and National Security Strategic Review", 2017, chapt. 3.2, https://www.dsn.gob.es/sites/dsn/files/2017%20France%20Strategic%20Review.pdf

ing among the most exposed. The food security implications of climate change, increased competition over the control of resources, and migration pressures are noted among the repercussions of climate change. Furthermore, the document notes the potential of the Arctic, due to global warming, to 'one day become an area of confrontation'. The 2018 MoD document outlines in detail how climate change impacts its work and the meaning of climate change for the country.<sup>137</sup>

France's Defence Strategy in the Indo-Pacific (2019) reiterates the need to take action against climate change, maintaining that '[t]he involvement of the French Ministry for the Armed Forces will substantially contribute to implement these orientations'.<sup>138</sup> The document highlights France's development of 'a policy of environmental security anticipation' wherein the French Ministry of the Armed Forces is contributing in three areas:

- (i) environmental risk analysis
- (ii) support for strategic research and to targeted science programmes
- (iii) the organisation of international events throughout the region.<sup>139</sup>

The central role of French forces in 'securing the areas impacted by ecological transition and in national natural heritage protection' is noted, highlighting the following areas of cooperation: 'adaptation of coastal military infrastructures, preservation and sustainable exploitation of overseas ecosystems, improvement of cyclone early warning, improvement of shoreline surveys and maritime surveillance coverage, military health'.<sup>140</sup>

On 12 November 2021, French Minister of the Armed Forces Florence Parly declared at the Paris Peace Forum that 'the armed forces must be committed to the fight against climate change', launching a new ministerial initiative entitled 'The Armed Forces Against Climate Change'.

<sup>137.</sup> Défense et Climat.

Ministère des Armées, "France's Defence Strategy in the Indo-Pacific," 2019, 12, https:// apcss.org/wp-content/uploads/2020/02/France-Defence\_Strategy\_in\_the\_Indo-Pacific\_ 2019.pdf

<sup>139.</sup> Ibid., 19

<sup>140.</sup> Ibid., 19

The latest French strategic document issued by the Ministry of the Armed Forces acknowledges the growing importance of the 'climate factor' for the armed forces at the national and international levels. Declaring the Ministry's strong commitment to 'green defence', the take on 'climate security' in the strategy entails all questions relating to the impact of climate change, including the strategic context and geopolitical balance, armed forces missions and their means of implementation, as well as anticipation and adaptation measures vis-à-vis climate change.<sup>141</sup> Anticipating the implications of climate change on the strategic context and the missions and capabilities of the armies by mapping climate risks, strengthening monitoring, research, and anticipation instruments (e.g., the Defence and Climate Observatory), the Observatory of Energy Flows and Materials, and the Arctic Observatory, is a foregrounded effort to which all ministry stakeholders are to be mobilised.<sup>142</sup> Additionally, the need for early reflections on the manifold impact of climate change on French military operations and capacities is highlighted along with an imperative to better anticipate the related risks relating to defence infrastructures. The latter range from rising sea levels, increased periods of heat waves and drought, to the increased risk of fire, problems with the supply of drinking water and industrial water, large-scale floods and landslides, and storms and cyclones.<sup>143</sup>

#### Level of Ambition

In its international diplomatic messages, France has stressed the need to develop 'a preventive assessment strategy of the effects of climate change on peace and security in order to raise awareness, anticipate the consequences and develop policies and measures for potentially concerned countries or regions', alongside the necessity 'to ensure that the work of the UN in countries vulnerable to the effects of climate change is climate-proofed'.<sup>144</sup>

<sup>141.</sup> Ministère des Armées, Stratégie Climat et Défense, April 2022, 6, https://www.defense.gouv. fr/sites/default/files/tronc\_commun/2022%2004%2029%20Stratégie%20Défense-Climat. pdf.

<sup>142.</sup> Stratégie Climat et Défense, 7-9.

<sup>143.</sup> Stratégie Climat et Défense, Section 2.6., 9.

<sup>144.</sup> Permanent Mission of France to the United Nations in New York, "Events on Climate and Security Risks," accessed May 5, 2022. https://onu.delegfrance.org/Event-on-Climate-and-Security-risks.

On the diplomatic front, partnerships are sought after with 'all the riparian states in the South and Southeast Asian maritime basins'; neighbouring states of the Southwestern Indian Ocean, alongside consultations with 'stakeholders concerned with sustainable development and security in the Mozambique Channel, the South Pacific, Southeast Asia and the Bay of Bengal'.<sup>145</sup> France is furthermore keen to follow closely the preservation of the natural resources in Antarctica and optimistic about the global maritime dialogue with Japan. The Strategic Update of 2021 reiterates the message of the previous core strategic documents.<sup>146</sup>

With its global ambition, France is in favour of the UNSC taking up climate change as an issue of international peace and security.

#### Delivery/Action

The French Ministry of Armed Forces organised the first international conference, 'Defence and Climate: What Are the Stakes?' in 2015, and has been developing its 'capacity of anticipation' ever since.<sup>147</sup> The event brought together over 600 representatives of defence institutions, administrations, and from the academic and private sectors, alongside 33 foreign delegations and international organisations (UN, EU, AU). The related research initiatives have focused on assessing the effects of climate change on critical infrastructure, disaster relief operations, and maritime surveillance missions.<sup>148</sup> As a recent French parliament fact-finding mission concluded in January 2021, however, diplomats and armed forces have been slow to address the security consequences of climate change, and a vast space for the improvement at strategic and operational levels alike remains.<sup>149</sup> The related protection efforts are mostly targeted at protecting the French and the economy, the prevention of natural and

<sup>145.</sup> Défense et Climat, 19.

<sup>146.</sup> Ministère des Armées, "Strategic Update" 2021, https://www.stjornarradid.is/library/03-Verkefni/Almannaoryggi/Thjodaroryggismal/France%20-%20Strategic%20Review%202021. pdf

<sup>147.</sup> Bonnaventure's Preface to Défense et Climat, 2018.

<sup>148.</sup> Défense et Climat, 9.

<sup>149.</sup> Louise Rozès Moscovenko, "French MPs: Diplomacy, Military Slow to Address Climate Change as Driver of Armed Conflict." EURACTIV France (January 28, 2021), https:// www.euractiv.com/section/defence-and-security/news/french-mps-diplomacy-militaryslow-to-address-climate-change-as-driver-of-armed-conflict/.

public health risks rather than systematically developed at a broader level.  $^{\rm 150}$ 

The 2022 Strategy of Climate and Defence identifies seven major areas of effort for adapting the armed forces:

- 1. adaptation to changing theatres of operation
- 2. integrating climate risks and their effects in the analysis of operational conditions and capability requirements in order to guarantee the performance and reliability of equipment
- 3. adaptation of force employment doctrines, education, and training
- 4. adaptation of defence bases and installations
- 5. increasing assistance from the armed forces to relief operations in the event of natural disasters
- 6. adaptation of the logistical support provided to the forces deployed abroad
- guaranteeing the armed forces ability to continue military activities in a restrictive regulatory context<sup>151</sup>

Taken together, France scores high on its declared intentions and level of ambition to tackle climate change through security policy. While its respective measures and degree of implementation in climatising security and defence are emerging,<sup>152</sup> it remains too early to assess performance comprehensively vis-à-vis the declared securitising intent of climate change (see Figure 2).

#### 2.3.2.4. Germany: A Climate Diplomat

Germany has been a progressive player in international climate negotiations,<sup>153</sup> and climate change features as the *leitmotiv* in the 2021 Co-

<sup>150.</sup> Ministére de la Transition Écologique et Solidaire, "Le Plan National d'Adaptation au Changement Climatique," 2018, https://www.ecologie.gouv.fr/sites/default/files/2018.12.20\_PN-ACC2.pdf

<sup>151.</sup> Stratégie Climat et Défense, 10-15.

<sup>152.</sup> E.g., consider the Eco-Camp Project, eco-design of weapon systems, and the defence energy strategy of 2020.

<sup>153.</sup> For general overview, see Franziskus von Lucke, "Germany: Climate Change, Human Security and Southern Populations," in *Securitisation of Climate Change*, 117-75; Franziskus von Lucke, Judith Nora Hardt, "La politique climatique allemande sous l'angle de la politique extérieure et de sécurité: une solution d'avenir?" transl. by Loïc Windels, *Allemagne d'Aujourd'hui* 1, no. 239 (2022): 111-23.

alition Agreement of the Federal Republic of Germany, with a pledge to carbon-neutrality by 2045 at the latest, alongside the affirmation of German support to the European Commission's plans to strengthen the existing emissions trading system and an ambitious reform.<sup>154</sup> While Germany has discussed climate security extensively, with various tangible consequences in the development and foreign policy sector,<sup>155</sup> palpable action on the climatisation of its security and defence policies remains rather elusive for the lack of clarity on concrete implementation measures in the defence and security sector, specifically; hence, its ranking in the lower end of the medium bracket in our assessment of the overall degree of securitising climate change in the German combined intention, level of ambition, and delivery on the declared aims in the domain of security and defence (see Figure 2).

# Intention

For Germany, climate change is deemed to impact a number of risk areas and thus international security, ranging from the possible increase of weak and fragile states, risks for global economic development, growing distribution conflicts and threats to human rights, to challenges from migration and overall, excessive demands on traditional security policies.<sup>156</sup>

Domestically, climate change is seen as a problem for human security in Germany due to its potential to generate flooding, sea-level rise, and increased storm surges impacting the North Sea and Baltic regions. Sea water intrusions threaten low-lying areas, with the potential to endanger freshwater and ground water reservoirs. The increase in extreme weather

<sup>154.</sup> See Deloitte, "Germany's Coalition Agreement for a New Federal Government," https:// www2.deloitte.com/dl/en/pages/legal/articles/koalitionsvertrag-deutschland.html. For the full agreement text, see https://www.bundesregierung.de/breg-de/service/gesetzesvorhaben/ koalitionsvertrag-2021-1990800.

<sup>155. &#</sup>x27;We cannot negotiate with nature... Sooner rather than later, climate change will be a catalyst in almost every conflict that we are dealing with'. Federal Foreign Office, Speech by Federal Foreign Minister Heiko Maas on climate change and security at the UN Security Council, 2020, https://www.auswaertiges-amt.de/en/newsroom/news/ maas-unsc-climate-security/2370754.

<sup>156.</sup> Kira Vinke & Hans-Joachim Giessmann, Klimawandel und Konflikte – Herausforderungen für die deutsche Außen- und Sicherheitspolitik (Der Beirat der Bundesregierung Zivile Krisenprävention und Friedensförderung: January 1, 2021), 12, https://beirat-zivile-krisenpraevention.org/publikation/klimawandel/

events in Germany (e.g., heatwaves, drought, heavy rainfall) further threatens the German forests, which cover one-third of the German landmass. On a global level, Germany regards climate change as impacting especially fragile states where food and water resources risk being affected, which can, in turn, lead to conflict, particularly in the case of weak governance structures. The Arctic is a further area of concern for Germany (which has a high climate change profile at both poles) due to the melting sea-ice and thawing permafrost creating new challenges; as are North Africa and the whole MENA region.

In the German 2016 White Paper, climate change features as a global trend impacting hundreds of millions of people.<sup>157</sup> This is considered particularly problematic in fragile states with inadequate resources, demographic growth trends, and weak institutions. In such contexts, climate change is seen to add to a downward spiral, leading to state failure, violent clashes, and migration.

Yet the lens adopted in climatising German security and defence policies appears rather bounded, with a focus on how troops and materiel are to be prepared for missions with extra high temperatures (e.g., in Sahel), and how diesel and other equipment and supplies are to be procured accordingly. An important declared goal remains to minimise the German military's carbon footprint.

#### Ambition

Germany pursues the climate change management agenda actively in the UN, EU, and G7. Climate change is furthermore sought to be included more systematically in the German commitment to crisis prevention and stabilisation efforts, as well as integrated and promoted in its resilience-building labours in potentially affected regions. The German securitisation profile vis-à-vis climate change has been described as that of an ambivalent forerunner: on the one hand, Germany has been clearly committed to countering climate change with a 'relatively strong level of securitisation on the individual and planetary level', whereas in practice, 'Germany is not always the shining example that it often presents itself

Die Bundesregierung, Weißbuch zur Sicherheitspolitik und zur Zukunft der Bundeswehr, 2016, 42, https://www.bmvg.de/resource/blob/13708/015be272f8c0098f1537a491676bfc31/ weissbuch2016-barrierefrei-data.pdf.

as', with the country's influential automobile industry lagging behind efforts to produce low-emission vehicles and the Ministry of Economy supporting research projects focused on the exploration of the melting Arctic with an eye to finding new sources of fossil fuels.<sup>158</sup>

#### Delivery/Action

While the 2016 German White Paper defines the German approach to climate change, it does not delineate any plan of action.<sup>159</sup> A number of implications of climate change on security politics is outlined in studies such as *Der Beirat der Bundesregierung Zivile Krisenprävention und Friedensförderungen*'s 2021 *Klimawandel und Konflikte: Herausforderungen für die Deutsche Aussen- und Sicherheitspolitik*, which calls for a deeper commitment on the part of the Federal Government to prevent crises, overcome or avert security threats, and to contain damage that has already occurred. However, concrete measures and the implementation of the various recommendations have yet to make their appearance.

Taken together, despite leveraging climate change as an important issue, especially in the 2016 White Paper, specific action on climatising security and defence policies remains difficult to detect for the vagueness on concrete implementation measures.<sup>160</sup> Climate security debates have featured more prominently in the framework of German development and foreign policy, with limited effects on military planning and the For-

<sup>158.</sup> Diez et al., Securitisation of Climate Change, 66.

<sup>159.</sup> For detailed discussion of the German approach to the climate-security nexus, see Hardt and Viehoff, "Climate for Change," 44-49; BMVg, Um Klimawandel kümmern, 2017, https:// www.bmvg.de/de/aktuelles/um-klimawandel-kuemmern-20120; BMVg, Nachhaltigkeitsbericht 2018 des Bundesministeriums der Verteidigung und der Bundeswehr. Berichtszeitraum 2016-2017, 2018; BMVg, Strategische Vorausschau: Der Arktisdialog, 2018, https://www.bmvg.de/de/aktuelles/strategische-vorausschau-der-arktisdialog-25808; BMVg, Der Klimawandel: Herausforderungen für die Bundeswehr, 2019, https://www.bmvg.de/de/aktuelles/klimawandel-bundeswehr-59138; BMVg, Neunte Sitzung des Netzwerks "Strategie und Vorausschau," 2019, available at https://www.bmvg.de/de/aktuelles/neunte-sitzung-des-netzwerks-strategie-und-vorausschau-64884; BMVg, Nachhaltigkeitsbericht 2020 des Bundesministeriums der Verteidigungund der Bundeswehr. Berichtszeitraum 2018-2019, 2020; BMVg, Auswärtiges Amt und BMVg stärken gemeinsame Krisenfrüherkennung, 2020, https://www.bmvg.de/de/aktuelles/bmvg-auswaertiges-amt-staerken-gemeinsame-krisenfrueherkennung-4960694.

<sup>160.</sup> The actual initiatives are limited to examining new, non-fossil fuels, using them more effectively, and focusing on the use of the electric infrastructure by the armed forces (i.e. electrical vehicles), thus contributing to reaching the 2030 agenda goals.

eign Office as the main actor.<sup>161</sup> An overarching vision for climatising German security and defence remains wanting and the respective policies are scattered in silos.

#### 2.3.2.5. The Nordic Countries: 'Global Frontrunners'

The Nordic countries score relatively high on their framing of climate change as a security problem and the declarations embracing climate change in their respective security policies. Their levels of climatising their security and defence policies are lagging behind the declared ambitions, however; nor is the defence sector always seen as the primary realm for working towards furthering climate resilience at home and abroad. Hence, foreign and development policies often feature as the preferred domain for tackling the climate-security nexus in the Nordic countries. Our overall scoring therefore places the Nordic countries' respective levels of securitisation of climate change in their security and defence sectors in the medium category (see Figure 2).

#### Norway: A Torn Mitigator

Norway occupies an awkward position as a torn mitigator among the Nordic climate policy frontrunners. While the Norwegian government expects all sectors of government to contribute to the 'greenification' of Norwegian society,<sup>162</sup> the country continues to expand its fossil fuel extraction fields in the North Sea, and its economic model still relies heavily on fossil fuels as the main export. Relatively progressive Norwegian policies are thus contradicted by its oil and gas exports as the biggest producer in Western Europe.<sup>163</sup>

Climate change has predominantly featured as an environmental issue to be tackled in Norwegian security and defence policy documents by reducing GHG emissions. The tendency not to explicitly link climate change to national security has only recently begun to change, as the issue has become palpable in its direct implications in the Arctic, with

<sup>161.</sup> Diez et al., Securitisation of Climate Change, 90.

<sup>162.</sup> Forsvaret, Annual Report 2020, 19, https://www.forsvaret.no/aktuelt-og-presse/publikasjoner/forsvarets-arsrapport/Forsvarets%20%C3%85rsrapport%202020.pdf/\_/attachment/inline/eecff3b1-d61d-4edb-9395-e1dcb8938bb3:429ee7d627f628b49cd327723da-087fafd915e65/Forsvarets%20%C3%85rsrapport%202020.pdf.

<sup>163.</sup> See Climate Change Performance Index, https://ccpi.org/country/nor/.

the Norwegian Svalbard islands directly affected by the thawing permafrost.<sup>164</sup> The 2020 long-term plan for Norwegian defence addresses climate change as both strategic and an environmental problems. Norway has also been among the states calling for the UNSC to address the impact of climate change on peace and security. We have scored Norway high on its intention and ambition to tackle climate change as a security issue, but assessed its delivery on the said goals to be 'low', thus contributing to the country's overall ranking of its securitisation of climate change in the security and defence domain at the lower end of the medium bracket (see Figure 2).

#### Intention

'The Defence of Norway: Capability and Readiness: Long Term Defence Plan 2020' (LTP) acknowledges that climate change 'will *impact* all branches of government in the years to come, including defence and security. The effects of climate change can also generate challenges for military installations and operations. These circumstances challenge the ability of the state to protect society and populations'.<sup>165</sup> The off-used framing of climate change as 'threat multiplier'<sup>166</sup> that can both create and intensify conflicts features in the latest strategic Norwegian reading of the issue. The pledge for the defence sector to 'implement well-targeted measures to reduce the negative effects on the environment' is issued correspondingly.

Norway acknowledges the defence sector's special responsibility to address climate change. The national security implications are closely linked to the society in the Norwegian strategy document, and the potential spill-over effects caused by climate change are noted with concern.<sup>167</sup> Climate change is further seen to potentially pose a serious

<sup>164.</sup> Thomas Nilsen, "Thawing Permafrost Makes Big Trouble for World's Northernmost Town," *The Barents Observer*, October 9, 2018, https://thebarentsobserver.com/en/arctic/2018/10/ thawing-permafrost-troubles-longyearbyen.

<sup>165.</sup> Norwegian Ministry of Defence, "The Defence of Norway: Capability and Readiness: Long Term Defence Plan 2020," 9, https://www.regjeringen.no/contentassets/3a2d2a3cfb694aa3ab4c6cb5649448d4/long-term-defence-plan-norway-2020---english-summary.pdf

<sup>166.</sup> On the origin of this term, see CNA, *National Security and the Threat of Climate Change* (Alexandria, VA, 2007).

<sup>167.</sup> Det Kongelige Forsvarsdepartement, Prop. 14 S, (2020-2021) Proposisjon til Stortinget (forslag til stortingsvedtak), Evne til forsvar – vilje til beredskap, Langtidsplan for fors-

threat to Norwegian military installations and operations. While the impact of climate change remains uncertain,<sup>168</sup> the predominant Norwegian assessment is of climate change remaining 'a threat multiplicator', with particular concern regarding the High North, including the Arctic, with the most immediate consequences for the Norwegian defence and security policies.

#### Level of Ambition

There is a notable discrepancy between Norway's granular regulation of the environmental imprint of its security and defence practices at home and the country's continuing external profile as a major fossil fuel exporter. The Norwegian climatisation of its security and defence policies is domestically oriented and hands-on: Norway has prioritised the reduction of CO<sub>2</sub> emissions from buildings and infrastructure, along with ensuring that defence contractors meet green standards when acquiring and procuring materiel. The various defence sectors have accordingly been required to come up with a plan for climate and environmental actions aimed at reducing GHG emissions. Other concrete initiatives include the conversion of administrative vehicles to electricity and phasing in hybrid technologies in light and medium-weight military field vehicles. Biofuel use is encouraged in the defence sector, and ships are required to consume electricity from land rather than running their own generators while docked in harbour. All military service-related travel is required to be conducted in an emission-free manner. Similarly, all defence sector buildings and infrastructure are required to focus on low emission building and the use of sustainable electricity. Collective transport (e.g., train, bus) is encouraged as an alternative to automobiles in internal operational activities, as are increased flight simulation in training and vegetarian fare in the defence sector canteens.

#### Delivery/Action

Most of the Norwegian climate change-related initiatives vis-à-vis security and defence policy pertain to the promotion of advanced forms

varssektoren, 38, https://www.regjeringen.no/contentassets/81506a8900cc4f16bf-805b936e3bb041/no/pdfs/prp202020210014000dddpdfs.pdf.

<sup>168.</sup> Ibid., 42.
of biofuel, hybridisation and maximisation of energy-effective solutions on ships, the use of natural gas (LNG) on ships, promoting strict green requirements on companies supplying the defence industry, and last but not least, contributing to the world development goals through the country's climate change management action. In terms of transparency and accountability, Norway publishes an annual account of their defence sector performance on the environmental footprint reduction front. The country has conducted an annual monitoring exercise of the climate and environmental footprint of the Norwegian defence sector since 2004.

#### Sweden: A Climate Diplomat

Overall, Sweden is an ambitious climate policy actor, committed to achieving net-zero emissions by 2045. It has identified climate change as a 'socioeconomic threat to society'<sup>169</sup> with serious consequences for national security policy.

The country has declared its ambition to 'continue being a leading country with regard to reducing fossil fuel emissions and conducting strong climate diplomacy that builds effective alliances'. The avowed goal is to strengthen Sweden's 'leading role in international cooperation to curb climate change and promote sustainable development based on the 2030 Agenda'.<sup>170</sup> We have scored Sweden high on its intention and ambition, medium on the climatisation action in its defence and security policies and practices, and consequently allocated the medium score for Sweden's overall securitisation of climate change in the security and defence domain (see Figure 2).

#### Intention

Sweden's National Security Strategy from January 2017 regards climate change as a threat, impacting the country both internally and externally.<sup>171</sup> Climate change is considered as 'one of the greatest long-term

<sup>169.</sup> Försvarsmakten, "Försvarsmakten och ett förändrat klimat", https://www.forsvarsmakten. se/sv/var-verksamhet/ett-hallbart-forsvar/klimat-och-energi/forsvarsmakten-och-ettforandrat-klimat/.

<sup>170.</sup> Ibid., 25.

<sup>171. &#</sup>x27;Climate change impacts security in Sweden both directly and indirectly. The international implications will be just as significant as those directly affecting our country. Climate change can increase the risk of war, conflict and poverty. It can exacerbate the lack of water and food in regions that are already vulnerable. The combination of a lack of resources and pop-

challenges for humanity', with 'direct and rapidly growing security consequences', *inter alia* towards energy supplies and populations.<sup>172</sup> 'The urgency of the security implications of climate change is noted in the growing significance of the threat to 'global security' and 'the survival of humanity in the long term'. Extreme weather events, such as heavy rains and floods are seen as particularly impactful for Sweden, with its low-lying areas considered to be high-risk, but the higher frequency of wildfires is also a concerning consequence of warmer and drier weather. The impact on the Arctic is of direct relevance for Sweden, but the challenge is seen in the first instance more as global and regional and less as strictly national.

Sweden's declared goal is 'to develop a long-term sustainable and robust society that actively addresses climate change by reducing vulnerabilities and leveraging opportunities'. To this aim, a national strategy has been called for 'to strengthen climate adaptation efforts and the national coordination of such work in the long term' and to 'make it easier to adapt ongoing and planned land use and the built environment to a gradual change in climate.<sup>173</sup>

Climate change features prominently in the 2020 Total Defence Agreement (covering the period 2021-2025), which stresses the imperative for the Swedish Defence to consider climate change when planning military operations, both domestically and abroad. The defence forces are expected to contribute to Agenda 2030 and meet the sustainable development goals.<sup>174</sup>

#### Level of Ambition

Internationally, Sweden's climate change-related security concerns have focused on the Sahel and MENA regions, where Swedish troops have been (or are currently) present. Therein, climate change is regarded primarily as a 'threat multiplier', enhancing and challenging already weak

ulation growth destabilises societies and breeds or exacerbates conflict. This often results in people being forced to flee. Higher sea levels and severe storms threaten lives, property and infrastructure in coastal regions throughout the world'. Prime Minister's Office Sweden, "2017 National Security Strategy", https://www.government.se/4aa5de/contentassets/0e04164d7eed462aa511ab03c890372e/national-security-strategy.pdf, 10, 24.

- 172. Prime Minister's Office Sweden, NSS, 2017, 16.
- 173. Prime Minister's Office Sweden, NSS, 2017, 16.

 Regeringens proposition 2020/21:30 Totalförsvaret 2021-2025, https://www.regeringen. se/4a965d/globalassets/regeringen/dokument/forsvarsdepartementet/forsvarsproposition-2021-2025/totalforsvaret-2021-2025-prop.-20202130.pdf. states and institutions in their capacity to deal with the challenge of climate change and its effects (potentially leading to further conflict, migration, and the struggle for resources).

Apropos the defence specifics, according to the 2020 Defence Forces Environment and Sustainability Report (published annually), the Swedish Armed Forces (SAF) must be able to operate in a climate-changed environment<sup>175</sup> with the smallest possible environmental footprint. The defence forces are requested to reduce their fossil-fuel dependency, including the consumption of fossil fuels by buildings and other infrastructure. The SAF is supposed to focus on environmental issues (e.g., garbage return policies, re-use of materials). Likewise, the environmental sensibility is to guide the material and acquisition purchases, the ambition being climate neutrality by 2045.

#### Delivery/Action

In 2018, the Swedish government decided that a roadmap had to be developed for how to adapt Swedish forces to climate change. It was intended to focus the efforts to strengthen the capacity within each authority in Sweden, embracing the 'whole of government' approach to tackle climate change.<sup>176</sup> The roadmap came into force in January 2019, marking the beginning of the implementation phase. In effect, the Swedish defence had to initiate further climate and resilience analysis aimed at producing an actual plan for how to address climate change in practical terms; and later to follow up on the initiatives (incl. the evaluation of the related efforts). This remains a work in progress.

It has not been possible to identify concrete measures of what actually must be done apart from meeting the goals of the Swedish government plan aimed at zero emissions by 2045 at the latest. Whereas the SAF is committed to contributing to net zero by the target date, with environmental and energy initiatives meeting the global sustainability

Försvarsmakten, "Hållbarhetsredovisning 2020", https://www.forsvarsmakten.se/siteassets/ 4-om-myndigheten/dokumentfiler/hallbarhetsredovisningar/hallbarhetsredovisning-2020. pdf, 8.

<sup>176.</sup> SFS nr: 2018:1428, Departement/myndighet: Miljödepartementet, Utfärdad: 2018-06-28, Ändringsregister: SFSR (Regeringskansliet), https://www.riksdagen.se/sv/ dokument-lagar/dokument/svensk-forfattningssamling/forordning-20181428-ommyndigheters\_sfs-2018-1428.

goals of Agenda 2030, there is little granularity in the action plans available for public view.

#### Finland: 'A Climate Smart Actor'

A frontrunner in national and international climate policy, with a distinct foreign policy profile in climate mitigation and adaptation, Finland has remained rather generic when it comes to spilling the details about the climatisation of its security and defence policies. This follows a common pattern, described by the leading researcher at the Finnish Institute of International Affairs, Charly Salonius-Pasternak, as a 'Do – Don't talk' approach to communication by the Finnish security authorities.<sup>177</sup> Accordingly, we have scored Finland high on its intention and ambition, medium on the climatisation action in its defence and security policies and practices, and consequently allocated the medium score for Finland's overall securitisation of climate change in the security and defence domain (see Figure 2).

#### Intention

Finland has pledged to be carbon neutral already by 2035, aiming to be the world's first fossil-free welfare society.<sup>178</sup> Being among the world's most ambitious countries in climate change mitigation and adaptation, Finland adopted an Action Plan for Climate Smart Foreign Policy in 2019, covering all of the policy areas of the Ministry of Foreign Affairs, including security policy.<sup>179</sup> The declared aim of Finland's foreign policy on climate change is to 'mainstream climate change into all levels of foreign policy and to promote a global transition towards low emission and climate resilient societies.<sup>180</sup> The Action Plan links climate change to security policy through natural disasters, migration, epidemics, water, and food security management. Finland's policy approach to the climate change-security nexus is underpinned by the

<sup>177.</sup> Charly Salonius-Pasternak "Finland's Defence Forces Clearly Signals 'Game On'..." Twitter, January 24, 2022. https://twitter.com/charlyjsp/status/1485620438516609033?s=20.

<sup>178.</sup> Finnish Government. "Finland Has an Excellent Opportunity to Rebuild Itself in Line with the Principles of Sustainable Development," https://valtioneuvosto.fi/en/ marin/government-programme/carbon-neutral-finland-that-protects-biodiversity.

<sup>179.</sup> Ministry of Foreign Affairs of Finland, "Finland's Action Plan for Climate Smart Foreign Policy," https://um.fi/action-plan-for-foreign-policy-on-climate-change.

<sup>180.</sup> MFA of Finland, "Finland's Action Plan."

premise that conflicts can be prevented by promoting a fair distribution of natural resources.

The 2017 Security Strategy for Society identifies the slowing down of climate change and preparing for its impacts among the main instruments for addressing global threats.<sup>181</sup> The country's firm commitment to international cooperation is in the service of this goal.<sup>182</sup> Viewed from the Finnish lens, climate change is regarded as 'gradually evolving phenomena'.<sup>183</sup> The Government Report of Finnish Foreign and Security Policy of 2016 takes note of the 'threat' of climate change among the 'universally recognized global trends'. The document further acknowledges that '[t]he transformation process from fossil fuels to renewables, expedited by the Paris Agreement, will significantly impact the balance of economic and political power in the world'.<sup>184</sup> Climate change is accordingly featured among the most important sustainable development goals from the perspective of Finnish foreign and security policy.<sup>185</sup>

Finland's National Risk Assessment (NRA) 2018 describes the transformation of the security environment, examining *inter alia* climate change as a driver of change in the security environment. The National Adaptation Plan (NAP), adopted in 2014, formulates three core objectives,<sup>186</sup> to be interpreted and applied in different societal sectors and coordinated nationally. The climate-security link is generally addressed in the context of the energy security issue in Finland, with the Ministry

Yhteiskunnan Turvallisuus, "Security Strategy for Society: Government Resolution", November 2, 2017, 17, https://turvallisuuskomitea.fi/wp-content/uploads/2018/04/ YTS\_2017\_english.pdf.

<sup>182.</sup> Turvallisuus, "Security Strategy for Society," 70.

<sup>183.</sup> Turvallisuus, "Security Strategy for Society," 75.

Prime Minister's Office Finland, "Government Report on Finnish Foreign and Security Policy", 9/2016, 9, https://valtioneuvosto.fi/documents/10616/1986338/VNKJ092016+en. pdf/b33c3703-29f4-4cce-a910-b05e32b676b9.

<sup>185.</sup> Prime Minister's Office Finland, "Government Report," 25.

<sup>186. &#</sup>x27;A. Adaptation has been integrated into the planning and activities of both the various sectors and their actors; B. Actors have access to the necessary tools and methods for the assessment and management of climate risks.; C. Research and development work, communication, and education and training have enhanced adaptive capacity of the society, developed innovative solutions and improved citizen awareness on climate change adaptation? Ministry of Agriculture and Forestry, Finland, "Finland's National Climate Change Adaption Plan 2022," 2014, 4, https://mmm.fi/documents/1410837/5120838/MMM-\_193086-v1-Finland\_s\_National\_climate\_Change\_Adaptation\_Plan\_2022.pdf?ts2041ee-3518-4a63-bf60-7133aed95a9c/MMM-\_193086-v1-Finland\_s\_National\_climate\_Change\_Adaptation\_Plan\_2022.pdf?t=1507187377000

of the Environment and Ministry of Employment and Economy responsible for coordinating the national climate policy planning system via Finland's Long-Term Climate Change Policy Plan, Medium-Term Climate Change Policy Plan and Adaptation Plan, and a separate National Energy and Climate Strategy (2013).<sup>187</sup>

#### Level of Ambition

While among the most ambitious and climate-smart policy actors globally, with a distinct foreign policy profile in climate mitigation and adaptation action, Finland has not been overly granular in stipulating its climate change management measures in defence and security policy spheres specifically. The country's tackling of the problem is mostly conducted through foreign, development, and energy policies.

#### Delivery/Action

Finland's climate-smart foreign policy is coordinated by the Ambassador for Climate Change. The country is an active participant in the EU's climate work. Together with Chile, Finland has founded an international Coalition of Finance Ministers for Climate Action, with a purpose to make climate concerns a more integral part of the overall planning of central government finances, already with more than 50 members. The Finnish emphasis on climate action policy has been in advocating the linkage between climate change and human rights, alongside channelling development cooperation funds to support the establishment of weather and climate services and early warning systems in over 50 developing countries in cooperation within the UN. Funding and expert work has been further channelled towards initiatives seeking to contain the warming effect on the Arctic region, which has 'major importance' for Finland.<sup>188</sup>

<sup>187.</sup> See further Ministry of Employment and the Economy, "Energy and Climate Roadmap," October 16, 2014, https://tem.fi/documents/1410877/2769658/Energy+and+Climate+ Roadmap+2050.pdf/9fd1b4ca-346d-4d05-914a-2e20e5d33074/Energy+and+Climate+ Roadmap+2050.pdf?t=1464241259000.

<sup>188.</sup> MFA of Finland, "Finland's Action Plan." https://um.fi/action-plan-for-foreign-policyon-climate-change.

Finnish defence administration participates in environmental cooperation within the frameworks of NORDEFCO,<sup>189</sup> the EU, NATO, and the UN, alongside bilateral environmental cooperation with the US and other countries. It also participates in environmental cooperation among defence sectors in matters related to the High North and the Baltic region.<sup>190</sup>

The Finnish Institute of International Affairs (FIIA) has identified direct, cascading, and transitional security effects of climate change, advising the state to include climate change more comprehensively in national risk assessments carried out every three years.<sup>191</sup> Direct impacts pertain to changes in the physical environment and their consequences for human health and critical infrastructure. Such effects include damage to infrastructure caused by extreme weather events. Direct impacts are not by default urgent, however, as they could occur over a longer period of time (e.g., new pathogens resulting from rising temperatures). Cascading impacts occur at the conjunction of environmental changes and socio-economic and geopolitical factors, and they may be reinforced when coinciding with pre-existing antagonistic relations in international politics, potentially leading to rising geopolitical tensions, conflicts (incl. hybrid threats and sudden migration pressures), and supply chain disruptions. Transition impacts stem from the mitigation and adaptation efforts of climate change themselves (e.g., decarbonisation weakening the geopolitical position of major fossil fuel producing countries) and thus increasing 'actual or perceived inequality and thereby contribut[ing] to polarisation within society.<sup>192</sup> Finland's preparedness for the manifold security impacts of climate change is accordingly advised to be built on the platform of the country's comprehensive security model, which

<sup>189.</sup> NORDEFCO, "Sustainable Life Cycle of Defence Equipment Theme at Nordefco Green Defence," Webinar https://www.nordefco.org/Sustainable-life-cycle-of-defenceequipment-theme-at-Nordefco-Green-Defence-Webinar.

<sup>190.</sup> Finnish Government, "Government's Defence Report," Helsinki, 2021, 51, https://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/163407/VN\_2021\_80.pdf?sequence= 4&isAllowed=y

<sup>191.</sup> See Emma Hakala, Kati Berninger, Sanna Erkamo, Juha Pyykönen, Heikki Tuomenvirta, Oras Tynkkynen & Antto Vihma, "Climate Change and Finnish Comprehensive Security: Insights into Enhance Preparedness", *FIIA Briefing Paper* no. 325 (December 2021), https://www.fiia.fi/wp-content/uploads/2021/11/bp325\_emma-hakala-et-al\_climate-change-and-finnish-comprehensive-security.pdf.

<sup>192.</sup> Ibid., 5.

consists of cooperation between authorities, the private sector, and civil society.

#### Denmark: 'A Green Superpower'

With 30% of its primary energy supply coming from renewable sources and feasible plans to reduce its GHG emissions by 70% by 2030 and becoming net zero by 2050, Denmark general climate policies score high.<sup>193</sup> Having declared 'war on coal',<sup>194</sup> the Danish government has publicly declared its intention to end all North Sea oil and gas production by 2050, thus reaching an important green milestone: bringing an end to the Danish fossil fuel era.<sup>195</sup> Denmark seeks to lead by example and to become the first country to end oil and gas production, thereby taking a significant step towards meeting the Paris Accord goals. Climate is one of the five keywords in the new Danish foreign and security policy strategy (2022), which extensively stipulates the country's 'climate diplomacy approach', which is intended to raise the global level of ambition.<sup>196</sup> The Danish intention and ambition to tackle climate change as a security problem scores high, but Denmark is at the lower end of the medium bracket in the climatisation action in its defence and security policies and practices. Consequently, we have allocated a medium score for Denmark's overall securitisation of climate change in the security and defence domain (see Figure 2).

#### Intention

Climate change is high on the Danish political agenda. The recent Danish foreign and security policy strategy outlines the country's value-based approach to foreign and security policy, laying notable emphasis on the importance and impact of climate change on these policy spheres.<sup>197</sup> 'The climate crisis threatens',<sup>198</sup> the strategy maintains, for it 'exacer-

<sup>193.</sup> Topping, for example, the Climate Change Performance Index (CCPI) 2022, https://ccpi. org/country/dnk/.

<sup>194.</sup> Ministry of Foreign Affairs of Denmark, "Foreign and Security Policy Strategy 2022," 31, https://um.dk/en/foreign-policy/foreign-and-security-policy-strategy-2022

<sup>195.</sup> Danish Ministry of Climate, Energy and Utilities, "Beyond Oil and Gas Alliance," https:// en.kefm.dk/global-cooperation/beyond-oil-and-gas-alliance.

<sup>196.</sup> MFA of Denmark, "Foreign and Security Policy Strategy 2022," 6.

<sup>197.</sup> Ibid.

<sup>198.</sup> Ibid.

bates the security policy tensions when the fight for scarce natural resources intensifies'. Climate change further constitutes 'a crisis of safety' for increasing the pressure from migration when people's livelihoods disappear.<sup>199</sup> This strategy follows the previous government's "Foreign Policy and Security Strategy" (2018), which considered human-induced climate change as comprising 'one of the greatest challenges that the world needs to address<sup>200</sup> For the Kingdom of Denmark, climate change features as a security risk, not least in the Arctic, where warmer temperatures and melting sea ice and glaciers are opening new sea routes as well as revealing possible new landmasses. Domestically, climate change and its effects pose a challenge which could become a security problem if critical infrastructure is affected. In 2020, the annual evaluation of threats to Denmark published by the Danish Intelligence Service made concerned note of Russian intentions regarding the Arctic, increased competition for resources, and the Arctic as an arena for great power competition between the US, Russia, and China more generallv.<sup>201</sup>

The Danish government has identified industries as important stakeholders in public-private climate partnerships in an effort to chart and develop specific climate-friendly solutions in the area of defence. Innovative civilian solutions are hoped to create spill-over effects for those in the remit of the Danish Ministry of Defence.<sup>202</sup> This is, again, of strategic importance in the Arctic, where climate partnerships focus on creating the conditions for industry to work together with Danish defence forces in finding green solutions to climate change-related problems and pioneering new technologies.<sup>203</sup>

<sup>199.</sup> Ibid., 31.

Ministry of Foreign Affairs of Denmark, "Udenrigs- og Sikkerhedspolitisk Strategi 2019-2020," 7 https://um.dk/udenrigspolitik/aktuelle-emner/udenrigs-og-sikkerhedspolitiskstrategi-2019-2020

Forsvarets Efterretningstjeneste, "Efterretningsmæssig Risikovurdering 2020" (November 2020), 16, https://www.fe-ddis.dk/globalassets/fe/dokumenter/2020/risikovurderinger/-risikovurdering-2020-.pdf.

<sup>202.</sup> The Danish Government, "National Defence Industrial Strategy of the Danish Government Strengthened Cooperation for Danish Security" (August 2021): 8, https://www. fmn.dk/globalassets/fmn/dokumenter/nyheder/engelske/-national-defence-industrial-strategy-of-the-danish-government-.pdf.

<sup>203.</sup> Ibid., 8.

#### Level of Ambition

Denmark's climate action-related level of ambition is high - which also extends to its declared security policy goals. The new foreign and security policy strategy from January 2022 uses climate change as a catalyst for change through a value-based approach, where climate diplomacy is one of the steppingstones for reaching the coveted 'green superpower' status. The previous "Foreign Policy and Security Strategy of November 2018" defined combatting climate change as 'Green Multilateralism', embedded in an international framework and common solutions. The current Danish Defence Agreement (2018-2023) considers Denmark more challenged compared to a few years ago, *inter alia* by climate-related events. Correspondingly, a need to strengthen national emergency preparedness is highlighted together with the ambition to maintain the Arctic as a low-tension area by Denmark's increased presence and monitoring of the region.<sup>204</sup> The Greenlandic government decided to ban all future oil exploitation with immediate effect on 15 July 2021, thus leaping ahead of the Danish decision to stop all oil exploitation in and around Denmark by 2050.

#### Delivery/Action

In May 2021, the Danish Ministry of Defence (MoD) published its Green Action Plan for 2021-2025. Accordingly, it is maintained that 'climate change leads to major defence and security policy challenges', demanding from Denmark the respective focus in NATO and the EU, along with work towards a greater incorporation of climate change and green conversion into defence cooperation.<sup>205</sup> The Green Action Plan has seven designated focus areas: 1) nature, 2) energy consumption, 3) air pollution, 4) soil and ground water, 5) wastewater and surface water, 6) resource consumption and waste production, and 7) noise and vibrations. The different initiatives are to be addressed and coordinated by a steering group and a project group, consisting of representatives from the MoD and all subsidiary authorities.<sup>206</sup>

Danish Ministry of Defence, "Defence Agreement 2018-2023," 8, https://www.fmn.dk/globalassets/fmn/dokumenter/forlig/-danish-defence-agreement-2018-2023-pdfa-2018.pdf.

<sup>205.</sup> Danish Ministry of Defence, "Green Action Plan 2021-2025," May 2021, 3, 19, https://www. fmn.dk/globalassets/fmn/dokumenter/strategi/miljo/-mod-green-action-plan-2021-2025-. pdf.

<sup>206.</sup> Ibid., 9.

In its turn, the "National Defence Industrial Strategy" stipulates seven concrete initiatives, including: 1) strengthened MoD-defence industry cooperation, 2) internationalisation and access to foreign markets, 3) good framework conditions for the defence industry, 4) targeted industrial support and cooperation, 5) stronger innovation and research cooperation, 6) strengthened social commitment and green focus in the defence industry, and 7) modern technological focus. While these initiatives constitute a strategic investment in technologies both domestically and together with allied partners, the practical output remains delimited. Few things have actually been done apart from identifying specific areas as necessary to be investigated and to undergo change in the future.<sup>207</sup>

The latest foreign and security policy strategy does not change this. Concrete steps and action plans are still missing, leaving the strategy a mere statement of good intentions and ambitions. In the practical address of the security implications of climate change, walking the walk remains yet wanting, as the declarative statements abound, such as 'driving the development from carbon dependency to a green future considering sustainability broadly,' creating better living conditions for everyone', 'mobilising green strategic partnerships with some of the main emitters', 'in partnership with Danish business communities showing the way for socially fair green transition', 'clearing the way for Danish solutions', 'pushing the EU to use its influence on countries which are dragging their feet', and 'supporting developing countries especially in Africa in taking the green and sustainable development road'.

The Danish Peace and Stabilisation Fund (PSF) has supported various regional programmes since 2010, for example in Syria and Iraq, as well as in the Sahel region, elsewhere in Africa, Afghanistan, Ukraine, and in various other European countries. The PSF is an inter-ministerial funding mechanism between the Ministry of Foreign Affairs (MFA), Ministry of Defence (MoD), and Ministry of Justice (MoJ), led by a steering committee consisting of the aforementioned ministerial representatives and the Prime Minister's Office (PMO). It has grown from

<sup>207.</sup> Jens Wenzel Kristoffersen, "Forsvaret skal selv komme med sine bud på en grønnere fremtid, så det ikke ender med faste krav oppefra," *Jyllands-Posten* (26 April 2021), https:// jyllands-posten.dk/debat/kronik/ECE12906051/forsvaret-skal-selv-komme-med-sine-budpaa-en-groennere-fremtid-saa-det-ikke-ender-med-faste-krav-oppefra/

DKK 155 million in 2010 to a DKK 500 million fund in 2020.<sup>208</sup> Established as a flexible funding mechanism for supporting initiatives in primarily weak and fragile states under the 'whole of government' approach, the PSF has bridged the gap between traditional development programmes and defence capacity-building efforts aimed at supporting initiatives that could promote peace and stability in areas of instability. The programme runs across countries in the Middle East, Africa, and Europe, with the latest initiatives covering Syria and Iraq, Ukraine, Afghanistan, the Gulf of Guinea, and The Horn of Africa, along with the Sahel region.

As of today, the PSF does not directly support climate change initiatives and programmes. Such initiatives are currently pursued through support to other organisations, such as the UN Peacebuilding Fund (PBF), Political and Peacebuilding Affairs (DPPA), Peacebuilding Support Office (PBSO), and other instruments (e.g., official development assistance, along with addressing climate security issues in the Sahel area through the Global Diplomacy Office in countries like Mali, Burkina Faso, Niger, and Chad).

The Danish MFA is working on the climate-security nexus issues together with various organisations, including the World Bank (WB), International Fund for Agricultural Development (IFAD), SNV Netherlands Development Organisation, and the UNDP, and it channels the related funding through them. It would be worthwhile to explore further what type of programmes have thus far created the best effects in terms of supporting climate change management initiatives and concurrently contributing to peace and stability.

#### 2.3.2.6. Russia: A Climate Sovereign

General climate action-wise, the performance record of the world's fourth largest emitter of GHGs remains problematic, with pronounced Russian dependence on hydrocarbons and strong domestic opposition to any regulatory effort to limiting domestic carbon emissions, most notably from the Russian Union of Industrialists and Entrepreneurs. Arguably, Russia has no strategy for combatting climate change or adapting

<sup>208.</sup> Danish Ministry of Defence, "Danish stabilisation effort," https://www.fmn.dk/en/topics/ operations/stabiliseringsindsatser/.

to it: '[t]he country's environmental doctrine - and even its ratification of the Paris Agreement - are more of an international PR strategy than anything else'.<sup>209</sup> Critics have pointed out how Russian climate policy documents are mostly declaratory and contradict other projects, such as a programme to increase the production of coal through 2035.<sup>210</sup>

Internationally, Russia has used its prerogative as a permanent UNSC member to oppose any formal linking of climate change with the UN peace and security agenda. Staunchly committed to the supremacy of state sovereignty, Russia has been sceptical about international-level attempts at securitising climate change, resisting alleged attempts to use climate change as pretext for 'limiting Russian companies' access to export market, contain the development of Russian industry, introduce control systems over transport routes and stagger Russia's development of the Arctic'.<sup>211</sup> More recently, recognition of the economic, infrastructure, human security, and environmental implications of permafrost thaw would appear to be seeping in, with environmental protection and climate change now featuring prominently on the current Russian chairmanship agenda of the Arctic Council.<sup>212</sup> We have scored Russia's overall securitisation of climate change in the security and defence domain as low (see Figure 2).

#### Intention

<sup>209.</sup> Natalia Paramonova, "Will EU Green Deal Force Russia to Clean up Its Act?," *Carnegie Moscow Center*, July 2020, http://eu-russia-expertnetwork.eu/en/analytics/eu-green-deal-paramonova.

<sup>210.</sup> Ibid.

<sup>211.</sup> President Vladimir Putin, Press Conference, June 30, 2021, http://www.kremlin.ru/events/ president/news/65973; see also Atle Staalesen, "Climate Change Finds a Place in Russia's New National Security Strategy," *The Barents Observer*, July 6, 2021, https://thebarentsobserver.com/en/security/2021/07/climate-change-finds-place-russias-new-nationalsecurity-strategy.

<sup>212.</sup> The Government of the Russian Federation. "Responsible Governance for a Sustainable Arctic," Russia's Chairmanship Priorities for the Arctic Council 2021-2023, https:// oaarchive.arctic-council.org/bitstream/handle/11374/2646/Арктика%20приоритеты\_ англ\_21.06.2021.pdf?sequence=11&isAllowed=y. For discussion, see Katarina Kertysova and Akash Ramnath, "Permafrost Thaw Puts Russia's Arctic Ambitions at Risk," Planetary Security Initiative, September 27, 2021, https://www.planetarysecurityinitiative.org/ index.php/news/permafrost-thaw-puts-russias-arctic-ambitions-risk; Ann M. Simmons and Georgi Kantchev, "Climate Change Is Melting Russia's Permafrost: And Challenging Its Oil Economy," The Wall Street Journal, October 5, 2021, https://www.wsj.com/articles/ climate-change-permafrost-oil-gas-economy-russia-11633443474.

Still, there has been a gradual acknowledgement of the security implications of global climate change in various strategic documents of the Russian Federation over the past decade. For example, the 2009 Climate Doctrine of the Russian Federation admits that 'the anticipated climate change threatens the security of the Russian Federation<sup>213</sup> Compiling the goals, principles, measures, and implementations of consolidated domestic and international politics of the Russian Federation with respect to climate change and its consequences, <sup>214</sup> the Climate Doctrine stresses that the Russian Federation 'takes part in developing collective measures of the world community for mitigating the human-made impact on climate<sup>215</sup> The Russian stance is premised on an assumption that 'a comprehensive and long-term solution to the climate problem is only possible if the universal character of the relevant international regime is ensured and all major greenhouse gas emitters participate in it based on the UN Framework Convention on Climate Change principles'. Characteristically, however, the Climate Doctrine emphasises the need to give 'due account' to the country's security interests while tackling the climate change agenda.<sup>216</sup> The 2014 Progress Report on the Implementation of Climate Doctrine identifies specific adaptation measures to control the frequency of forest and peat fires, mitigate production loss risks in agriculture, and to limit the negative impacts of flooding, mountain glaciation degradation, mudflows, and avalanches.

In comparison, the Russian 2015 National Security Strategy only makes passing mention of ecological concerns. Climate change features among other cross-border challenges and threats in the 2016 Russian Foreign Policy Concept, which 'favours expanding international cooperation with a view to ensuring environmental security and fighting climate change' within the regulatory context of the 1992 UNFCCC and the Paris Agreement. Yet the concept also expresses explicit opposition to 'far-fetched attempts to politicize environment protection and use it as a pretext for restricting State sovereignty over natural resources or for

President of Russia, "The Climate Doctrine of the Russian Federation", December 17, 2009, para. 9, http://en.kremlin.ru/supplement/4822.

Ana Karaman, "Russia and Global Climate Change," in *Climate Change, Policy and Security*, ed. Wallace and Silander, 2018, 216-34.

<sup>215.</sup> President of Russia, "The Climate Doctrine," para. 25.

<sup>216.</sup> Ibid., para. 38.

encouraging unfair competition.<sup>217</sup> The 2014 Military Doctrine of the Russian Federation makes no mention of climate change (or environment, for that matter) at all. The 2015 Maritime Doctrine of the Russian Federation, in its turn, stresses the importance of conducting scientific research and monitoring the changes in the marine Arctic environment 'under active anthropogenic impact, taking into account the role and location of the Arctic Basin in global climate change.<sup>218</sup> A discursive can be observed in the Russian 2021 National Security Concept (NSC), which identifies climate change as a new threat that must be battled and calls for international cooperation to do so.

Russia's 2009 Climate Doctrine identifies climate change as a threat to Russian state security as well as human security, emphasising the importance of Russia's independent ability to evaluate climate change data and to draw pertinent conclusions about its impact on the Russian Federation.<sup>219</sup> The Climate Doctrine characterises climate change as 'one of the major international problems in the 21<sup>st</sup> century', which has accordingly emerged as a major long-term element of the security of the Russian Federation and been acknowledged as a policy priority thereof.<sup>220</sup> Generally, a tangible economic dimension of climate change is acknowledged: As per the estimations made by the Russian Ministry of Natural Resources, direct and indirect consequences of climate change will lead to an average 1-2% drop in the Russian gross domestic product (GDP) by 2030, with some regions losing as much as 4-5% of their GDP in the

<sup>217.</sup> Embassy of the Russian Federation to the United Kingdom of Great Britain and Northern Ireland, "The Foreign Policy Concept of the Russian Federation," November 30, 2016, para. 41, https://www.rusemb.org.uk/rp\_insight/

<sup>218.</sup> Russia Maritime Studies Institute, and Anna Davis, "The 2015 Maritime Doctrine of the Russian Federation", RMSI Research, 2015, para. 61 (q), https://digital-commons.usnwc.edu/cgi/viewcontent.cgi?article=1002&context=rmsi\_research. Similar emphasis is placed on Antarctica in this document. See further Olga Dobrovidova, "Russia's New Permafrost Monitoring System Could Improve Climate Models, Protect Infrastructure," *Science*, January 4, 2022, https://www.science.org/content/article/russia-s-new-permafrost-monitoring-system-could-improve-climate-models-protect.

<sup>219.</sup> Karaman, "Russia and Global Climate Change," 219.

<sup>220.</sup> Among the most critical climate changes, the Climate Doctrine lists the following: (1) increased heath risk and mortality rates for some social groups of the population, (2) increased repeated droughts in some regions and extreme levels of precipitation and floods leading to soil deterioration in other regions, (3) increased risk of forest fires, (4) thawing permafrost in Siberia leading to deterioration of infrastructure, (5) shifts in ecological balance, (6) spread of infectious diseases, and, finally, (7) increased use of electricity for air-conditioning during summer seasons for most localities. President of Russia, "The Climate Doctrine," para. 27.

same period.<sup>221</sup> Soil instability resulting from the thawing of the permafrost is damaging the foundation of the infrastructure, including oil and gas pipelines in Western Siberia, which is costing the Russian Federation dearly.

Meanwhile, the positive implications of climate change for the country's industrial and economic development are also acknowledged, such as the improved conditions for marine transport in the Arctic seas along with increased access to Arctic oil. Consequently, the Russian Climate Doctrine emphasises the superiority of national interest in the articulation and implementation of climate politics.<sup>222</sup>

#### Level of Ambition

At the international policy level, Russia has resisted the UNSC tackling the climate change topic in the context of security issues. Russia has expressed concerns over efforts to link environmental conservation to international peace and security, and it objected to the UNSC addressing climate change, emphasising that the issue should instead be dealt with within national borders and under the appropriate UN agencies.<sup>223</sup> While Russia was among the first nations to sign the UNFCCC in June 1992 (ratified in December 1994), it has remained a relatively minor player in international climate change politics.<sup>224</sup>

Consequently, the Russian profile in global climate action has ranged from opportunism to obstructionism. Its endorsement of climate treaties has been remarkably slow: The 1997 Kyoto Protocol was only ratified in 2004 and the 2015 Paris Agreement in 2019; nor did President Putin attend the COP26 Climate Summit in Glasgow in November 2021. Yet just weeks shy of the COP26, the Russian Economic Development Ministry came up with a national goal of achieving carbon neutrality by 2060. Dubbed 'a sea change' in Moscow's official

<sup>221.</sup> Davidova, cited in Karaman, "Russia and Global Climate Change," 217.

<sup>222.</sup> Overall, the Russian 2009 Climate Doctrine remains optimistic about Russia's ability to adapt to climate change due to the low population density in the most impacted areas of the country. The doctrine underscores the need for a balanced approach, accounting for the imperative of economic development and not disregarding the positive implications of climate change for Russia. The Russian position on climate politics at the international level is accordingly to be tied to its interest of economic development as well; Karaman, "Russia and Global Climate Change," 218-19.

<sup>223.</sup> Kalliojärvi, "Age of Changes," 17-24.

<sup>224.</sup> See further Karaman, "Russia and Global Climate Change," 222.

view on climate change and energy policy, the new strategy is seen as marking an end to climate change denial in the Russian government.<sup>225</sup> Under 'intense scenario' of Russian climate change policy in the new strategy, the country's emissions are set to peak by 2030.<sup>226</sup> Compared to Russia's 2020 draft long-term strategy, which foresaw emissions increasing through 2050 and not dropping to net zero before 2100, the new plan appears to represent an improvement, at least on paper - albeit still in notable contradiction to Russia's 2035 Energy Strategy and the 2035 Coal Production Strategy.

Still, at least domestically, Russia appears to be in the process of assuming more agency in its navigation of climate change. Whereas the country's 2015 National Security Strategy framed climate change in terms of its consequences, the 2021 National Security Concept has a more emphatic treatment of 'ecological security', depicting climate change as a security threat requiring 'prevention' and 'adaptation'. Russian self-positioning vis-à-vis the Arctic has grown in confidence as compared to the previous strategic document's language.<sup>227</sup>

Regardless, since the 2009 Climate Doctrine, Russia has been persistently keen on also highlighting the positive balance of climate change. The possibility of the decreasing Arctic sea ice to expand the Northern Sea Route is duly noted for its potential to become a valid practical alternative to the southern navigation routes through the Suez and Panama Canals. The expansion of the Northern Sea Route would carry palpable economic benefits for Russia and help other countries engaged in intercontinental navigation between the Atlantic and the Pacific by significantly reducing shipping distances between Asia and Europe.<sup>228</sup> The economic benefits of the melting Arctic ice have led the Russian government to strengthen its military presence in the region. Nonethe-

Dmitri Trenin, "How the Arms Control Approach Could Help Russia Tackle Climate Change," *Carnegie Moscow Center*, October 19, 2021, https://carnegiemoscow.org/ commentary/85585.

<sup>226.</sup> Natalie Sauer, "What Can We Expect from Russia at COP26?," https://www.opendemocracy.net/en/odr/what-can-we-expect-from-russia-at-cop26/, October 28, 2021.

<sup>227.</sup> Elizabeth Buchanan, "Russia's 2021 National Security Strategy: Cool Change Forecasted for the Polar Regions," *RUSI Commentary*, July 14, 2021.

<sup>228.</sup> Karaman, "Russia and Global Climate Change," 224.

less, climate change and environmental protection rank high among the Russian chairmanship agenda items for the Arctic Council.<sup>229</sup>

#### Delivery/Action

Taken together, Russia's security-political operationalisation of its take on the climate change-security nexus is neither granular nor advanced. The generic policy slogans go to the importance of international cooperation, yet the protection of Russian sovereign interests and the guaranteeing of the involvement of Russian scientists in producing and evaluating the climate change-related data appear at the core of the pertinent discourse. When it comes to practice, Russia has done more to capitalise on the positives of climate change via investment in the ice-fleet capabilities, re-opening Soviet-era military bases and establishing new ones, along with enhancing the Russian Northern Fleet, based near Murmansk,<sup>230</sup> rather than systematically buttressing itself against the negative impacts of climate change. The Russian Federation remains among the largest GHG emitters in the world (4.53% of total global emissions), and the country's dependency on oil and gas exports shows no signs of waning.

More recently, the Russian government has increasingly acknowledged the problem of global warming and the resulting impact throughout the vast territory of the country on the environment, people, and infrastructure alike. Yet the temptation to reap geopolitical benefits from the changing predicament in the Arctic region has thus far taken precedence over tangible mitigation action of the related impediments. The environmental concerns have accordingly been subordinated to the country's broader political and economic interests.<sup>231</sup> As in other areas of its international activity, sovereignty has been the most preciously guarded consideration, also in Russia's take on climate change in general, as well as its tackling of the climate change-security nexus in particular.

<sup>229.</sup> The Government of the Russian Federation, "Responsible Governance for a Sustainable Arctic."

<sup>230.</sup> Karaman, "Russia and Global Climate Change," 227.

<sup>231.</sup> Not least in the Arctic region, where Russia appears 'determined to retain its dominance in the region and capitalize on the benefits from rich oil and gas deposits as well as the expanded use of the Northern Sea Route'. Karaman, "Russia and Global Climate Change," 228.

#### 2.3.2.7. China: 'An Ecological Civilisation'

With 'ecological civilisation' as President Xi Jinping's slogan for the Chinese efforts to embrace environmental sustainability, the overall Chinese climate policy is quite ambitious; at least on paper. China remains the world's largest territorial  $CO_2$  emitter, albeit the country has recently announced its decision to end financing for coal-fired power stations overseas.<sup>232</sup> While being committed to reach peak emissions by 2030 and aiming for carbon-neutrality by 2060, however, China has persistently refused to link climate and state security, instead framing climate change as a challenge to economic growth and human security.<sup>233</sup>

Together with Russia, China has stood against securitising climate change at the international level, opposing the challenge to be considered as a threat by the UNSC.<sup>234</sup> China has argued for the UNSC's limited expertise on the matter and expressed persistent concern over including climate change in the UNSC peace and security agenda as potentially threatening to state sovereignty. Opposing high-level climate change securitisation in international diplomacy, China's preferred context for tackling climate change remains the sphere of sustainable development. Notably against this backdrop, neither Chinese nor Russian leaders attended the COP26 Climate Conference in Glasgow in November 2021, although China and the US both delivered a last-minute joint statement on enhancing climate actions in the 2020s.<sup>235</sup> In our assessment, China

<sup>232.</sup> Patrick Greenfield and Vincent Ni, "'Ecological Civilisation': An Empty Slogan or Will China Act on the Environment?," *The Guardian*, October 16, 2021, https://www.the-guardian.com/environment/2021/oct/16/ecological-civilisation-empty-slogan-cop15-or-will-china-act-on-environment-aoe.

<sup>233.</sup> Daniel Silander and Martin Nilsson, "China and Global Climate Change," in *Climate Change, Policy and Security*, ed. Wallace and Silander, 164-65.

<sup>234.</sup> During the confidential Arria-Formula meetings of the UNSC on climate change and security in 2013 and 2015, the UNSC division became apparent, with the US, the UK, and France supporting an expanded UNSC role for addressing climate change issues in a security context, whereas Russia and China, with much of the developing world's backing, opposed such measures. Wallace, "UN Regime on Global Climate Change," 54. See also Patrick D. Nunn and Carola Betzold, "Geography and Global Climate Change: Asia-Pacific – Human and State Security," in *Climate Change, Policy and Security*, ed. Wallace and Silander, 77. For further discussion, see Jilong Yang, "Understanding China's Changing Engagement in Global Climate Governance: A Struggle for Identity," *Asia Europe Journal*, 2022, https://link.springer.com/article/10.1007/s10308-021-00643-1

<sup>235.</sup> U.S. Department of State, "U.S.-China Joint Glasgow Declaration on Enhancing Climate Action in the 2020s", November 10, 2021, https://www.state.gov/u-s-china-jointglasgow-declaration-on-enhancing-climate-action-in-the-2020s/. See further: Wilson

scores in the lower end of the medium bracket regarding its intention and ambition to acknowledge climate change as a security problem and plans to tackle it accordingly. We have ranked the Chinese climatisation action in its defence and security policies and practices as low, and consequently allocated the low score for the country's overall securitisation of climate change in the security and defence domain (see Figure 2).

#### Intention

Except for China's National Defense in 2010, which takes note of climate change among other 'security threats posed by [...] global challenges', there is no mention of climate change in China's publicly available national security documents.<sup>236</sup> The Diversified Employment of China's Armed Forces (2013) stresses the role of armed forces in 'promoting ecological progress and protecting the environment'.<sup>237</sup> In a similar vein, the earlier 2010 China's National Defense document highlights that the armed forces inter alia 'contribute to ...ecological and environmental conservation'.

As regards China's general climate policy targets, the pertinent timelines are reasonably concretized due to the plan-based Chinese governance system.<sup>238</sup> The 13<sup>th</sup> Five-Year Plan was announced in 2015, with an

Center, "Walking the Walk after the New U.S.-China Climate Declaration," January 13, 2022, https://www.wilsoncenter.org/event/walking-walk-after-new-us-china-climate-declaration. Cf. The 2014 US-China Joint Agreement on Climate Change, which promised to expand joint clean energy R&D, advance major carbon capture, use and storage demonstrations, enhance cooperation on hydrofluorocarbons, launch a climate-smart (low-carbon cities initiative), and promote trade in green goods and demonstrate clean energy on the ground. The White House. "FACT SHEET: U.S.-China Joint Announcement on Climate Change and Clean Energy Cooperation." November 11, 2014. https://obamawhitehouse.archives.gov/the-press-office/2014/11/11/ fact-sheet-us-china-joint-announcement-climate-change-and-clean-energy-c.

<sup>236.</sup> Ministry of National Defense of the People's Republic of China, "China's National Defense in 2010," White paper, March 2011, http://eng.mod.gov.cn/publications/2021-06/23/content\_4887922.htm E.g., Ministry of National Defense of the People's Republic of China. "China's National Defense in the New Era." July 24, 2019. http://eng.mod.gov.cn/publications/2019-07/24/content\_4846452.htm; Ministry of National Defense of the People's Republic of China. "China's Military Strategy." June 23, 2021. http://eng.mod.gov.cn/ publications/2021-06/23/content\_4887928.htm.

<sup>237.</sup> Ministry of National Defense of the People's Republic of China, "The Diversified Employment of China's Armed Forces," White paper, April 2013, http://eng.mod.gov.cn/publications/2021-06/23/content\_4887929.htm

<sup>238.</sup> China introduced some of its first climate targets in the 11th National Five-Year Plan (2006-2010) (e.g., reducing the use of energy by 20% during the next five years, with a

aim to develop 'a moderately prosperous society' around five principles of innovation, openness, green development, coordination, and inclusive development.<sup>239</sup> China ratified the Paris Agreement on 3 September 2016, and published the annual report 'China's Policies and Actions for Addressing Climate Change' the following month.

In all, the country has promised: (a) to achieve the peaking of  $CO_2$  emissions around 2030 and making best efforts to peak early, (b) to reduce  $CO_2$  emissions per unit of GDP by 60-65% of 2005 levels, (c) to increase the share of non-fossil fuels in primary energy consumption to around 20%, and (d) to increase the forest stock volume by around 4.5 billion cubic meters in relation to the 2005 level.<sup>240</sup> As the world's largest GHG emitter, China's pledge for carbon neutrality by 2060 is most noteworthy. In the meantime, China has joined the chorus of emergent economies resisting to be held to the same standards as advanced industrialised countries.

focus on the most energy-consuming Chinese factories; declaring a quantitative target to lower carbon-based energy use, with objectives to increase the use of non-fossil, renewable, and nuclear-based energy sources and to reduce pollutants). In 2007, the National Climate Change Programme was launched, aiming 'to build a resource conservative and environmentally friendly society, enhance national capacity to mitigate and adapt to climate change, and make further contribution to the protection of the global climate system'. After the 2009 Copenhagen Summit, China promised to reduce its GHG emissions by 40-45% per unit of GDP by 2020. In the 12th Five-Year Period (2011-2015), a concrete framework for halting emissions was presented, in the context of securing economic development and growth in China. The 12th Five-Year Plan established concrete mitigation targets stressing the importance of the green governance approach. See Silander and Nilsson, "China and Global Climate Change," 158-59.

- 239. The main targets for halting climate change were to reduce GHG emissions by 18% by 2020 (compared with 2015), peak the total carbon emissions by 2030, reduce energy intensity by 15% by 2020 (compared with 2015), increase non-fossil energy to 15% by 2020 (compared with 2015), and increase forest stock volume and coverage to 16.5 billion cubic meters (bcm) and 23.04% by 2020. The National Plan on Climate Change (2014-2020) and the related documents (i.e. the National Plan for Tackling Climate Change, 2014-2020; the Energy Development Strategy Action Plan, 2014-2020; and the National Strategy for Climate Adaption, 2013) further developed the mitigation policies introduced in the 13th Five-Year Plan. Silander and Nilsson, "China and Global Climate Change," 160.
- 240. China's National Development and Reform Commission 2015; see further Sanna Kopra, "China, Great Power Responsibility and Arctic Security," in *Climate Change*, eds Heininen and Exner-Pirot, 49.

#### Level of Ambition

Rhetorically, China has come to acknowledge its great power responsibility for climate change over the last decade, thus overcoming its initial reluctance to international dialogue on the issue.<sup>241</sup> In this vein, Special Envoy Zhang Gaoli announced at the UN Climate Summit in September 2014 that 'responding to climate change is what China needs to do to achieve sustainable development at home as well as to fulfil its due international obligation as a responsible major country'. Meanwhile, Chinese President Xi Jinping declared China's taking of a 'driving seat' in international climate negotiations in 2017, at the time of major climate action disruption in the US during the Trump presidency.<sup>242</sup>

Yet ahead of the COP26 climate conference in Glasgow, the coalition of 'Like Minded Developing Countries' (LMDC, incl. China, India, Egypt, Indonesia, and Saudi Arabia) issued a ministerial statement rejecting that the world must reach net zero by 2050.<sup>243</sup> Instead, it is demanded that developed countries achieve full decarbonisation this decade based on their 'historical responsibility for the predominant majority of cumulative anthropogenic emissions since the Industrial Revolution', while they pursue fossil-fuelled development paths with impunity.<sup>244</sup> For China, the climate change problem is fundamentally an issue of establishing international justice between the 'haves' and 'have-nots' (or what some have called 'the developing country logic').<sup>245</sup> Accordingly, its leadership ambitions in relation to building an 'ecological civilisation'

- 241. For example, the intended nationally determined contribution of China submitted ahead of the 2015 Paris Summit declared that: '[T]o act on climate change in terms of mitigating greenhouse gas emissions and enhancing climate resilience, is not only driven by China's domestic needs for sustainable development in ensuring its economic security, energy security, ecological security, food security as well as the safety of people's life and property and to achieve sustainable development, but also driven by its sense of responsibility to fully engage in global governance, to forge a community of shared destiny for humankind and to promote common development for all human beings'. Cited in Nunn and Betzold, "Geography and Global Climate Change", 77-78.
- 242. See further Kopra, "China," 40.
- 243. Chloé Farand, "Emerging economies slam Cop26 net zero push as 'anti-equity," Climate Home News, October 20, 2021, https://www.climatechangenews.com/2021/10/20/ emerging-economies-slam-cop26-net-zero-push-anti-equity/
- 244. Anthony Burke, "Glasgow: A Tipping Point for Serious Action," *The Interpreter*, October 25, 2021, https://www.lowyinstitute.org/the-interpreter/glasgow-tipping-point-serious-action.
- 245. Leonard et al., "The Geopolitics of the European Green Deal," 17. For further discussion, see von Lucke et al., "The EU and Global Climate Justice Seen from the Outside," in *The EU and Global Climate Justice*, 74-93.

reflect a status struggle with the more established powers in contemporary international politics.

#### Delivery/Action

China is now responsible for 30% of annual global emissions, compared to the US share of 15%. Regardless of the recently more promising and progressive rhetoric on the part of the Chinese leadership, the country's emerging profile on the climate change-security nexus remains true to the ethos of keeping the issue outside of UN-level peace and security discussions. China has been among the persistent de-securitisers of climate change at the highest international level, claiming instead its leadership position in the issue area of sustainable development via speaking for the developing world's concerns.

The degree of climatisation of Chinese security and defence policies remains guarded from public view. Even at the discursive level, the respective policy documents refrain from engaging climate change beyond the most general declarations of positive intent. Our scoring of China's overall securitisation of climate change as low reflects this observation (see Figure 2). It should be noted, though, that the Chinese framing of climate change as a security issue is yet distinct from the Russian framing (which has also received a low ranking in its overall securitisation of the issue in this report, albeit it at least mentioning climate security quite regularly).



# Climatisation of Security Policies: Summary

Chapter 3 synthesises the actor-specific overview provided in the previous chapter, while the subsequent, concluding part of the report discusses the security-political implications of the emerging climate change governance trends through international and national security policies for Denmark.

## 3.1. Convergences and Divergences in Addressing Climate Change through Security and Defence Policies

Reconciling long-term forward thinking regarding the implications of the global warming and environmental degradation with mid-term security policy planning and more immediate national defence imperatives is a common challenge that state actors and international organisations grapple with. Commonalities aside, the agenda-setting actors tackling climate change through the lens and means of security politics can still be distinguished regionally and globally, along with the voices warning against the alleged threat inflation in relation to climate change.

Chapter 2 identified specific actor profiles that vary in their degree of the securitisation of climate change, on the one hand, and the climatisation of their security and defence policies on the other. Western organisations and states generally acknowledge the significance of climate change as a security problem and outline a variety of steps to manage the challenge in the security and defence policy realm. Many of the analysed actors have explicit leadership ambitions regionally and/or globally (e.g., NATO as an *Aspirational Mitigator*, the EU as an *Exemplary Leader*, the US as yet another *Aspirational Global Leader*, the UK as a *Global Trailblazer*, France as an *Environmental Security Pioneer*, and the Nordics as *Global Frontrunners*).<sup>246</sup> Others, such as Germany, are more emphatically committed to advancing climate diplomacy internationally instead of setting concrete climate change-related domestic targets in their defence planning and policy. Yet others, notably Russia (as a *Climate Sovereign*) and China (as a voice for an *Ecological Civilisation*), oppose addressing climate change through the lens of security politics, staunchly resisting attempts to address the issue as a matter of international peace and security via the UN Security Council.<sup>247</sup>

Nonetheless, various security implications of global climate change are generally acknowledged as broad contextual factors influencing the global security environment and sustainability of action in state and international security strategy documents across the sample studied in this report. In the meantime, a systematic distinction between the direct and indirect security impacts of climate change with more concretised timescales and specified solutions for the 'greenification' of defence is notably sparser across the board. Recognising the urgency of the challenge of climate change as a consequential security-political factor generally correlates with having preliminary action plans and roadmaps in place (which further vary in their level of granularity in distinct cases).

<sup>246.</sup> These labels do not necessarily mirror the reality or depict the analysts' assessment, capturing instead the terms the actors themselves have used to describe their respective positions in relation to the climate-security nexus.

<sup>247.</sup> For a recent example, see Rick Gladstone, "Russia Blocks U.N. Move to Treat Climate as Security Threat," *The New York Times*, December 13, 2021, https://www.nytimes. com/2021/12/13/world/americas/un-climate-change-russia.html.

Security Implications	International Organisations									
	NATO	European Union								
Intention for Action	<ul> <li>Security implications of climate change acknowl- edged at multiple levels (operational, geopolitical, human security), impacting NATO's core tasks and operations</li> <li>Commitment to reduce the environmental impact of NATO military activities; to adapt and become more resilient in response to security risks posed by climate change</li> </ul>	<ul> <li>Security implications of climate change acknowl- edged at multiple levels (operational, capability development, global partnerships, human security</li> <li>Contribution to the goal of becoming 'climate resilient' by 2050 by reducing defence sector emissions</li> </ul>								
Level of Ambition	<ul> <li>Global outreach</li> <li>Beyond adaptation: aiming at contributing to climate change mitigation</li> <li>Responsiveness to climate change to be included in a wide range of NATO activities (from defence planning to crisis management, disaster response, and resilience)</li> </ul>	<ul> <li>Global outreach (incl. Sahel, the Arctic), emphasis on multilateral action, financing green economy, energy transition worldwide</li> <li>Beyond adaptation: aiming at contributing to climate change mitigation</li> <li>Climate mainstreaming in foreign and security policies</li> </ul>								
Action on Clima- tising Security and Defence Policies	<ul> <li>Green Defence Framework (2014)</li> <li>Climate Change and Security Action Plan (2021)</li> <li>Targeted working groups (e.g., SET, EPWG, STEEEP)</li> <li>Climate change to be included in the new NATO strategic concept (with likely voluntary targets for Allies to progressively cut military force emissions)</li> </ul>	<ul> <li>The European Green Deal (2019)</li> <li>The EU Climate Change and Defence Roadmap (2020)</li> <li>EU strategy on adaptation to climate change (2021)</li> </ul>								
Overall Level of Securitisation	Medium ('urgent threat'), yet NATO not envisioned as the 'first responder'. Action plan in place, with expected emphases in the new strategic concept (2022).	High ('existential threat to humanity and biodiver- sity'). Concrete roadmap, investment, and financial tools in place.								
Actor profile	Aspirational Mitigator	Exemplary Leader								

### Table 2: Actor takes on the climate change-security nexus: International organisations

#### Table 3: Actor takes on the climate change-security nexus: US and UK

Security Implications	Countries									
	United States	United Kingdom								
Intention for Action	<ul> <li>Security implications of climate change acknowl- edged at multiple levels (operational, geopolitical, humanitarian), creating additional demands on US diplomatic, economic, humanitarian, and military resources</li> <li>Commitment to 'put the world on a sustainable climate pathway' and build domestic and inter- national resilience against the impacts of climate change</li> </ul>	<ul> <li>Security implications of climate change acknowl- edged at multiple levels (societal, operational, geo-economic, geopolitical, humanitarian)</li> <li>Commitment to adaptation, resilience, sustain- ability</li> </ul>								
Level of Ambition	<ul> <li>Global (incl. the Arctic)</li> <li>Adaptation: emphasis on resilience-building</li> </ul>	<ul> <li>Global leadership (with highlights on the Arctic and Sub-Sahara)</li> <li>Mitigation of food and water scarcity</li> </ul>								

Action on Clima- tising Security and Defence Policies	<ul> <li>Climate change incorporated into national security planning and policymaking</li> <li>DoD Climate Change Adaptation Roadmap (2014)</li> <li>Annual DoD Sustainability Report and Implementation Plan</li> <li>Presidential Executive Order on Tackling Climate Crisis at Home and Abroad (2021)</li> <li>National Climate Task Force and a special Presidential Envoy for Climate</li> </ul>	<ul> <li>MoD Climate Change and Sustainability Strategic Approach (2021)</li> <li>Initial action plan (2021-25) specified, yet com- prehensive</li> </ul>
Overall Level of Securitisation	Medium under the Biden administration ('threat to national security'), but yet to be implemented in practice. Gradual institutionalisation.	High ('global challenge'), acknowledging the need to review defence and security planning assumptions. Action plan in place.
Actor profile	Aspirational Global Leader	Global Trailblazer

#### Table 4: Actor takes on the climate change-security nexus: France and Germany

Security Implications	Countries							
	France	Germany						
Intention for Action	<ul> <li>Security implications of climate change acknowl- edged at multiple levels (operational, developmen- tal, societal, human security, global stability)</li> <li>Emphasis on the development of a preventive assessment strategy</li> </ul>	<ul> <li>Security implications of climate change acknowl- edged at multiple levels (domestic, global econom- ic development, conflict spreading, pressures on human rights and traditional security policies)</li> <li>Climate change management is part of the German commitment to crisis prevention and stabilisation efforts, and resilience-building in potentially affected regions</li> </ul>						
Level of Ambition	<ul> <li>Global (emphasis on the Sahel, Southeast Asia, Pacific islands, the Arctic)</li> <li>Regional and bilateral partnerships</li> <li>Aspiring to develop the capacity of anticipation</li> </ul>	<ul> <li>Regional (emphasis on the North Sea and Baltic regions as well as the Arctic and MENA region)</li> <li>Minimise the carbon footprint of the German military</li> <li>Establish climate security in the UNSC</li> <li>Rise of climate diplomacy and climate foreign policy</li> </ul>						
Action on Clima- tising Security and Defence Policies	<ul> <li>Stratégie Climat et Défense (2022)</li> <li>Defence and Climate (2018)</li> <li>Targeted defence strategies (e.g., on the Indo-Pacific, 2019), highlighting the policy of environmental security anticipation</li> </ul>	<ul> <li>Klimawandel und Konflikte: Herausforderungen für die Deutsche Aussen- und Sicherheitspolitik (2021)</li> <li>BMVg, Um Klimawandel kümmern (2017)</li> <li>BMVg, Nachhaltigkeitsbericht 2018 des Bunde- sministeriums der Verteidigung und der Bunde- swehr. Berichtszeitraum 2016-17 (2018)</li> <li>BMVg, Strategische Vorausschau: Der Arktisdialog (2018)</li> <li>BMVg, Der Klimawandel: Herausforderungen für die Bundeswehr (2019)</li> <li>BMVg, Neunte Sitzung des Netzwerks "Strategie und Vorausschau" (2019)</li> <li>BMVg, Nachhaltigkeitsbericht 2020 des Bunde- sministeriums der Verteidigungund der Bunde- swehr. Berichtszeitraum 2018-19 (2020)</li> <li>BMVg, Auswärtiges Amt und BMVg stärken gemeinsame Krisenfrüherkennung (2020)</li> </ul>						

#### 3.1. Convergences and Divergences in Addressing Climate Change through Security and Defence Policies

Overall Level of Securitisation	Medium (climate change considered a matter of peace and security). Less granular on concrete action plans.	Medium (lower end) ('catalyst in almost every conflict', 'problem for Germany's national security'). Plans of action lacking domestically; internationally, initiated the Informal Expert Group on Climate Security in the UNSC in 2020.
Actor profile	Environmental Security Pioneer	Climate Diplomat

#### Table 5: Actor takes on the climate change-security nexus: Norway and Sweden

Security Implications	Countries									
	Norway	Sweden								
Intention for Action	<ul> <li>Implications acknowledged at multiple levels (domestic defence and security governance, operational, societal internationally)</li> <li>Defence sector part of the 'greenification' of Norwegian society, contributing to the world development goals</li> </ul>	<ul> <li>Implications acknowledged at multiple levels (domestic, energy and human security, operational internationally)</li> <li>Minimising the environmental footprint of the armed forces and securing their operational sustainability in a climate-changed environment</li> <li>Commitment of defence forces to the sustainable development goals</li> </ul>								
Level of Ambition	<ul> <li>Regional focus (the High North and Arctic)</li> <li>Adaptation and mitigation: reduction of the negative effects of climate change by curbing defence sector CO<sub>2</sub> emissions</li> </ul>	<ul> <li>Regional (the Arctic) and global (the Sahel and MENA)</li> <li>Adaptation and mitigation reduction of fossil fuel emissions; building effective alliances in climate diplomacy</li> <li>Zero emissions target by 2045</li> </ul>								
Action on Cli- matising Security and Defence Policies	<ul> <li>Long Term Defence Plan (2020)</li> <li>Annual monitoring of the climate and environmental footprint of the Norwegian defence sector and its performance in reducing said footprint</li> </ul>	<ul> <li>National Security Strategy (2017)</li> <li>Roadmap (2019)</li> <li>Defence Forces Environment and Sustainability Report (2020)</li> </ul>								
Overall Level of Securitisation	Medium: moderate in words ('threat multiplicator'), practically institutionalised monitoring mechanisms in place.	Medium (higher end): ('threat to global security and the survival of humanity in the long term'). Pri- marily viewed as socioeconomic threat. Roadmap in place.								
Actor profile	Torn Mitigator	Climate Diplomat								

#### Table 6: Actor takes on the climate change-security nexus: Finland and Denmark

Security Implications	Countries							
	Finland	Denmark						
Intention for Action	<ul> <li>Implications acknowledged at multiple levels (incl. disaster management, energy and human security, global health)</li> <li>Emphasis on the security-sustainable develop- ment nexus</li> </ul>	<ul> <li>Implications acknowledged at multiple levels (domestic and international; incl. geopolitical security risks but also related economic possibilities)</li> <li>Emphasis on international cooperation and common solutions</li> </ul>						

Level of Ambition	<ul> <li>Regional (the Arctic, High North, Baltic region); global in climate action outreach</li> <li>Adaptation and mitigation: mainstreaming climate change into all levels of foreign policy</li> <li>Carbon neutrality pledged by 2035</li> </ul>	<ul> <li>Emphatic focus on the Arctic region</li> <li>Embracing 'Green Multilateralism'</li> <li>Greater incorporation of climate change and green conversion into defence cooperation</li> </ul>
Action on Cli- matising Security and Defence Policies	<ul> <li>National Energy and Climate Strategy (2013)</li> <li>Security Strategy for Society (2017)</li> <li>Action Plan for Climate Smart Foreign Policy (2019)</li> </ul>	<ul> <li>Foreign and Security Policy Strategy (2022)</li> <li>Foreign Policy and Security Strategy (2018)</li> <li>Global Climate Action Strategy (2020)</li> <li>Danish Defence Agreement (2018-23)</li> <li>Green Action Plan for 2021-25</li> </ul>
Overall Level of Securitisation	Medium: moderate in words ('gradually evolving phenomena'). Action plans and coordination struc- tures in place (Ambassador for Climate Change), but vague on defence policy.	Medium (higher end): ('one of the greatest chal- lenges that the world must address'). Action plan (incl. climate ambassador and sector collaborations) in place, but too early to assess the efficiency of implementation.
Actor profile	Climate Smart Actor	Green Superpower

## Table 7: Actor takes on the climate change-security nexus: Russia and China

Security Implications	Countries								
	Russia	China							
Intention for Action	<ul> <li>Implications acknowledged along multiple dimensions at domestic level (incl. health and human security, biodiversity, infrastructure resilience, economic risks, but also opportunities)</li> <li>Safeguarding Russian sovereignty paramount in global climate action</li> </ul>	<ul> <li>Refusal to link climate and state security, framing climate change as a challenge to economic growth and human security instead</li> <li>Climate change as a sustainable development issue, not a security matter</li> </ul>							
Level of Ambition	<ul> <li>Prevention and adaptation emphasis</li> <li>Regional focus (the Arctic); in global climate diplomacy adamant about keeping climate change out of the UNSC purview</li> </ul>	<ul> <li>Adaptation and gradual acknowledgement of great power responsibility in tackling climate change</li> <li>Resisting the inclusion of climate change in the UNSC peace and security agenda</li> </ul>							
Action on Cli- matising Security and Defence Policies	<ul> <li>Climate Doctrine of the Russian Federation (2009).</li> <li>The 2014 Progress Report on the Implementa- tion of Climate Doctrine</li> <li>Foreign Policy Concept (2016)</li> <li>National Security Concept (2021)</li> </ul>	<ul> <li>China's National Defence (2010)</li> <li>The Diversified Employment of China's Armed Forces (2013)</li> </ul>							
Overall Level of Securitisation	Low: albeit acknowledged as 'one of the major international problems in the 21st century' and as a threat to Russian state and human security, climate change is to be firmly kept out of the UNSC peace and security matters. Not granular in outlining the climate change-security nexus policy-wise.	Low: Climate change viewed as a sustainable development (not security) issue. Increasingly progressive rhetoric in global climate diplomacy yet to be matched by action.							
Actor profile	Climate Sovereign	Ecological Civilisation							

NATO and the EU have both presented a systematic approach to embracing the multi-level effects of climate change in their respective security policies. Both organisations address the challenge on an operational level, considering the immediate implications of climate change for their forces and missions, as well as with an eye for the broader, medium-, and long-term geopolitical repercussions of anthropogenic climate change. Both institutions go beyond the minimum ambition of adapting to (or merely coping with) the challenge, outlining specific steps and programmes for mitigation (i.e., protecting the environment from further damaging effects by their activities and global presence), the related capability-building (e.g., developing novel technologies to improve climate modelling and the predictability of climate change-induced risks), and partnership outreach initiatives. Both NATO and the EU have a global ambition in their addressing of the climate change-security nexus. While neither offers a clear definition of 'climate security', both embrace various aspects of the security implications of global climate change in terms of their respective emphases on environmental, energy, and human security concerns and emerging mitigation agendas. Both institutions engage in an explicit framing of climate change as a serious threat and have pertinent action plans/roadmaps in place.

Meanwhile, state actors tend to view the security implications of climate change through a state-centric and state-specific lens, albeit the framing of the problem generally acknowledges the human security implications of climate change. While various dimensions of climate change-induced security issues receive mention in assorted national security policy documents, including geopolitical tensions, public health, and ecological concerns, societal and economic security pressures, and critical infrastructure disruptions, the primary referent object for any state security strategy remains the state. While state actors vary significantly in the 'progressiveness' of their thinking beyond their immediate sovereign scope of concern and action for addressing the problem in the traditional security and defence domain, the general integration of the challenge of climate change in the states' respective diagnoses and responses through the lens and means of security politics remains scattered and unsystematic. The defence-specific engagement of states with the challenge varies considerably, since climate change cuts across various areas of responsibility and existing divisions of labour between domestic institutions. Action in the defence and security sector is not the only

possible result – or apex – of securitisation: The securitisation of climate change could also manifest via foreign and development policies.

State actors diverge in attaching urgency to climate change as an issue to be addressed through security policy both in words and deeds: the problem is elaborated on (and prioritised in security agendas) very differently in cases like Russia and the Nordic states, for example. State strategies tend to fall short of systematic, multi-level engagement with the security implications of climate change, insufficiently differentiating between the immediate (or direct) and broader contextual effects of the challenge in question. The case for taking climate change seriously as a security problem is almost invariably made on pragmatic grounds, leaving the normative considerations of whose survival, resilience, needs, and rights should be considered and hence explicitly or implicitly put at the centre of respective linkage politics outside of the current strategic canon and state practice. The practical introduction of climate change adaptation and mitigation measures into security and defence policy mechanisms remains notably uneven across the studied cases: for example, French and German vocality on the nexus is not quite matched by comparable granularity in their security and defence policy-specific action plans. Meanwhile, in the case of Germany, there is notable climatisation ongoing in the foreign and development policy sectors. The Nordic states are generally progressive in their overall climate action (with Norway displaying a torn external profile), while generally viewing the climate change-related security challenges through the sustainable development lens. The practical implementation is yet another story across the studied cases: the action plans and roadmaps in place are either too recent or only emerging for the comprehensive assessment of their delivery efficiency.

Figure 2 captures the summary securitisation of climate change by the sampled actors. This visualization draws on our qualitative assessments along our central analytical categories, and therefore does not pretend to deliver the final word on the matter (see Table 8 below). The actor profiles have been visualised to capture the scope, strength, and specificity of climate change securitisation in each individual case based on our mapping exercise and qualitative coding of the core categories. The *bubble size* indicates an actor's securitisation intent (consolidating its declared intention and level of ambition in framing climate change as a security issue and stipulating planned action on the matter). The *x-axis* features

Table 8: Actor scoring table												
	NATO	EU	US	UK	France	Germany	Norway	Sweden	Finland	Denmark	Russia	China
Intent and ambition (bubble size)	6	9	7	10	8	7	7	8	7	8	3	4
Climatisation of security and defence policies (delivery and action – x-axis)	6	7	7	9	6	4	3	5	5	5	2	2
Level of overall securitisation of climate change (Aggregate of all categories: y-axis)	6	8	7	9.5	7	5.5	5	6.5	6	7	2.5	3

the actors' respective action on rendering climate change governable as a security issue (or what we refer to as 'climatising' security and defence policies). The *y-axis* shows the actors' overall securitisation of climate change, combining their intention, ambition, and pertinent delivery with regard to addressing climate change via security and defence policies.<sup>248</sup> It is, hence, the summary of all other categories. Consequently, the x-axis indicates our combined assessment of the actors' definition of climate change as a threat<sup>249</sup> along with the measures and activities promoted as a consequence (or pertinent actions taken to counter climate change in and through the security and defence policy field). The positioning of actors in this figure is based on our qualitative scoring of their performance along the indicated categories from high (8-10) to medium (4-7) to low (1-3). The colouring of the bubbles in the figure is random.

<sup>248.</sup> In the original meaning of the Copenhagen School, securitisation is to be considered successful only in the case of introducing special procedures and extraordinary measures to manage a particular issue framed as an existential threat (see Buzan et al., *Security*: 25). It is notable how, in the securitisation of climate change, tackling the issue has not brought about emergency measures; rather, it has unfolded through the negotiations under the UN Framework Convention on Climate Change and been dealt with by various existing international fora. Note also that scholars remain divided on the desirability of securitising climate change. For a sympathetic reading of securitising climate change, see Rita Floyd, "Securitizing the Environment," in *Routledge Handbook of Environmental Security*, eds Richard Matthew, Evgenia Nizkorodov, Crystal Murphy, Kristen A. Goodrich, Ashley Hooper, Bemmy Maharramli, Maureen J. Purcell, Paroma Wagle (London: Routledge, 2021), 227-39. For a political theory of just securitisation, see Rita Floyd, *The Morality of Security: A Theory of Just Securitization* (Cambridge: Cambridge University Press, 2019).

<sup>249.</sup> I.e., the discursive framing of climate change as a threat (or 'securitizing moves' in the Copenhagen School parlance).





Level of climatisation of security and defence policies

# 4

# Conclusions and Policy Recommendations

While climate change as an object of global governance has become a recurring topic in national and international security strategies and policies,<sup>250</sup> how the actors tackle climate change as a security issue continues to be generally unsystematic and often declaratory. Much of the problem lies in the fact that mitigating the effects of the current climate crisis is a complex collective action conundrum which requires rethinking both state sovereignty and the traditional core of the security concept. As Carol Dumaine asserts, 'future national security approaches must go beyond a traditional state-centric national security lens to grapple with the larger ecological, social, political, and intergenerational dynamics that may arise in the wake of climatic changes and other complex, transnational challenges'.<sup>251</sup> As a 'super wicked problem',252 climate change defies the standard national security-oriented paradigms and policies. Regardless of the rise of various environmental regulations internationally and domestically, the most recent UN Global Climate Change Conference of the Parties (COP26) of November 2021 has brought the persisting tensions between national and integrated multilateral and global frameworks alongside precautionary and reactionary approaches in addressing climate change, out in the open again.

<sup>250.</sup> Bentley B. Allan, "Producing the Climate: States, Scientists, and the Constitution of Global Governance Objects," *International Organization* 71, no. 1 (2017): 131-62.

<sup>251.</sup> Dumaine, "Redefining Security," 81-83.

<sup>252.</sup> Heininen, "Before Climate Change," 112.

This report has taken stock of the shifting security-political environment through the lens of how the significant international and state actors ponder the effects and implications of climate change. Such implications are manifold yet oftentimes nebulous, since the nexus appears as a spectrum rather than a relationship with unequivocal causal vectors. Part of the problem with managing the security repercussions of climate change lies in the attachment of actors to distinct types and concepts of security. For example, the energy transition of the EU in congruence with its 'Green Deal' aimed at a zero net emission target by 2050, which would mean a loss of an important source of Russian export revenues, thus potentially creating domestic tensions and endangering Russian economic and political security. This could further add to Russia's aggressive conduct in security politics regionally and globally, generating energy security pressures for the European countries along the way in the short term. From the Russian perspective, the global rise in renewable energy source targets and the transition towards a decarbonised energy economy are regarded as a significant threat to the country's export revenues.<sup>253</sup> Conversely, the external pressure to decarbonise could offer an incentive for Russia's own economic modernisation, encouraging it to embrace clean energy technologies and relieving the country's dependence on hydrocarbons in the long run.<sup>254</sup>

Any discussion of the climate change-security nexus therefore defies easy answers about what climate security and climate resilience entail for distinct actors. Careful, nuanced, and empirically grounded definitions are called for to help us to appreciate the multi-level and multi-dimensional security implications of this global challenge. Climate change sets a moving agenda for security actors, providing them with manifold trials as well as opportunity to rethink the deficiencies and bottlenecks of their existing security policies, practices, and relationships. The actor-mapping exercise conducted in Chapter 2 demonstrates how the emerging securi-

<sup>253.</sup> James Henderson and Tatiana Mitrova, "Implications of the Global Energy Transition on Russia," *The Geopolitics of the Global Energy Transition, Lecture Notes in Energy* 73, 2020, 100, https://doi.org/10.1007/978-3-030-39066-2\_5.

<sup>254.</sup> See further Jussi Lassila and Marco Siddi, "Russia Meets Climate Change: The Domestic Politicization of Environmental Issues and External Pressure to Decarbonize," *FILA Briefing Paper no. 303*, March 2021, 3, https://www.fiia.fi/wp-content/uploads/2021/03/bp303\_ russia-meets-climate-change.pdf.
ty policies and practices in response to climate change vary significantly in terms of their comprehensiveness, level of specificity, concreteness of measures, and their relationship to actors' overall self-positioning in the wider climate change action landscape.

## 4.1. Implications: so what for Denmark?

What does the above analysis of emerging national and international trends on addressing the multifarious security repercussions of climate change mean for Danish security and defence policy planners? Which openings, closings, and competitions does the emerging landscape of climate change-affected security policies among the important points of reference for the Kingdom of Denmark indicate for its own foreign, security, and defence policies?

Leaving aside the discussion of the various ripple effects of climate change on the physical security environment of Denmark *per se*, the following section provides a summary reflection on the political and strategic implications of the emerging international developments on managing climate change through security and defence policies. Our focus is, hence, on the implications of the evolving *policy environment* of tackling the challenge, regionally and globally. Moreover, Denmark's direct vulnerability to climatic distress is of a different order compared to the most 'climate-fragile' regions of the world (i.e. the Horn of Africa, the Sahel, South East Asia, Central America, and the Middle East and North Africa, and last but not least, the Arctic).<sup>255</sup>

Denmark has prominently acknowledged and increasingly addressed the challenge of climate change in various national and international security strategies and action plans, and indirectly through different international organisations, as well as bilateral initiatives. For a self-declared 'green frontrunner in global climate action'<sup>256</sup> and a green multi-lateralist in its security-political embracing of the challenge, systematic awareness and continuous monitoring of the unfolding policy context in the

Global Climate Crisis Group, "How Climate Change Fuels Deadly Conflict," https:// globalclimate.crisisgroup.org/ (accessed December 15, 2021).

Ministry of Foreign Affairs of Denmark, "Global Climate Action Strategy," 2020, https:// um.dk/en/foreign-policy/new-climate-action-strategy/.

Euro-Atlantic space and beyond are imperative for setting wise policy priorities and savvy action. Denmark's 'pioneer country' profile in green innovation and transition provides a sound platform on which to capitalise, also in climatising security and defence policies. At a global policy level, bold and efficient climate change mitigation policies could be seen as evolving status markers of legitimate sovereign conduct and, by extension, sustainable and responsible security policies. Mainstreaming climate change responsiveness to foreign and security policies of states is becoming part and parcel of the emerging international expectations regarding effective climate action. While antagonistic competition in that regard is unlikely in the foreseeable perspective, a friendly regional race for the greenest pioneer country status of the many aspirational leaders in the sphere is quite probable - and apparently already unfolding.

The Danish candidature for a UNSC seat in 2025-2026 provides an immediate political impetus and a window of opportunity to leave a mark on the global climate security management agenda (or more specifically, the points of convergence between the global climate, peace, and security agendas).<sup>257</sup> Since Germany focused on this during its last term in the UNSC, initiating dialogue with Germany on lessons learned and key issues on which to follow up could be a productive starting point for Denmark. Calling for an international conference to methodically address the security dimensions of climate change and to develop a functional definition of climate security could be a good political start.<sup>258</sup> Denmark's strategic profile in relation to climate action through security and defence policies should be advanced with an integrated approach for the challenge cuts across different ministerial competencies, and it calls for comprehensive engagement on multiple dimensions (energy transition, risk anticipation, conflict prevention, disaster response) and modalities of action (risk monitoring, analysis, policy coordination, practical response) concurrently. Besides the UN as an umbrella forum for defining and tackling the security implications of climate change, it is paramount for Denmark to keep an eye on and relate to the respective

<sup>257.</sup> Jessica Larsen and Jakob Dreyer, "Denmark Can Have Climate Security on International Agenda," *DIIS Policy Brief*, October 13, 2021, https://www.diis.dk/publikationer/ danmark-kan-faa-klimasikkerhed-paa-internationale-dagsorden.

<sup>258.</sup> See also Berlin Climate and Security Conference 2021, https://berlin-climate-security-conference.de/

developments in NATO and the EU. This is already boldly embraced in the new foreign and security policy strategy, where Denmark has declared its commitment to 'ensure that what started as a Coal and Steel Union becomes a Climate Union with global clout'.<sup>259</sup>

Considering NATO's increasing focus on climate change as a defining security challenge and threat multiplier of our times, it would be pertinent for Denmark to further stipulate its security-political take on the climate challenge in its forthcoming Defence Agreement (to be negotiated in 2022), along with the implementation steps of the government's 2022 foreign and security policy strategy. Since curbing climate change is high on the overall political delivery list,<sup>260</sup> the imperative to subject Danish defence sector to systematic 'greenification' is also loud and clear should Denmark hope to be able to deliver on the said reduction target on the whole. Consequently, the prioritisation and funding of the green transformation in defence and security policy initiatives will have to feature centrally in the next Danish Defence Agreement for the sector to be able to make a proportional contribution to the overall greenification goals of Danish society.

This objective pertains to the allocation of finances, adjustment of logistics and equipment, identification of concrete training needs of the Danish armed forces, and the development of targeted capabilities. The adaptation minimum implies the systematic introduction and implementation of measures to reduce the current carbon footprint of Danish forces and military equipment *inter alia* by incentivising the use of biofuels, solar energy, and nanotechnology for military gears and equipment, alongside the utilisation of hybrid and/or electric vehicles in military activities. To meet the country's overall climate action commitments, Danish defence forces are bound to reduce their dependency on fossil fuels, and the defence industry is consequently compelled to increase the related R&D efforts on new, sustainable fuel types to be used in ships, aircraft, cars and trucks, and other logistical equipment. The green transformation in Danish defence industry means, in turn, less dependency on foreign materiel acquisitions for Danish armed forces, whereas favouring the Danish defence industry will lead to further degrees of Dan-

<sup>259.</sup> MFA of Denmark, "Foreign and Security Policy Strategy 2022," 28.

<sup>260.</sup> That is, 70% reduction of GHG emissions by the 2030 target.

ish production capability and thus strategic freedom in terms of materiel acquisitions. The example of the renaissance of the Danish shipbuilding industry could generate a broader export adventure for the Danish defence industry more generally. The increasing non-dependence on fossil fuels would imply a higher degree of operational freedom for Danish armed forces for no longer having to rely on long and costly logistical supply lines.

Strategically and operationally, the Arctic region will continue to feature as the Danish focal point in climate change-responsive security politics. In light of the increasing great power competition in the region induced by climate change, the Kingdom of Denmark (i.e. Denmark, the Faroe Islands, and Greenland) has an important balancing role against the backdrop of the emerging militarisation tendencies of the region. Enhanced situational awareness regarding the impacts of climate change across the High North and the Arctic is therefore emerging as an important security commodity for Denmark. Along the southern security geography vector, climate change will continue to colour Denmark's operational priorities in cooperation with host nations and other international organisations (primarily NATO) while also featuring as an important contextual contributor to future migration pressures from the south.

## 4.2. Policy Considerations and Recommendations

On the basis of the above analysis of the key international and national takes on the climate change-security relationship together with the emerging securitisation patterns of climate change, three key sets of policy considerations can be derived for Euro-Atlantic security policy experts and practitioners:

1. Distinguish between the direct and indirect security impacts of climate change in shaping collective policy responses in shortand long-term perspectives alike. Taking note of the varied understandings of 'climate security' worldwide, the 'climatization' of security policies should build on sensitivity towards distinct dimensions and the contextual implications of the term. Consistent monitoring and analysis of global developments in climate action should be accompanied with the assessment of the related consequences for climate security at multiple levels of analysis.

- 2. Integrate a climate change sensibility (or an attunement and responsiveness to climate change) into all levels of security and defence policy planning and delivery. Such an effort should range from systematic, context-specific analysis to tailored foresight-build-ing, preparedness, and improved coordination of climate security between different sectors of government domestically.
- 3. Coordinate climate change-related monitoring, information exchange, and cooperation activities systematically through NATO and the EU, and advance the synergistic collaboration via a permanent consultation format between the two organisations for tackling the issue. Within NATO, concrete allied guidelines for netzero carbon emissions on part of the Allied military forces could be considered to be implemented in the next few decades alongside NATO's existing expectation to spend 2% of GDP on defence, with a related encouragement of Allies to report the carbon output of their militaries to NATO to increase mutual accountability in climatising security and defence.<sup>261</sup>

For Denmark specifically, the progressive policy rhetoric and aspirations must immediately be turned into 'walking the walk' in order to credibly deliver on the country's bold ambitions to be a green superpower in global climate action. The Green Office of the Ministry of Foreign Affairs plays a prominent oversight role here, besides the more specifically defence-related action profile of the Ministry of Defence. Accordingly, Denmark's security and defence policy establishment could consider:

<sup>261.</sup> See further Ahmet Uzumcu, Tacan Ildem, and Fatih Ceylan, "The New Challenge for NATO: Securing a Climate-Changed World," *New Atlanticist*, April 20, 2021, https://www. atlanticcouncil.org/blogs/new-atlanticist/the-new-challenge-for-nato-securing-a-climatechanged-world/ (accessed December 2, 2021).

- Setting clear target goals for the actual contribution of the Danish defence sector towards the 70% reduction in emission-target by 2030 through specific programme initiatives, aiming at a collective net zero by 2050.
- 2. Establishing a Climate Change Coordination and Monitoring Office between the climate partnership ministries (i.e., the Ministry of Defence, Ministry of Climate, Energy and Utilities, and the Ministry for Industry, Business and Financial Affairs) in order to follow the actual transformation processes empirically. Relatedly, it would be worthwhile to consider establishing a monitoring and reporting mechanism within the said office that would closely follow the pertinent progress and produce an annual report on national climate change adaptation and the mitigation measures put in place.
- 3. Integrating climate impact analysis systematically into Denmark's overall deterrence and defence planning. The Danish Arctic defence focus would make the country an organic frontrunner on the issue more broadly. Denmark could further use its climate impact analysis to contribute to the respective EU initiatives, despite its opt-out from the EU's foreign policy where defence is concerned.
- 4. Integrating climate change mitigation programmes into the Danish government's Peace and Stabilisation Fund (PSF) 2022-2025 as a mechanism for change in contributing to peace and security in conflict-ridden countries and regions (e.g., the Sahel and East Africa). The climatisation of the development sector, marked by the introduction of adaptation as a new goal of development policy and aimed at enhancing people's coping capacity and resilience<sup>262</sup> runs parallel to the climatisation of the defence sector. Gearing the PSF further towards countering climate change should be coordinated by the Ministry of Foreign Affairs and the Ministry of Defence through a whole-of-government approach utilising the green transition initiatives in Denmark. In addition, a close monitoring of the already supported organisations could serve as an avenue of further pro-

<sup>262.</sup> Oels, "From 'Securitization', to 'Climatization'," 200.

grammatic focus in order to determine the effect of existing climate change mitigation and adaptation initiatives.

5. If Denmark succeeds in getting a seat in the UN Security Council, promoting climate change as part of the international peace and security agenda is an important priority.

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