Working paper

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Introduction

‘Realising a Sustainable Security Architecture in Europe’ is a three-year project that is being funded by the generosity of Polden-Puckham Charitable Foundation. This undertaking is intended to help develop and advise policymakers across Europe on how to build a sustainable security architecture in Europe. This project brings together representatives from several Organisation for Security and Cooperation in Europe (OSCE) member states. During 2024 and 2025, five track 1.5 regional workshops will take place, hosted across five European countries. The workshops will bring to the table government officials and experts from more than 30 European states for in-depth discussion and deliberations.

These discussions will be driven by a research-based working paper, produced by BASIC. It is intended that the workshop participants will explore the possibilities for the development of a New Model for Security in Europe that prioritises climate and human security, alongside traditional security.

After deliberation of the participant recommendations throughout the workshops, an initial working report ‘A New Model for Security in Europe’ will be unveiled at the project’s final conference in Vienna in 2025. There, participants from both Track 1 and Track 2 levels from across the states can engage with a final discussion on the project, leading to the publication of the full final report in the latter part of 2025.

Why we need a new European security architecture

Relations between states have become more complex and increasingly conflict-prone with the rise of multipolarity or multiorder, and we are facing a crisis in the international rules-based order.[1] In Europe, Russia’s continued war against Ukraine has uprooted decades of post-Cold War diplomacy aimed at creating a pan-European security architecture that allowed peaceful relations between allied and non-allied European states. The Russian aggression against Ukraine is the culmination of a slow erosion of post-Cold War diplomacy, and suggests that a new security architecture and new diplomacy are needed in Europe to return the continent to a state of stability. It is clear that in the short-term, security in Europe must be organised in opposition to Russia; however, in the long-term, Europe’s security architecture, while still requiring hard headed defence, must be rethought beyond traditional

[1] Trine Flockhart and Elena A. Korosteleva, ‘War in Ukraine: Putin and the Multi-Order World’, *Contemporary Security Policy*, 24 June 2022, 1–16, https://doi.org/10.1080/13523260.2022.2091591.

alliances and agendas and involve Russia as a European state.[2] This raises immediate questions around when and how the European states can engage to build a sustainable security architecture in Europe.

The need to rethink beyond traditional alliances and agendas stems from this breakdown of post-Cold War diplomacy and newly realised security issues, such as energy security and climate change's impact on security, including human security, both of which have become increasingly important topics in international politics. When developing a security architecture in Europe encompassing new and old threats to peace and stability, we need to consider the complexity of security in Europe against the backdrop of the breakdown of the rules-based global order, the failure of post-Cold War diplomacy, rising nationalism in and outside of Europe, and climatic threats to security. This working paper seeks to better understand the complexity of security in Europe in this new era.

What is a security architecture?

The term 'security architecture', although often used, may have a different meaning to different actors, be it governments or scholars. Some scholars argue that – in a European context – the European security architecture is a system created by the overlapping competencies of the main European institutions, or it is composed of 'interlocking institutions'; others have spent time digesting the different architectural debates in the post-Cold War era in Europe reflecting that the European security architecture evolves over time and space.[3] Yet others are using the term without clarifying its meaning.[4] As a suggestion and point of departure for the purpose of this working paper, we use the following:

'A security architecture is a system of norms, practices, relationships, alliances and institutions constructed or developed by nations to address, enhance or ensure international and/or regional security.'[5] More specifically, when we talk about the purpose of a security architecture, these can be framed in material and social terms. The material purpose is often expressed in the ability to produce tangible outcomes, such as hard security, whereas in social terms, the purpose is about producing normative outcomes, such as policies or understandings of what the threats are.

In Europe, the architecture is the system made up of a range of components, such as alliances, multilateral organisations and institutions - such as the OSCE - a range of bilateral and multilateral relationships, formal and informal agreements, treaties and shared norms to

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[2] Peter Jones, 'European Security Architecture: Against Russia, or With It?', *RUSI Commentary* (blog), 14 December 2022, https://www.rusi.org/explore-our-research/publications/commentary/european-security-architecture-against-russia-or-it.

[3] Michael W. Mosser, 'Embracing "Embedded Security": The OSCE's Understated but Significant Role in the European Security Architecture', *European Security* 24, no. 4 (2 October 2015): 579–99, https://doi.org/10.1080/09662839.2015.1054376; Franz Kernic, *European Security in Transition*, ed. Gunther Hauser, 0 ed. (Routledge, 2016), https://doi.org/10.4324/9781315581019.

[4] EEA: EU support to Ukraine and the security architecture in Europe, 2022. https://www.eeas.europa.eu/eeas/eu-support-ukraine-and-security-architecture-europe_en

[5] Brendan Taylor and William T. Tow, 'What Is Asian Security Architecture?', *Review of International Studies* 36, no. 1 (2010): 95–116, https://doi.org/10.1017/S0260210509990520.

ensure security. There are a vast number of components in this system that differ in geographical scope, level of formality stretching from formal to informal, level of commitment and purpose. At the same time, new components continue to emerge in response to specific political goals or threats.[6] For example, the European Political Community only recently came into being as a new organisation for cooperation between 'democratic' European nations to cooperate on, amongst other things, security. In addition, the Bucharest 9 came into being as a result of a perceived lack of adequate attention to the Eastern flank's defence needs following the Russian 2014 illegal annexation of Crimea as a platform for dialogue and consultation between the members on NATO matters.[7]

A distinctive feature of the European security architecture is that the principles and rules of the UN Charter are reinforced throughout a number of core institutions and agreements founded since 1945, such as the Council of Europe 1949 and the 1990 Charter of Paris.[8] In the post-Cold War period, Europe has seen Russia slowly rejecting the rules-based multilateral regional order in Europe, culminating in the full-scale invasion of Ukraine in 2022 in breach of international humanitarian law, principles, rules and regional norms. Other European governments are rejecting the fundamental principles of the European order, such as Hungary's Orban government.

What is Europe?

Having a regional security architecture, specifically a European security architecture, also raises the question of where and what Europe is - which is a highly debated issue. On the surface, Europe is a geographical space - essentially a small appendage to Eurasia - yet Europe's geographical demarcation remains debated especially in the East. Europe, however, can also be an entity bound by political, cultural, economic ties or a sense of identity deeply rooted in the history of the region as a space separate from the surrounding regions.[9]

While there is a defined (yet contested) cartographic demarcation of Europe, it is clear that when we talk about security, geography does not capture all those states that are currently

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[6] For an overview of how complex the European security architecture is, RUSI mapped the UK's defence and security relationships in Europe, see https://rusi.org/explore-our-research/projects/european-security-transformation-programme/uk-defence-and-security-relationships-across-europe

[7] Thomasen, G. (2023). The Unsettled Alliance: Risk, Fear and Solidarity in NATO. Journal of Autonomy and Security Studies, 7(2). Retrieved from https://jass.ax/index.php/jass/article/view/92; https://commonslibrary.parliament.uk/what-is-the-european-political-community/

[8] Kjell Engelbrekt, 'The European Security Order', in *The Borders of the European Union in a Conflictual World: Interdisciplinary European Studies*, ed. Antonina Bakardjieva Engelbrekt et al. (Cham: Springer Nature Switzerland, 2024), 205–31, https://doi.org/10.1007/978-3-031-54200-8_9.

[9] Maria Malksöo, *The Politics of Becoming European: A Study of Polish and Baltic Post-Cold War Security Imaginaries*, The New International Relations (London ; New York: Routledge, 2010); R.B.J. Walker, 'Europe Is Not Where It Is Supposed to Be', in *International Relations Theory and the Politics of European Integration : Power, Security and Community, Edited by Morten Kelstrup, and Michael Williams* (Taylor & Francis Group, 2000); Larry Wolff, *Woodrow Wilson and the Reimagining of Eastern Europe* (Stanford, California: Stanford University Press, 2020), https://search.ebscohost.com/login.aspx?direct=true&db=nlebk&AN=2297108&site=ehost-live.Windley, Brian Frederick , Berentsen, William H. , East, W. Gordon and Poulsen, Thomas M.. "Europe". Encyclopedia Britannica, 7 Mar. 2024, https://www.britannica.com/place/Europe. Accessed 7 March 2024.

directly involved in the European security architecture, most notably the US. Looking back, it becomes evident that states have been involved in or detached from European security. For example, the US periodically stood outside European security in the 20th century only to become deeply embedded in 1949. Other states, most notably Russia and the US, have left certain parts of it in the post-Cold War era. At the same time, new states or states that reclaimed their statehood after the breakdown of the Soviet Union, joined the European security architecture; for example, Kazakhstan became a member of the OSCE in 1992.[10] This in turn suggests that Europe, when we talk about European security, evolves in space over time.

What is climate change?

According to the UN 'climate change refers to long-term shifts in temperatures and weather patterns.'[11] These changes are driven by human activities, especially the burning of fossil fuels which increase greenhouse gases in the atmosphere and cause temperatures to rise abnormally. Experienced differently across the globe, climate change manifests itself in numerous ways, including in rising sea levels, extreme weather events such as wildfires and floods, forced displacement, and vector borne diseases. With the 2015 Paris Agreement, more than 190 states signed up to a global goal of limiting the temperature rise to 1.5°C by 2100. However, it is now widely believed that by 2030 the 1.5°C threshold will be surpassed.[12] The Intergovernmental Panel on Climate Change (IPCC) - the UN body for assessing science related to climate change - estimates that global emissions will have to reach net zero by 2050 to limit the temperature rise to 1.5°C or reach net zero by 2070 to limit the rise to 2°C. Beyond 2°C there are tipping points in the Earth's system.[13]

Europe is not immune to global heating. By the end of the 21st century, Europe's temperatures are predicted to rise, at minimum, by 1.5 °C and, at maximum, by 4.5 °C.[14] The effects of this rise in temperature are felt across Europe. For example, it is recognised that while wildfires are largely caused by human activities in the South Caucuses, their impacts are likely to be more frequent and severe as a result of climate change, thereby risking environmental, social, and economic harms for the region.[15]

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[10] Geir Lundestad, *The United States and Western Europe since 1945: From 'Empire' by Invitation to Transatlantic Drift*, 1. publ. in paperback (Oxford: Oxford Univ. Press, 2005); Gry Thomasen, *Applying a Systematic Approach to NATO-Russia Risk Reduction: Perspectives from the North East Flank* (London, United Kingdom: BASIC, 2022).
[11] UN: What Is Climate Change? https://www.un.org/en/climatechange/what-is-climate-change
[12] Damian Carrington and Damian Carrington Environment editor, 'World's Top Climate Scientists Expect Global Heating to Blast Past 1.5C Target', *The Guardian*, 8 May 2024, sec. Environment, https://www.theguardian.com/environment/article/2024/may/08/world-scientists-climate-failure-survey-global-temperature.
[13] IPCC, 2023: Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, H. Lee and J. Romero (eds.)]. IPCC, Geneva, Switzerland, pp. 35-115, doi: 10.59327/IPCC/AR6-9789291691647.
[14] 'What Will the Future Bring When It Comes to Climate Hazards? - Overview', Briefing, European Environment Agency, accessed 12 September 2024, https://www.eea.europa.eu/publications/europes-changing-climate-hazards-1/what-will-the-future-bring.
[15] OSCE and adelphi Research, 'Joint Co-Operation Strategy on Climate Change and Security in Northern Armenia and Southern Georgia | Climate-Diplomacy', 14 January 2025,

Dealing with climate change, however, is a complex endeavour. On the one hand, climate change needs to be dealt with in the short-term to slow the rise of temperatures to reduce the risk of climate extremes and irreversible tipping points, and on the other, climate change must be dealt with through a long-term perspective to stabilise the climate.[16] Whereas the rise in temperature is scientifically predictable, the many extreme weather events that have occurred over the years are far more difficult to predict. In addition, climate change becomes more unpredictable as societies may react differently to the effects of climate change.[17] This makes climate change effects on our security somewhat difficult to control and certainly underscores the complexity of predicting the effects of climate change in both the short- and long-term.

Climate risks

The climate – security nexus denotes the idea that there may be an interrelationship between climate change and conflict, and governments are increasingly representing climate change as simultaneously a systemic crisis - that is, a threat to national security, the environment and human security - and a threat multiplier, meaning that global warming multiplies existing threats to security. The causal link between global warming and geostrategic competition has, however, not been established yet.[18]

In terms of climate risks, however, there are at least three risks that are interrelated.

First, we talk about so-called ‘transition risks’ that may occur if states rapidly decarbonise. The petrostates are vulnerable to economic disruptions and a rapid decarbonisation may pose risks to these societies, political regimes and increase risks of conflict if there is no substantial planning to deal with a steep decline in revenue from hydrocarbon exports.

Second, the ‘derailment problem’ denotes that if we as societies are not dealing with climate change fast enough, it becomes more severe, which in turn may lead to short-term disaster responses based on fossil fuel solutions to keep our societies going.[19] In general terms, during conflict and periods of political instability, climate regulations are often rolled back and the necessary international scientific cooperation on climate change suffers.[20]

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https://climate-diplomacy.org/magazine/cooperation/joint-co-operation-strategy-climate-change-and-security-northern-armenia-and.

[16] Durwood Zaelke, Romina Picolotti, & Gabrielle Dreyfus 2023; NIE Climate Change and National Security October 2021.

[17] Durwood Zaelke, Romina Picolotti, & Gabrielle Dreyfus 2023; National Intelligence Estimate, Climate Change and International Responses Increasing Challenges to US National Security Through 2040. NIC-NIE-2021-10030-A. October 2021.

[18] Katharine J. Mach et al., ‘Climate as a Risk Factor for Armed Conflict’, *Nature* 571, no. 7764 (1 July 2019): 193–97, https://doi.org/10.1038/s41586-019-1300-6; Joshua W. Busby, *States and Nature: The Effects of Climate Change on Security*, The Politics of Climate Change (Cambridge: Cambridge University Press, 2022), https://doi.org/10.1017/9781108957922.

[19] Laurie Laybourn, Joseph Evans, and James Dyke, ‘Derailment Risk: A Systems Analysis That Identifies Risks Which Could Derail the Sustainability Transition’, *Earth System Dynamics* 14, no. 6 (14 November 2023): 1171–82, https://doi.org/10.5194/esd-14-1171-2023.

[20] Angelina Davydova, ‘At COP27, Russia Acted as Though It Had Not Invaded Ukraine’, openDemocracy, accessed 21 May 2024, https://www.opendemocracy.net/en/odr/cop27-russia-war-ukraine-climate-crisis/; Gry Thomasen,

Ukraine appears to be an outlier in this regard, as the Ukrainian government has prioritised the environmental toll that the war has had on Ukraine and has employed environmental monitoring since early 2022.[21] 'Ecocide' has long been a concept of crime in Ukrainian legal code and it is likely that Ukraine will seek damages from Russia for this crime.[22]

Third, geoengineering is a 'large scale manipulation of a specific process central to controlling Earth's climate for the purpose of obtaining a specific benefit' and has become a threat to national security. In the US recent intelligence estimate, the Intelligence Community (IC) warns that: 'Large-scale geoengineering could be internationally disruptive because of its potential to substantially affect the Earth's biosphere, which would change global weather patterns and provide climate benefits to some regions at the expense of others.'[23]

What is human security?

In the UN's seminal Human Development Report (1994), human security was introduced as a new frontier in world politics, underscoring that the end of the Cold War allowed states to step back from doctrines of mutually assured destruction and arms racing. Unlike the traditional concept of security that placed the protection of the state - its territorial integrity and sovereignty - from external threats at the centre, human security places the human at the centre and gives the individual security agency.[24] This broadens the scope of security to encompass economic security, food security, health security, environmental security, personal security, community security, and political security, to name but a few. Human security has a positive and negative dimension, meaning it is not only about absence of threats, but also about the presence of opportunity to live a full life.[25]

Human security as a concept has, however, been criticised for being too vague or rather too encompassing in the sense that everything can become a matter of human security, leaving states and international organisations with a concept that is difficult to operationalise into policies.

'Managing Resources And Sea Routes In The Arctic - BASIC' (London, United Kingdom: BASIC, 7 November 2022), https://basicint.org/report-managing-resources-and-sea-routes-in-the-arctic/.

[21] High-Level Working Group on the Environmental Consequences of the War, 'An Environmental Compact for Ukraine - A Green Future: Recommendations for Accountability and Recovery [EN/UK] - Ukraine | ReliefWeb', 18 February 2024, https://reliefweb.int/report/ukraine/environmental-compact-ukraine-green-future-recommendations-accountability-and-recovery-enuk.

[22] High-Level Working Group on the Environmental Consequences of the War.

[23] NIC-NIE-2021-10030-A. October 2021)

[24] The UN established The United Nations Trust Fund for Human Security highlighting the important role that the international community has to ensure individual's security, UNGA Res 33/290.

[25] Gunhild Hoogensen Gjørv et al., 'Human Security in the Arctic: The IPY GAPS Project', in *Implications and Consequences of Anthropogenic Pollution in Polar Environments*, ed. Roland Kallenborn, From Pole to Pole (Berlin, Heidelberg: Springer Berlin Heidelberg, 2016), 181–201, https://doi.org/10.1007/978-3-642-12315-3_10; Ygnacio "Nash" Flores, 'Human Security', in *Handbook of Security Science*, ed. Anthony J. Masys (Cham: Springer International Publishing, 2022), 341–59, https://doi.org/10.1007/978-3-319-91875-4_45; United Nations Development Programme, *Human Development Report 1994*, Human Development Report (UN, 1994), https://doi.org/10.18356/87e94501-en..

Whose security is at stake?

The state

A traditional concept of security was originally conceived to evolve around protecting the state's integrity, sovereignty, and survival from foreign aggression. A state's national security has since come to involve the state's extended resource base, military infrastructure and civilian diaspora. These threats to the state's security continue to exist, and for the purpose of this working paper, we consider attacks by state and non-state actors on a state's territorial integrity, or their existential interests beyond the state territory, to be a matter of national security.

When we turn to climate change and the referent object of security is the state, the effects of climate change have already entered the state's policies and strategies. As mentioned above, states increasingly tend to see the effects of climate change as threat multipliers and systemic crises simultaneously. In the Euro-Atlantic area this has translated into policies to adapt to climate change effects on national security, and is conceptualised as a matter of protecting a state's ability to defend itself from the enemy amid a changing climate. This has led to national defences adapting in all operating domains, including protecting and adapting their war fighting abilities, deterrence and defence postures.[26]

Environmental impacts of war in Ukraine
Ukraine is a prime example of how countries can be environmentally devastated due to war. In 2023, Ukrainian President VolodymyrZelenskyyestablished a working group to determine the environmental consequences of the war, the culmination of which was collated into the report "An Environmental Compact for Ukraine".[27] This report exposed the multiple damages that Ukraine is facing including chemical releases and pollution from destroyed industrial sites, negative impacts on air quality from forests burned, water pollution, damage to ecosystems, and devastation to natural reserves. The report reveals that these impacts go beyond Ukraine's borders, with the Black Sea region also being exposed to air and water pollution, underwater mines, and damage to local sea life. The war in Ukraine has taught us that the environment cannot be an issue that is sidelined until after the war's conclusion, as green reconstruction and environmental restoration planning is already in progress.

Although militaries have a clear mandate to approach the climate - security nexus by responding primarily through adaptation to secure military effectiveness,[28] states also attempt through mitigation to reduce greenhouse gas emissions whilst at the same time

[26] Jamie Kwong, *How Climate Change Challenges the U.S. Nuclear Deterrent* (Carnegie: 2023); NATO Secretary General, The Secretary General's Report NATO Climate Change and Security Impact Assessment. (Second edition, 2023); Susan D'Agostino 2021; Gry Thomasen, Chiara Cervasio & Mhairi McClafferty, *Arctic Diplomacy at a Crossroads. Addressing and Assessing Future Geopolitical and Strategic Risk*, (London: BASIC 2023).
[27] High-Level Working Group on the Environmental Consequences of the War, 'An Environmental Compact for Ukraine - A Green Future'.
[28] NATO Secretary General, *The Secretary General's Report NATO Climate Change and Security Impact Assessment*. (Second edition, 2023).

reducing reliance on fossil fuels in both operations and facilities. This is important as the 'carbon boot print' of defence - the total emissions of carbon dioxide from armed forces and the related industries - accounts for as much as up to 5% of the total global carbon dioxide emissions, which makes defence the largest single institutional emitter of carbon dioxide.[29] Russia's war on Ukraine is estimated to directly and indirectly release 175 million tonnes of CO2 throughout the war since the 2022 full-scale invasion and through the work it will take to repair the country.[30]

Meeting the obligations under the Paris Agreement, or simply to avoid a significant rise in temperature, states have increasingly come to see that reducing the emissions from their armed forces and related industries is important to mitigate climate change effects. In this context, states have embarked upon 'greening' defence to reduce their environmental impact; however, while 'greening' defence appears to be self-evident, some states have questioned the wisdom of 'greening', believing that these efforts can compromise national security.[31]

This may explain why NATO makes an effort to repeatedly clarify that 'military effectiveness in carrying out NATO's core tasks remains the number one priority, even if this objective may sometimes clash with mitigation goals'.[32] At the 2021 Brussels Summit, NATO states agreed to the Climate Change and Security Action Plan (CCSAP), which developed a set of 'measures to increase both NATO's and allies' awareness of the impact of climate change on security, along with developing clear adaptation and mitigation measures', and the Alliance declared that NATO should become 'the leading organization when it comes to understanding and adapting to the impact of climate change on security'.[33] However, decarbonising defence is not necessarily about mitigating climate change; it is a means to increase operational ability.[34] Regardless, NATO pledges to reduce its CO2 emissions by

[29] Duncan Depledge, 'Low-Carbon Warfare: Climate Change, Net Zero and Military Operations', *International Affairs* 99, no. 2 (6 March 2023): 667–85, https://doi.org/10.1093/ia/iiad001; Mohammad Ali Rajaeifar et al., 'Decarbonize the Military — Mandate Emissions Reporting', *Nature* 611, no. 7934 (3 November 2022): 29–32, https://doi.org/10.1038/d41586-022-03444-7. In this context it is important to realise that war time emissions are one thing, but the upkeep of defences in peacetime is probably more costly from a carbon footprint perspective than war.
[30] Max Hunder, 'Study Details Huge Emissions Resulting from Russia's Invasion of Ukraine', *Reuters*, 13 June 2024, sec. Europe, https://www.reuters.com/world/europe/study-details-huge-emissions-resulting-russias-invasion-ukraine-2024-06-12/.
[31] Gry Thomasen, 'NATO and Climate Change: Towards a Joint Understanding and Response' (BASIC, June 2024), https://basicint.org/wp-content/uploads/2024/07/NATO-and-Climate-Change.pdf; John Conger, 'False Choices and Climate Security', *The Hill*, 16 May 2023, sec. Opinion - Energy and Environment, https://thehill.com/opinion/energy-environment/4006384-false-choices-and-climate-security/.
[32] NATO, 'The Secretary General's Report NATO Climate Change and Security Impact Assessment. Second Edition, 2023.' (NATO, 2023); NATO, 'Remarks by NATO Secretary General Jens Stoltenberg at the High-Level Roundtable "Climate, Peace and Stability: Weathering Risk Through COP and Beyond" in Glasgow, UK', NATO, accessed 4 May 2024, https://www.nato.int/cps/en/natohq/opinions_188262.htm; Michael Rühle, 'Scoping NATO's Environmental Security Agenda', NDC Policy Brief (NATO, March 2020), https://www.ndc.nato.int/news/news.php?icode=1426#.
[33] 'NATO Climate Change and Security Action Plan', NATO, https://www.nato.int/cps/en/natohq/official_texts_185174.htm (accessed 29 April 2024).
[34] Depledge, 'Low-Carbon Warfare: Climate Change, Net Zero and Military Operations'.

50% by 2050.[35] This in turn raises questions about what low-carbon warfare will mean for future NATO operations, including against adversaries that continue operating with fossil fuels as operational energy.[36]

The people

When looking at human security - that is, when the referent object of security is people - we find different threats, different security agents and different response strategies to ensure people's survival, livelihood and dignity.[37]

However, the fact that human security is about - according to the UN - the 'cross-cutting challenges to the survival, livelihood and dignity of their people', the concept of human security can be difficult to integrate into a traditional security framework. Yet, the MODs and militaries have begun to consider human security as well. In NATO's 2022 Strategic Concept, for example, it says that 'human security, including the protection of civilians and civilian harm mitigation, is central to our approach to crisis prevention and management' and NATO will, to that end, reinforce their coordination and cooperation with international and regional actors such as the EU and OSCE.[38] Reaching a common and joint understanding of human security is crucial for states and international organisations to be able to operationalise human security into policy.

The ecological system

While it is clear that the effects of climate change on human security and traditional security have been negotiated at the international and regional levels for decades and centuries, a new concept of security has emerged within the most recent years, namely ecological security. Ecological security - specifically in the context of climate change - denotes that all life is best protected by sustaining and maintaining the functionality of ecosystems.[39] When the referent object of security is the ecological system, the ecological system refers to all bodies including both the living and non-living, such as water. It also refers to stretches in time to underscore that the safety of future generations relies on the present actions to ensure that ecological systems are not damaged and thus all life endangered.

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[35] Jamie Kwong, *How Climate Change Challenges the U.S. Nuclear Deterrent* (Carnegie: 2023); NATO Strategic Concept 2023. Although we do not know with certainty, the estimated global military footprint is around 5.5%. However, during war the number will be higher as the operational energy usage increases and in the age of global warming, the increase will be even more as a result of cooling requirements of systems, material and soldiers, see Stuart Parkinson, How big are global military carbon emissions? *Responsible Science* 5, May 2023; NATO Secretary General, *The Secretary General's Report NATO Climate Change and Security Impact Assessment.* (Second edition, 2023)

[36] Duncan Depledge, Low-carbon warfare: climate change, net zero and military operations, International Affairs, Volume 99, Issue 2, March 2023, Pages 667–685, https://doi-org.proxy1-bib.sdu.dk/10.1093/ia/iiad001

[37] UNGA Res 33/290 https://undocs.org/Home/Mobile?FinalSymbol=A%2FRES%2F66%2F290&Language=E&DeviceType=Desktop&LangRequested=False

[38] NATO: Strategic Concept 2022.

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

Energy Security

Concerns about energy security have in a European context accelerated since the first instances of Russian disruption of gas supplies in the 2000s. Energy security, however, is a complex issue. In general terms, energy is 'secure when a country has energy reserve, balanced supply and demand, and balanced energy trade' and, importantly, policies aimed at securing energy are dependent on the state's assessment of the geopolitical situation, its economic resources and the status of environmental issues.[40] Policies for securing energy, however, are exactly that, policies based on political assessments and priorities. In Europe and the US, energy security is deeply entangled in geopolitical concerns around energy supplies for critical infrastructure, including defence, and peoples, as well as transition towards green(er) energy. In a European context, there appears to be a careful weighing up of the different securities, making energy security to do with national security, human security and - via the transition towards green(er) energy - ecological security.

Gas war

Since Russia's full scale invasion of Ukraine, Europe has sought to decouple from Russian gas, so that its access cannot be threatened again. As the largest regional actor, the EU halved its gas imports from Russia the first year of Russia's full scale invasion.[41] However, Russian liquified natural gas (LNG) imports to the EU rose by 12% in the same period.[42] Other European countries have decoupled from Russian gas due to circumstance - in 2025, Ukraine ended its deal with Russia that allowed Russian gas to flow through Ukraine's territory into EU markets.[43] While not an EU country, Moldova has been heavily affected by these circumstances, and it has faced shortages in heating and power outages due to its heavy dependence on Russian energy.[44] Russia has since pledged to supply gas to Transnistria only.[45]

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[40] Tri Ratna Bajracharya, Shree Raj Shakya, Anzoo Sharma, Chapter 2 - Dynamics of energy security and its implications, Editor(s): Muhammad Asif, Handbook of Energy and Environmental Security, Academic Press, 2022, Pages 13-25, ISBN 9780128240847, https://doi.org/10.1016/B978-0-12-824084-7.00019-9

[41] Sam Greene CEPA Elina Beketova, Elena Davlikanova, Olya Korbut, Federico Borsari, Mathieu Boulègue, Lera Burlakova, Ben Dubow, Aura Sabadus, Katia Glod, Olena Pavlenko, Pavel Luzin, Volodymyr Dubovyk, Vitalii Dankevych, SaraJane Rzegocki, 'Containing Russia, Securing Europe', CEPA, 31 January 2024, https://cepa.org/comprehensive-reports/containing-russia-securing-europe/.

[42] Szymon Kardaś, 'Conscious Uncoupling: Europeans' Russian Gas Challenge in 2023', ECFR, 13 February 2023, https://ecfr.eu/article/conscious-uncoupling-europeans-russian-gas-challenge-in-2023/.

[43] Nick Thorpe and Laura Gozzi, 'Ukraine Stops Transit of Russian Gas to EU in End of Era', BBC News, 31 December 2024, https://www.bbc.com/news/articles/c4glyjx9m71o.

[44] Tatiana Mitrova, 'Q&A | Can a Pro-European Moldova Reduce Its Energy Dependence on Russia? - Center on Global Energy Policy at Columbia University SIPA | CGEP %', Center on Global Energy Policy at Columbia University SIPA | CGEP, accessed 10 February 2025, https://www.energypolicy.columbia.edu/qa-can-a-pro-european-moldova-reduce-its-energy-dependence-on-russia/; Meduza, '"Little Pieces in a Big Game" Moldova's Former Reintegration Minister, Alexandru Flenchea, Explains What Losing Russian Gas Means for Breakaway Transnistria', Meduza, accessed 10 February 2025, https://meduza.io/en/feature/2025/01/14/little-pieces-in-a-big-game.

[45] Meduza, 'Transnistria's Leader Says Russia Will Start Supplying Gas to the Breakaway Region as Humanitarian Aid', Meduza, accessed 10 February 2025, https://meduza.io/en/news/2025/01/15/transnistria-s-leader-says-russia-will-start-supplying-gas-to-the-breakaway-region-as-humanitarian-aid.

The EU has coordinated and imposed investments across the member states in energy infrastructure and solidarity mechanisms to ensure there is no or little disruption in energy supplies across the Union.[46] Similarly, both NATO and the EU seek to avoid creating new energy dependencies, in particular with China on strategic minerals, that are important for and critical to the continued supply of material for states' defence and the transition towards climate friendly technology.[47] Türkiye promises to be an important partner in this endeavour, as it furthers its ambitions to develop itself as an energy hub and key transit point. The Trans-Anatolian Natural Gas Pipeline displays this promise to transit gas into Europe.[48]

A new model for security in Europe

Developing a new security model in Europe that captures old and new threats, traditional and new understandings of security is complex. How do we contemplate a model that captures climate change, war and energy security? There are several fundamental questions that need to be addressed to develop a sustainable security architecture, including what is Europe? And what is a security architecture? At the same time, new threats to security, most notably the effects of climate change, must be enrolled in the new architecture. A first step towards creating a sustainable security architecture in Europe is therefore the development of a common European understanding of what and how different threats or challenges become security threats in a European context. This project's workshops will be the starting point in this endeavour.

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[46] Communication from the Commission to the European Parliament and the Council, *European Energy Security Strategy /* COM/2014/0330 final */*. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A52014DC0330; Since the Russian war against Ukraine, the European Union members have become increasingly preoccupied with securing a steady flow of energy to the Union and has similarly upscaled its cooperation with potential new members, such as Georgia, including on energy infrastructure and connectivity, see The European Union and Georgia. The European Union and Georgia enjoy a very close and positive relationship. September 2023. https://www.eeas.europa.eu/georgia/european-union-and-georgia_en?s=221#2795

[47] National Intelligence Estimate, Climate Change and International Responses Increasing Challenges to US National Security Through 2040. NIC-NIE-2021-10030-A. October 2021; The Secretary General's Report NATO Climate Change and Security Impact Assessment. Second edition, 2023; EU acts to secure access to critical raw materials, The Economist Intelligence, April 2023.https://www.eiu.com/n/eu-acts-to-secure-access-to-critical-raw-materials/ Also Strategic Compass.

[48] Karim Elgendy, 'Turkey's Energy Hub Ambitions Have New Momentum after Assad's Fall | Chatham House – International Affairs Think Tank', 17 December 2024, https://www.chathamhouse.org/2024/12/turkeys-energy-hub-ambitions-have-new-momentum-after-assads-fall.