

IN-DEPTH ANALYSIS

Requested by the SEDE Subcommittee



Preparing the CSDP for the new security environment created by climate change



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ABSTRACT

While the European Union has developed a number of policy commitments and instruments to deal with the nexus between climate change and security, the Common Security and Defence Policy (CSDP) has lagged behind. This study discusses the security implications of climate change in the EU Neighbourhood and makes recommendations concerning how the CSDP might integrate climate factors into its mission and deliverables. The CSDP will need to adopt a place-specific approach that foregrounds the distinctive social, political and economic dynamics through which climate factors makes themselves felt in different partner countries. The analysis looks in particular depth at the Sahel and the Horn of Africa as two regions where CSDP missions already operate or are likely to operate in the future. Countries in these regions are highly vulnerable to the interaction between a degraded environment and climate change impacts, raising the prospects of humanitarian crises due to food insecurity and internal instability due to competition for resources. These problems compound the EU's prominent security concerns of terrorism and migration. The EU can move to climate-proof the CSDP through better conflict intelligence and foresight, carefully adapted and adequately resourced mandates, climate-change proofing investments in equipment and infrastructure, and better links to local social and institutional dynamics. The European Parliament should deploy its considerable political capital to support such initiatives, through resolutions, engagement with the UN and other inter-parliamentary fora, and efforts to garner political commitment from the Member States.

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Introduction

This in-depth analysis examines the implications of climate change for the European Union's Common Security and Defence Policy (CSDP). It asks how the CSDP needs to adapt to an era in which climate change will compound many of the strains that underpin conflict, fragility and instability. In the hope of enriching ongoing policy deliberations on this question, the report suggests a number of ways in which the CSDP might incorporate climate security considerations in a more systematic way. Some of these suggestions have to do with the environmental sustainability of CSDP operations themselves; some of them relate to the new and additional kinds of CSDP deployments that might become necessary; and some speak to the need to nest the CSDP more tightly within the EU's broader climate security strategies.

The report first examines key challenges in the EU Neighbourhood, before looking in more depth at two regions of Africa where the security implications of climate change are most severe and urgent, and where some CSDP missions already operate or might be required in the future: the Sahel and the Horn of Africa. The report shows that climate impacts are exacerbating multiple tensions in both these regions. The most acute and immediate security concerns in both regions stem from the interaction between a degraded environment and climate change impacts, leading to diminished food security and competition for resources between farmers and pastoralists. The destabilising effects of these problems raise the prospects of humanitarian crises due to food insecurity feeding into prominent security concerns for the EU: terrorism and illegal migration. Overlooking such local dynamics risks rendering the EU's current policy efforts, including CSDP missions, ineffective.

The effects of climate change vary across different localities, impinging upon countries and regions in different and increasingly unpredictable ways. This calls for a place-based approach to policymaking that places policy and governance challenges in context. This implies taking into consideration the perspective of those who live or work in a specific place: the issues they face, the challenges they encounter and the solutions they propose.

The report assesses EU policy since it formalised a comprehensive commitment to climate security in 2008. It charts key milestones in the development of EU commitments and policy instruments relevant to the climate-security nexus. While it has made notable advances in terms of incorporating climate security into its defence-related policy documents, there are clear limitations in how far the EU has implemented a comprehensive strategy in practice. The Roadmap on Climate and Defence agreed in 2020 offers an opportunity to close this gap and connect CSDP more tightly to the EU's overarching climate security strategies.¹

This analysis looks in some detail at how this might be done at the operational level. It examines the steps that would help the CSDP more fully incorporate a focus on climate change and its impacts. These steps include increasing the climate-sensitivity of early warning, conflict intelligence and foresight; military planning processes designed to weave in climate factors; climate-related changes to equipment and infrastructure; mainstreaming climate considerations into CSDP mandates; and governance processes to build in local actors' perspectives on underlying drivers of instability compounded by climate change.

The report concludes by offering guidelines for three broad areas of CSDP development. First, adapting military operations and approaches to climate change needs to be done in a proportionate

¹ Council of the European Union, [Council conclusions on climate and energy diplomacy: Delivering on the external dimension of the European Green Deal](#), 25 January 2021; EEAS, '[Climate Change and Defence Roadmap](#)', Working Document EEAS (2020)1251, 2020.

and targeted way that prioritises mission effectiveness. Second, civilian CSDP can make a significant contribution to addressing place-specific climate impacts that create security challenges alongside other instruments of EU external action. Third, more committed political leadership and financial investment are needed to underpin a CSDP commitment to climate security and improve coordination. As the European Parliament (EP) has a key role to play in this respect, the report proposes concrete ways in which it can help foster the right kinds of policy developments.

The report is based on a review of academic and grey literatures, as well as 17 semi-structured interviews conducted remotely (via phone or video call) with a total of 21 officials (Commission/EEAS), almost equally split between Brussels (EEAS and Commission) and the delegations and missions in the two regions studied (see Appendix).

1 Climate change and its impact on the EU's security environment

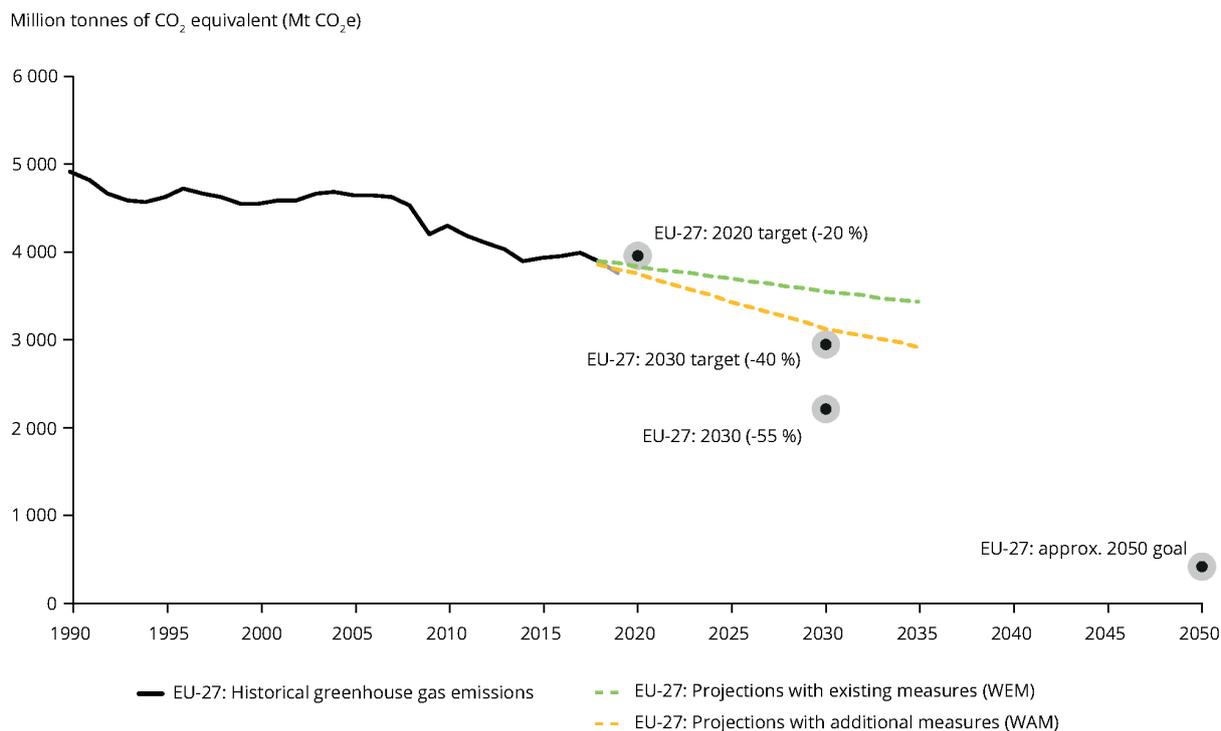
This first chapter sets the scene by unpacking the challenges that climate factors present to the CSDP. It gives an overview of aggregate climate-related risks before explaining why a place-specific approach is needed that grasps the more specific ways in which these relate to local social and institutional conditions. The chapter demonstrates these complexities by examining the security challenges posed by climate change in the EU Neighbourhood to the east and to the south. It then details its core message: the CSDP needs to incorporate considerations of climate change-related impacts on security in a way that is tailored to the multiple indirect ways in which climate factors feed into conflict dynamics. Climate change will have far-reaching security and defence implications for the EU. The EP is ideally positioned to take stock of projected risks and deploy all the instruments at its disposal to make sure that the CSDP is fit for purpose in this regard.

1.1 Aggregate trends and risks of climate change

A necessary starting point for this analysis is a shared understanding of what is currently known about climate change itself, its causes and immediate effects. Human activities from pollution to overpopulation are driving fundamental changes in world temperature. Climate change will continue through the 21st century and beyond, with its magnitude in the upcoming decades depending primarily on the amount of heat-trapping gases emitted globally. While recorded greenhouse gas emissions peaked and are now decreasing in the EU-27 area, globally they have increased by 150 % since 1990 and are still rising (see Figure 1).²

² European Environment Agency, '[Total greenhouse gas emission trends and projections in Europe](#)', December 2020.

Figure 1 – Greenhouse gas emission targets, trends and Member States MMR projections in the EU, 1990-2050



Note 1 – Figure from the European Environment Agency (2020)

Collective action at an international level remains insufficient, with only The Gambia and Morocco so far meeting their Paris Agreement pledges. Despite a dramatic economic downturn due to COVID-19, which led to a temporary drop in global greenhouse gas emissions, the CO₂ concentration in the atmosphere has again reached an all-time high. In 2017, global warming had already passed the threshold of 1 °C above the pre-industrial level. Recent modelling by the World Climate Research Programme predicts that 2.6 °C - 3.9 °C of warming could be locked in by 2060.³

Climate change has already had observable effects worldwide, including accelerated rising sea levels, diminished crop yields and potable water resources, more intense and prolonged heatwaves, massive floods and heavy snowfalls.⁴ The number of climate-related disasters has tripled since 1960 – from intense wildfires in the United States, Russia and Australia in summer, through record oceanic temperatures, to more intense storm seasons and pest invasions. All these events show that climate change is unfolding much more rapidly than anticipated.^{5,6,7}

The Fourth Intergovernmental Panel on Climate Change (IPCC) Assessment Report highlighted that the Arctic is warming about twice as fast as the global average. During the 20th century, air

³ Voosen, P., 'Earth's climate destiny finally seen more clearly', *Science*, 2020, 369.6502: 354-355.

⁴ IPCC, 'Summary for Policymakers', 2013. In: 'Climate Change 2013: The Physical Science Basis. Working Group I Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change', 2013, Available at: <https://www.ipcc.ch/report/ar5/wg1/>.

⁵ EM-DAT, '2018 Review of Disaster Events', 2019.

⁶ Mann, M. E., 'Oceans hit highest ever temperatures in 2020', 21 January 2021.

⁷ Mann, M. E., 'An overheated planet', 21 January 2021.

temperatures over Arctic land areas increased by up to 5 °C, thus decreasing terrestrial permafrost. Between 1980 and 2008, the thickness of ice in the Arctic waters decreased on average by 1.3 – 2.3 metres. Such pan-Arctic trends also apply to the Barents Sea, the Fram Strait and the coastal waters of Norway. Furthermore, the melting of polar ice caps leads to the release of significant amounts of methane hydrates from sediments on the Arctic continental shelves, further amplifying the greenhouse effect.^{8 9}

Rising sea levels pose major problems to low-lying areas in countries ranging from Bangladesh in South East Asia to the United States and represent an existential threat to small island developing states (SIDS) in the Pacific Ocean, Indian Ocean and the Caribbean region. Increased storms, more frequent king (maximum high) tides and sea incursions shrink the land area, salinise crop-growing parcels of land and displace people long before the islands are submerged.

The process of desertification occurring in arid and dry subhumid areas has already claimed 12.6 % (5.43 million km²) of drylands, affecting more than 213 million people, 93 % of whom live in the developing economies.¹⁰ Almost 44 % of the world's agricultural land is located in drylands, predominantly in Africa and Asia, which supplies about 60 % of the global food production.¹¹ In the tropics and subtropics, desertification decreases crop yield and adds to already volatile food prices, undermining the food security of poorer communities, worsening economic grievances, fuelling displacement, worsening conflicts and undermining basic human security.¹² World Bank estimates show that an additional 132 million people may be pushed into poverty by 2030 due to the impacts of climate change, mainly in the sub-Saharan Africa region. Food and Agriculture Organisation of the United Nations (FAO) long-term predictions show that by 2050, land degradation associated with climate change will reduce the average crop yield by 10 % globally and up to 50 % in regions hit by particularly unfavourable weather conditions.^{13, 14, 15}

Climate change will also have far-reaching impacts inside the EU. According to the European Environment Agency (EEA), under a high-end emission scenario southern Member States will face a 50% reduction in non-irrigated crop yields by 2050, with a decrease in farmland fertility of well over 80% by 2100.¹⁶ Central and Eastern Europe has recently experienced hurricane events and harmful bark beetle outbreaks in addition to existing high water stress and frequent peatland fires. The Joint Research Centre's Peseta IV study presents ominous long-term consequences of a global warming scenario of 3 °C above pre-industrial levels. For instance, they forecast annual welfare losses in the EU27 and the UK of around EUR 175 billion euros, with 90,000 deaths every year from heatwaves, by

⁸ Arctic Monitoring and Assessment Programme, '[Arctic climate issues 2011: Changes in Arctic snow, water, ice and permafrost](#)', SWIPA 2011 Overview Report, 2012.

⁹ IPCC, '[Summary for Policymakers](#)', 2013. In: 'Climate Change 2013: The Physical Science Basis. Working Group I Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change', 2013.

¹⁰ Burrell, A. L., et al., '[Anthropogenic climate change has driven over 5 million km² of drylands towards desertification](#)', *Nature Communications*, 2020, 11.3853.

¹¹ United Nations Convention to Combat Desertification, '[Land in numbers 2019: Risks and opportunities](#)', 2019.

¹² IPCC, '[Climate Change and Land: An IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems](#)', 2019.

¹³ FAO, et al., '[The state of food security and nutrition in the world 2017. Building resilience for peace and food security](#)', 2017.

¹⁴ Scholes, R. J., et al. '[IPBES \(2018\): Summary for policymakers of the assessment report on land degradation and restoration of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services](#)', 2018.

¹⁵ FAO, et al., '[The state of food security and nutrition in the world 2020. Transforming food systems for affordable healthy diets for all](#)', 2020.

¹⁶ Ceglar, A., et al., '[Observed northward migration of agro-climate zones in Europe will further accelerate under climate change](#)', *Earth's Future*, August 2019, 7.9: 1088-1110.

2100. Moreover, in the EU27 and the UK, annual costs related to weather extremes like droughts, windstorms, coastal and river floods are projected to amount to over EUR 320 billion by 2100.¹⁷

1.2 A place-based approach

The far-reaching changes summarised above have a series of mounting implications for security issues. While the trends are general, their security impact is specific to each locality. A place-based approach is needed to assess the security implications of climate change in the context of the CSDP. A place-based approach¹⁸ entails taking into account the geographic and institutional specificities of the different countries under examination, including their socio-economic and institutional factors, and the specific environmental challenges they face that have the greatest potential to turn into security challenges. This approach leads towards detailed policy recommendations that match the scale at which action can be taken.

Typically employed in studies of local implementation of national government funding, the term 'place-based' describes more than just a location; it primarily describes a style and philosophy which seeks to achieve systems change by fostering capacity-building and ownership of policy solutions in the areas targeted by a specific policy. A place-based approach involves comprehensive programmes that foresee working with a wide variety of partners and societal stakeholders from different levels of governance. Taking a place-based approach means recognising that one size does not fit all and that different strategies may need to be adopted to achieve similar policy goals in different locations. These strategies have to be co-produced with local stakeholders and tailored to their specific needs. As the empirical data in Chapter 4 shows, this is the goal that CSDP mission and EU Delegation officials aspire to achieve: tailoring policy along the lines of what governments, security actors and local communities need in the countries where missions and delegations operate.

Figure 2 outlines the key linkages between climate change and both human and state security. It separates human and state security aspects even though both concepts can focus attention on the same or similar consequences of climate change, such as migration, piracy, and resource conflicts. However, they also entail different ways of looking at who is threatened and who is threatening, distinct strategies for tackling these threats, and choices over where to focus attention and resources. Human security is focused on individuals' 'freedom from want' and 'fear' as expressed in the seminal 1994 UN Development Report.¹⁹ UN General Assembly resolution 66/290 called for 'people-centred, comprehensive, context-specific and prevention-oriented responses that strengthen the protection and empowerment of all people', whereas the EU's Global Strategy is aimed at fostering 'human security through an integrated approach'.²⁰ The IPCC 2014 report stresses climate change's impact on human security. Climate change jeopardises human security by: (1) undermining livelihoods; (2) compromising culture and identity; (3) increasing migration that people would rather have avoided; and (4) challenging the ability of states to provide the conditions necessary for human security.

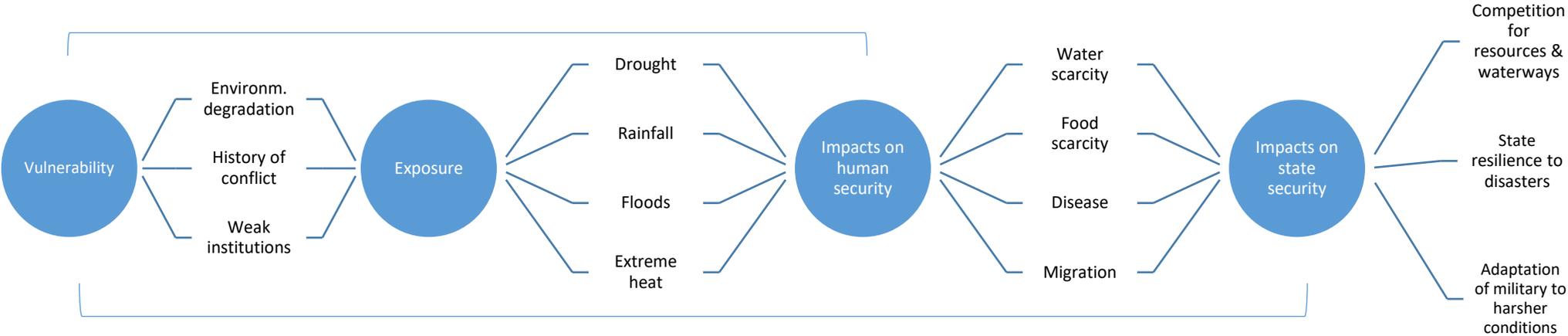
¹⁷ EU Science Hub, '[PESETA Platform-Projection of Economic impacts of climate change in Sectors of the EU based on bottom-up Analysis](#)', 2020.

¹⁸ Young, O., '[Vertical interplay among scale-dependent environmental and resource regimes](#)', *Ecology and Society*, 2006, 11.1.

¹⁹ United Nations Development Programme, *Human Development Report*, 1994, p. 3.

²⁰ EEAS, '[Shared vision, common action: A global strategy for the European Union's Foreign and Security Policy](#)', 2016, p. 28.

Figure 2 – Impacts of climate change on human and state security



In contrast, from a state security perspective, relative power resources and military defence matter greatly to protecting the territorial integrity and sovereignty of the state against external aggression. In its 2016 Global Strategy, the EU recognised that the international environment had become more hostile and competitive due to regional and great powers asserting themselves.²¹ HR/VP Josep Borrell called on Europeans to ‘learn to use the language of power’, whilst the Commission aspires to be ‘geopolitical’.²² In this context, one needs to ask whether climate change is weakening or strengthening the ability of states to defend themselves or strengthening the abilities of their adversaries.²³ More specifically, climate change has the potential to: (1) increase the likelihood of competition or even armed conflict over access to scarce resources such as water or oil or the control of waterways; (2) affect revenues from exports, particularly of hydrocarbons, and with it the ability to fund armed forces relative to potential protagonists; (3) render existing defence equipment less effective or unusable in harsher conditions, or require new capabilities, (4) and to threaten critical infrastructure through extreme weather events, distract armed forces to domestic crises, and thus increase vulnerability to hostile actions by other states or non-state actors. This perspective entails complementing a place-based approach with an actor-centred analysis of the cumulative effects of climate change on actors’ strategies and power resources.

The interplay is crucial between exposure to climate change and existing vulnerabilities, comprising both environmental degradation caused by human activity and socio-political factors such as weak institutions and history of conflict.²⁴ Environmental degradation includes trends such as overconsumption, pollution, urbanisation, deforestation, unregulated fishing and habitat loss. Their compounded effects jeopardise human security via impacts on food, land and water scarcity, and disease, thus forcing unwanted migration. In turn, lower human security can have state security impacts via causing conflicts for resources, fostering recruitment by criminal organisations and prompting environmental crime. Lower human and state security, in turn, have feedback effects that further increase vulnerability and also affect the factors driving climate change itself. Countries with similar exposure to climate change but different levels of vulnerability will experience different impacts. In more vulnerable countries and regions, the impacts of climate change are more likely to have severe security implications. Similarly, not only do armed conflict leads to higher emissions through the fighting itself but also distract political authorities from addressing climate change and environmental degradation. Conversely, any action to prevent and mitigate conflicts and reduce the carbon footprint of the armed forces has the potential to lower emissions.

1.3 Climate-related security issues in the EU extended Neighbourhood

A place-based approach highlights important differences in the security implications of climate change across different regions of the European neighbourhood. As for the **North**, there is now well-developed literature on the implications of pack ice melting in the High Arctic for geopolitical competition between great powers as new waterways and natural resources become more

²¹ Ibid.

²² Financial Times, ‘[The EU needs to learn the language of power](#)’, 1 January 2020.

²³ Busby, J. W., ‘[Who cares about the weather? Climate change and US national security](#)’, *Security Studies*, 2008, 17.3: 468-504.

²⁴ Von Uexkull, N. and Busby N., ‘[Climate shocks and humanitarian crises: Which countries are most at risk?](#)’, *Foreign Affairs*, 29 November 2018.

accessible.²⁵ The melting of the ice pack creates new opportunities for using more of the Northern Sea Route connecting the Pacific and the Atlantic Oceans for maritime trade for much longer in the year: on 19 February 2021, the commercial vessel Christophe de Margerie entered the Siberian port of Sabetta after nearly a month navigating across the Arctic Ocean,²⁶ having set off from the Chinese port of Jiangsu on 27 January. Several nations such as China, Russia and the US have created or extended permanent bases and installations and invested in military and dual-use capacities that advance the goal of enhanced access, such as commissioning more icebreakers. Leoni and Jalili explain that the strategies of great powers in the regions vary, with China being primarily interested in more cost-efficient trade and access to liquified gas, whilst Russia's focus is on the militarisation of the Arctic under what a Chatham House report calls a forward defence strategy.²⁷ A number of EU Member States and the EU institutions have stressed the importance of being present and influential in the Arctic.²⁸ One of the challenges for the EU lies in pursuing its interest more effectively whilst preventing arms race dynamics and lowering tensions through strengthening multi-lateral agreements.

Moreover, climate change in the Arctic offers the prospect of easier access to natural resources such as minerals and gas.²⁹ As of 2018, the EU imports 30 % of its oil and 40 % of its gas from Russia, whilst also receiving oil from Saudi Arabia and Iraq, and gas from Algeria.³⁰ The accelerating green transition is poised to alter fundamentally relations of energy dependency and therefore foreign policies vis-à-vis Russia. In turn, Russia has been struggling to reduce its economic and public finance hydrocarbon dependence, which stood at 30 % and 40 %, respectively, for 2019.³¹ Lower demand for and revenues from hydrocarbons exports could in the medium term severely undermine the material foundations of President Putin's rule and the Kremlin's ability to keep investing in defence equipment and its armed forces generally. Similarly, declining revenues from fossil fuels could destabilise countries in the Middle East and elsewhere that currently rely heavily on those revenues to legitimise their rule and fund their armed forces. Security implications will arise if they cannot transition their economies fast enough to generate tax revenues in other ways.³²

While the prospect of Russia's reduced energy dependency may appear positive from a European perspective in the long-term, it may create substantial risk in the short-term, as Russia may be tempted to capitalise on its past investment in military assets relative to Europeans and press its advantage within a closing window of opportunity to lock in strategic gains in the Arctic, the Baltic Sea or the Middle East. Climate change casts a dark shadow for hydrocarbon-dependent regimes,³³ thus potentially encouraging them to adopt more aggressive and risk-taking approaches in the shorter term.

²⁵ For a good and accessible overview of some of the issues see the blog of Leoni, Z. and Jalili, D., '[Britain's Arctic conundrum \(Part 2\): Great powers and naval gazing](#)', 10 February 2021. For a recent report on the implications for EU policy in the region see Dolata, P., '[A balanced Arctic policy for the EU](#)', In-depth analysis for the European Parliament, 2020.

²⁶ The Barents Observer, '[Arctic shipper shows off a historical icebreaking voyage](#)', 19 February 2021.

²⁷ Leoni, Z. and Jalili, D., '[Britain's Arctic conundrum \(Part 2\): Great powers and naval gazing](#)', 10 February 2021; Boulègue, M., '[Russia's Military Posture in the Arctic: Managing Hard Power in a "Low Tension" Environment](#)', 28 June 2019.

²⁸ European Commission and High Representative of the Union for Foreign Affairs and Security Policy, '[Joint Communication to the European Parliament and the Council: An integrated European Union Policy for the Arctic](#)', 27 April 2016.

²⁹ For a recent report on the implications for EU policy in the region see Dolata, P., '[A balanced Arctic policy for the EU](#)', 2020.

³⁰ Eurostat, '[From where do we import energy and how dependent are we?](#)', n. d.

³¹ Energyworld.com, '[Putin says Russia reducing dependence on oil and gas](#)', 17 December 2020.

³² For a good (German language) short overview of the problem see Müller, H. '[Explosive Klimapolitik](#)', 21 February 2021.

³³ Ibid.

As for the **Eastern Neighbourhood**, the linkage between climate change and security has been explored in a series of reports coordinated by the Organisation for Security and Cooperation in Europe (OSCE) under the umbrella of the Environment and Security Initiative (ENVSEC). Created in 2003, ENVSEC is a partnership of five international organisations³⁴ whose mission is to contribute to the reduction of environment and security risks through strengthened co-operation among and within countries in four regions: Central Asia, Eastern Europe, Southern Caucasus and South-Eastern Europe (SEE).³⁵ Between 2013 and 2017, ENVSEC conducted regional and country assessments aimed at identifying climate security hotspots in Eastern Europe (Moldova, Ukraine and Belarus), Central Asia (Republic of Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan) and the South Caucasus (Republic of Armenia, Azerbaijan and Georgia). In 2020, the OSCE decided to partner with the Berlin-based think tank adelphi to extend the regional analysis to the countries of South-Eastern Europe.³⁶ This second project concluded its regional consultation process in February 2021. The consultation revealed heightened awareness in the countries of the risks posed by climate change to stability in the region, given numerous shared river basins and mountain ecosystems.³⁷

The 2017 OSCE reports provide an overview of the key challenges for each of the focus regions. For example, although the water-agriculture-energy nexus is crucial for the countries in the South Caucasus, it is not considered to have security implications in the near to medium term,³⁸ whereas water scarcity is key in Central Asia.³⁹ The mountains of Central Asia are particularly vulnerable to climate change as melting glaciers and permafrost disrupt water regimes and threaten ecosystems, and poverty is higher. In dry and low-water years, competition for pastures and local water resources increases, and water diversions that disadvantage others lead to security tensions.

The countries of **Eastern Europe**⁴⁰ have experienced warming, pronounced seasonal variation in rainfall, heatwaves and more frequent extreme events such as floods and droughts. By 2030 several transboundary water basins appear likely to represent hotspots of climate and security risks. These include the Dniester River (with riparian countries Ukraine and Moldova), where climate change is expected to affect the volume and seasonal distribution of the river flow, thus increasing the frequency and intensity of floods and droughts, resulting in water scarcity. The region of Polesie, which includes Belarus and Ukraine, was affected by radioactive contamination from the Chernobyl disaster and is vulnerable to floods, droughts and forest fires. These events increase the risk of spreading radioactive contamination over larger areas, with implications for human health and the environment. Water scarcity is a concern in the Crimean Peninsula, which was illegally annexed by Russia in March 2014. The Ukrainian government has cut off the foreign-occupied territory from its water supply, which cannot easily be replaced through alternative channels. While climate change is not the immediate cause of conflict here, it may increase inter-state tensions in those hotspots.

With regards to **South-East Europe**, in 2010, NATO hosted an Advanced Research Workshop focused on environmental security in the region at the Venice International University (Italy). The

³⁴ ENVSEC is a partnership between the Organisation for Security and Co-operation in Europe (OSCE), UN Environment (UNEP), United Nations Development Programme (UNDP), United Nations Economic Commission for Europe (UNECE) and the Regional Environmental Centre for Central and Eastern Europe (REC).

³⁵ ENVSEC, '[Transforming risks into cooperation: The Environment and Security Initiative 2003-2013](#)', 2013.

³⁶ Adelphi, '[Strengthening responses to security risks from climate change in South-Eastern Europe, Eastern Europe, the South Caucasus and Central Asia](#)', 2021

³⁷ OSCE, '[OSCE and adelphi conclude first regional consultation on climate change and security in South-Eastern Europe](#)', 2021

³⁸ OSCE, '[Climate change and security in the South Caucasus](#)', 2017.

³⁹ OSCE, '[Climate change and security in Central Asia](#)', 2017.

⁴⁰ OSCE, '[Climate change and security in Eastern Europe](#)', 2017.

workshop focused on various issues linking environment and security, including food and energy security; most of the attention was devoted to water management, which is a key stressor with potential to have security implications in the region.⁴¹ The proceedings list several bilateral and regional treaties for the management of transboundary water assets between SEE countries; their effectiveness is unclear. Water management practices in the Balkans feature fragmented authority, lack enforcement and dispute resolution mechanisms, and do not foresee the involvement of the general public. As water demand increases and infrastructure is lacking, national governments in SEE rely on the extension of water supply via major waterworks and increased exploitation of groundwater resources. This supply-based approach fails to address the structural problems of water management in a region where precipitation is projected to decrease further and water pollution is not seriously addressed.

Research shows that EU integration has had a positive impact on the environmental policies of the Czech Republic, Poland and Bulgaria by exerting a strong influence on the environmental interests of regulated industries.⁴² However, industries that primarily serve the domestic market remain opposed to EU environmental standards and, unless forced by their national governments, have no incentive to incur the costs of compliance. This research contains important lessons for the EU that may apply equally well for the SEE. Namely, the EU cannot expect its *acquis* or indeed its soft power to automatically foster better environmental standards in SEE countries. These remain sources of vulnerability that may well foster tensions as the climate changes. The 2014 IPCC report expects lower precipitation but more frequent storms and floods in SEE, leading to, among other consequences, volatile crop yields which may affect economic and food security in the affected areas.⁴³ CSDP missions in SEE and Eastern Europe are well-placed to help partner countries identify not only climate security hotspots but also early warning strategies to address possible tensions.

Problems are even more acute in the **Middle East and North Africa** (Mena). Recent modelling that takes on board the range of Mena particularities relative to more general global modelling reaches unsettling conclusions. Half the region's population is likely to be suffering 'ultra-extreme', life-threatening heatwaves under a business-as-usual scenario by mid-century. Livestock conditions are already challenged; these extreme conditions will have devastating effects on rural livelihoods, as viable agricultural land could shrink by a half. Social tensions are likely to be especially pronounced relative to climate impacts in other regions due to the Mena's relatively high levels of inequality – these mean that access to much more limited water and other resources will be deeply skewed and can be expected to have highly destabilising results.⁴⁴

It is widely noted that climate change was a factor in the long drought that preceded the civil war in Syria, as it forced dispossessed rural communities into cities with mounting anger against the Assad regime. The Islamic State used violent control over water and other resources as part of its insurgency. In fact, combatants on all sides of the ongoing conflicts in Iraq and Syria have weaponised natural resources by seizing or destroying water supplies and infrastructure to leverage control of territory or populations.⁴⁵ Egypt's incumbent regime has reputedly drawn up military

⁴¹ Montini, M. and Bodganovic, S. (Eds.), *Environmental security in South-Eastern Europe: International agreements and their implementation*, NATO Science for Peace and Security Studies Series C: Environmental Security, 2010.

⁴² Andonova, L. *Transnational politics of the environment: The European Union and environmental policy in Central and Eastern Europe*, MIT Press, Cambridge, MA, 2004.

⁴³ Fay, M., et al., '[Adapting to Climate Change in Eastern Europe and Central Asia](#)', 2021.

⁴⁴ Zittis, G., et al., '[Business-as-usual will lead to super and ultra-extreme heatwaves in the Middle East and North Africa](#)', *Climate and Atmospheric Science*, 2021.

⁴⁵ Gleick, P. H., '[Water as a weapon and casualty of armed conflict: A review of recent water-related violence in Iraq, Syria, and Yemen](#)', *WIREs Water*, 2019, 6: e1351.

plans for the event that talks over Ethiopia's Grand Renaissance Dam fail. Access to increasingly scarce water and other resources is already being used as leverage in both inter-state and intra-state negotiations across the region.⁴⁶ Climate stressors have long fed into the Israeli-Palestinian conflict, both as cause and effect of this conflicts' longevity and as a tactic within it.⁴⁷

Many scholars caution against climate determinism and question some assertions that climate impacts can be traced as causal triggers for specific events, like the Syrian conflict. They note that political and demographic drivers of conflict and instability remain more tangible and potent. Notwithstanding these caveats, however, there is strong consensus that climate stressors will play a role among other factors in diminishing the Mena's institutional and socio-political adaptative capacity to deal with conflicts and tensions in the near future. Regime difficulties in maintaining water supplies are one factor that has nourished social protests in Jordan and other countries in the last few years.⁴⁸

1.4 Current and expected impacts in the regions of focus

In line with a place-based approach, it is necessary to focus on the specific issues at stake in the selected focus areas. Chapter 19 of the IPCC Fifth Assessment Report on Climate Change⁴⁹ provides an overview of the impacts of climate change on the African continent and its various regions. African ecosystems are already affected by climate change; future impacts on the continent are expected to be substantial. Besides warming temperatures (projected to exceed 3 °C by the end of this century unless significant emission cuts are made⁵⁰), climate change will amplify existing stresses on water availability, exacerbate the effects on non-climate change-related stressors on food security and increase the burden of a range of climate-relevant health outcomes, such as malaria epidemics in the high lands of East Africa.

Research highlights the need to combine climate projections with a sophisticated understanding of the drivers of insecurity and resilience, such as the strength of community structures, population density and quality of institutions.⁵¹ A good example is the work of Busby, White and Smith,⁵² who map climate security vulnerability in different regions of Africa based on their existing adaptive capacity and the quality of governance institutions. The results of these analyses show that in the contexts of weak governance and low household or community resilience, relatively small impacts of climate change may result in worse outcomes than bigger climate-related events in countries with stronger institutions and more resources. The results of these analyses highlight countries in the Horn of Africa (particularly Ethiopia and Somalia), the Sahel (particularly Chad, Niger and parts of Mali), Sudan and Egypt as being the most vulnerable to climate impacts, given their existing socio-economic vulnerabilities. The composite indicator map in Figure 3⁵³ shows that the Sahel region and

⁴⁶ Saha, S., '[How climate change could exacerbate conflict in the Middle East](#)', 14 May 2019.

⁴⁷ Hanemaayer, A., '[The synergy of climate change and conflict in the Middle East](#)', 2021.

⁴⁸ Earth Day, '[Climate change, water woes, and conflict concerns in the Middle East: A toxic mix](#)', 8 September 2020; Mason, M., '[Climate change and conflict in the Middle East](#)', *International Journal of Middle Eastern Studies*, 2019, 51, 626-628.

⁴⁹ IPCC, '[Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change](#)', 2013.

⁵⁰ United Nations Environment Programme, '[Emissions Gap Report 2020](#)', 2020.

⁵¹ Lewis, K., '[Climate science in climate security scenarios](#)', *Climatic Change*, March 2014, 123.1: 11-22.

⁵² Busby, J. W., et al., '[Mapping climate change and security in North Africa--Full Text](#)', 2010; Busby, J. W., et al., '[Climate change and insecurity: Mapping vulnerability in Africa](#)', *International Security*, 2013, 37.4: 132-172.

⁵³ Busby, J.W., Smith, T.G., and Krishnan, N., '[Climate Security Vulnerability in Africa Mapping 3.01](#)', 2014, *Political Geography* 43, p. 61

the Horn of Africa are among the most vulnerable regions on the African continent. A recent USAID report reaches similar conclusions.⁵⁴

Much of Southern Africa is also highly physically exposed to the adverse consequences of climate change. In this region, Mozambique emerges as particularly vulnerable given its low household and community resilience.⁵⁵ It is one of the poorest countries in the world and one of the most affected by weather-related damage caused by phenomena such as droughts, floods, cyclones and related disasters.⁵⁶ Several regional river basins converge in Mozambique; flooding, especially when combined with tropical cyclones and sea-level rises, is a persistent threat. Therefore, Mozambique, and in particular the area of the Zambezi river basin – a 3.500 kilometre long river of major geopolitical importance, stretching across eight south African countries – is expected to suffer from increasing floods.⁵⁷ With the country's economy being largely dependent on agriculture, and most of its population inhabiting the coast, climate change and variability threatens food security⁵⁸ and it is feared that 2.3% of the population may be forced to migrate away from the coast by 2040.⁵⁹ It is the combination of these climate stressors with the low resilience of the country, poverty and weak institutions that creates significant security risks.⁶⁰ Swain et al predicted already in 2011 that the northern part of the country posed the highest risks of unrest, being highly exposed to climate change and having been marginalised in favour of southern areas around the capital Maputo.⁶¹ The growth of the jihadist insurgency since 2017 in the northern province of Cabo Delgado appears to be at least partly related to this confluence of risk factors as they offer opportunities for recruitment to drug trafficking as well as jihadist groups. One can see these dynamics playing out when tropical cyclones such as Kenneth in 2019 hit the development of the large-scale Mozambique Liquefied Natural Gas (LNG) project operated by the company Total in a country with weak supply-chains and infrastructure.⁶² The same facility was also affected by recent jihadist terror attacks in the region, which prompted the Portuguese Presidency of the EU to propose a CSDP training to assist local security forces.⁶³ The mandate for such a mission will need to ensure not only that more capable local security forces do not inadvertently feed a jihadist insurgency through their own actions, but also to assist local actors – with the support of other EU instruments and resources - in tackling some of the underlying resource-conflicts, forced migration and vulnerabilities to extreme weather events. The implications and challenges to operations and missions are discussed in more depth in section 4.

⁵⁴ Moran, A., et al. [‘The intersection of global fragility and climate risks’](#), 2018.

⁵⁵ Busby, J. W., et al., [‘Climate change and insecurity: Mapping vulnerability in Africa’](#), *International Security*, 2013, 37.4: 132-172.

⁵⁶ Artur, L. and D. Hilhorst, [‘Everyday realities of climate change adaptation in Mozambique’](#), *Global Environmental Change*, 2012, 22.2: 529-536.

⁵⁷ Swain, A., Swain, R. B., Themner, A., & Krampe, F., [‘Climate change and the risk of violent conflicts in Southern Africa’](#), 2011, Global Crisis Solutions.

⁵⁸ World Bank Climate Change Knowledge Portal, [Country: Mozambique](#)

⁵⁹ Irish Aid, Resilience and Economic Inclusion Team, [Mozambique Country Climate Risk Assessment Report](#), February 2018.

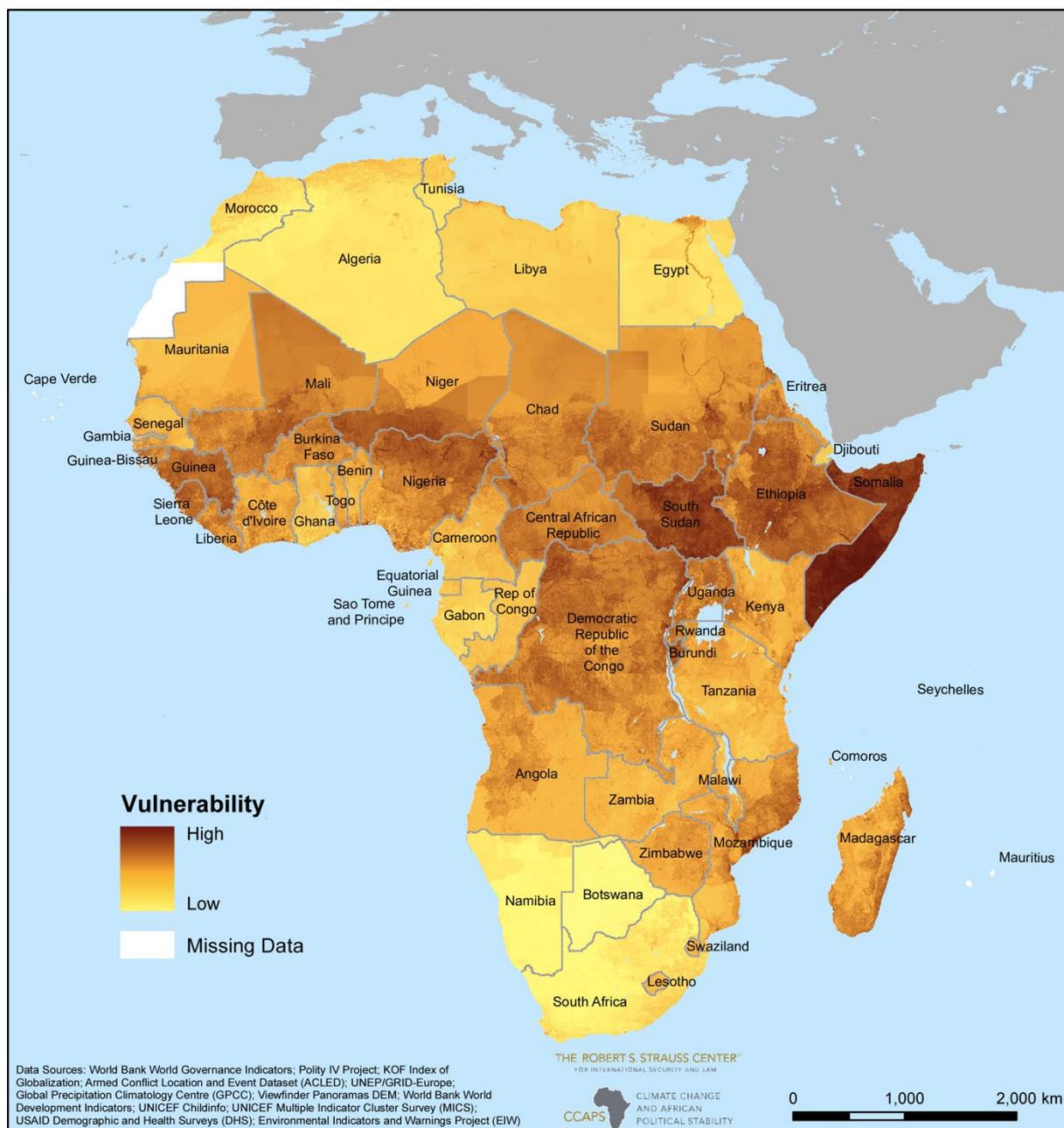
⁶⁰ Swain, A., Swain, R. B., Themner, A., & Krampe, F., [‘Climate change and the risk of violent conflicts in Southern Africa’](#), 2011, Global Crisis Solutions.

⁶¹ Ibid.

⁶² Nhamire, B., Sullivan B.K., [‘Cyclone highlights the vulnerability of operations in Mozambique’](#), World Oil, 6 March 2019, in World Oil <https://www.worldoil.com/news/2019/6/13/cyclone-highlights-the-vulnerability-of-operations-in-mozambique>

⁶³ Fox, B., [‘EU must step up military assistance to Mozambique, says Portuguese Presidency’](#), Euractiv, 1 February 2021; Urteaga, D., [‘Portugal to propose an EU mission to Mozambique’](#), Atalayar, 29 January 2021

Figure 3 – Composite vulnerability - Climate & Related Hazard Exposure + Population Density + Household & Community Resilience + Governance.⁶⁴



The empirical analysis of this report focuses on the Sahel region and the Horn of Africa. The Sahel is a narrow semi-desert region of Western Africa. As the southern border of the Sahara Desert, the region represents a transition between the northern desert and the forests of sub-Saharan Africa. The Horn of Africa is an arid peninsula in East Africa, cut north to south by the Nile and the Great Rift Valley; in between are high plateaus and volcanic mountains. The landscape comprises coastal lowlands, which are mainly desert and often below sea level, and highlands that were once thickly forested. Politically, the Sahel comprises Mauritania, Mali, Niger, Burkina Faso and Chad; the Horn

⁶⁴ Figure 6 reprinted from *Political Geography* vol. 43, November 2014, Busby et al., , Climate Security Vulnerability in Africa Mapping 3.0, , 43: 51-67 Copyright (2021), with permission from Elsevier

comprises Somalia, Ethiopia and Eritrea, though Djibouti, Kenya, parts of Sudan, Uganda and Tanzania are often also considered part of the region. These regions are among the poorest in the world. They display high population growth and environmental mismanagement, i.e. deforestation and soil degradation. The two regions also have weak institutions, a history of conflict and violent extremism. In both regions, instability in one country tends to have regional repercussions.

This report is informed by semi-structured interviews with locally based EU officials in EU Delegations in Ethiopia, Egypt, Niger and Burkina Faso, and CSDP missions in Niger, Somalia and the Central African Republic (CAR). Currently, CSDP missions are not present in Burkina Faso, Ethiopia, Sudan and Egypt. However, the considerable significance of climate stressors invites a focus on the region, as demand for civilian and/or military CSDP assistance may well arise in the near future. The CAR and Egypt are not considered part of either region; yet require attention for different reasons. The geographic position of the CAR renders it a 'bridge' between sub-regions and the significant security challenges it faces call for its consideration. The importance of the Nile for Egypt's security implicates it with the Horn of Africa in a perpetual struggle with water scarcity that might have security repercussions.

1.4.1 Water scarcity

Water scarcity is a pressing issue in the Horn of Africa, presenting daily challenges for significant numbers of rural and peri-urban citizens. Although major studies highlight that inter-state water conflict is rare⁶⁵, tension has been building up over the ongoing construction of Ethiopia's Grand Renaissance Dam, which will provide water and generate electricity for the needs of the country's growing population. Importantly, the dam should serve to manage water use given the recurrent droughts in the Horn of Africa. When completed, the dam will feed Africa's biggest hydroelectric power plant. The planned dam, whose construction began in 2011 and is now two-thirds built thanks to Chinese investment, has raised concerns for downstream users of the river in Sudan and Egypt – countries that are also frequently hit by drought. The latter, in particular, fears that filling the dam will reduce the stream of water downstream, worsening water scarcity and withdrawing water for irrigation from local farmers. The controversy is long-standing and derives from Egypt's reliance on the Nile for 90 % of its water needs, and a legal agreement affording it control over the waters and veto power over any infrastructural project on the river.⁶⁶

Recent simulation studies show that in the absence of extreme multi-year drought conditions, the dam will not affect water security in Egypt – in fact, both Sudan and Egypt may benefit from it, particularly in terms of managing the flooding that devastates Sudanese agriculture and homes. In conditions of multi-year drought, however, firm guarantees that water will be released to meet the basic requirements of the downstream riparian states are necessary.⁶⁷ A process of intermediation between the two countries has been ongoing for several years, helped by the United States and the African Union. Although such intermediation helps with factors that are conducive to water security, including stable political conditions, it does not necessarily deal with traditionally more significant

⁶⁵ Katz, D., '[Hydro-political hyperbole: Examining incentives for overemphasizing the risks of water wars](#)', *Global Environmental Politics*, January 2011, 11.1: 12-35.

⁶⁶ Mbaku, J. M., '[The controversy over the Grand Ethiopian Renaissance Dam](#)', *Africa in Focus*, Brookings, 5 August 2020.

⁶⁷ Wheeler, K. G., et al., '[Understanding and managing new risks on the Nile with the Grand Ethiopian Renaissance Dam](#)', *Nature Communications*, 16 October 2020, 11.1: 5222.

'demand-side' factors, such as population pressures, economic growth and agricultural productivity.⁶⁸

1.4.2 Competition for land and water resources

In both the Sahel and Horn of Africa, less predictable rainy seasons, increases in extreme weather events like floods and droughts, and rising temperatures have caused reductions in crop yields. In the Sahel, desertification pushes herders to move in search of natural resources to feed their cattle. Climate change has made the patterns of this migration less predictable, leading herders to migrate towards the south of the continent, thus creating tensions with farming communities there.⁶⁹ Rising tension between herders and farmers increases the likelihood of inter-communal violence. According to UN data, climate change-driven conflict remains the biggest reason for displacement across the Sahel, drawing communities away from areas of land which depend on a human presence to prevent their degradation.⁷⁰

1.4.3 Political violence

Climate change stressors affect livelihoods against the background of existing political violence. In the CAR, elections in December 2020 were followed by violence which led to 200,000 internally displaced persons. The country already experiences high levels of pollution and environmental crime, as well as deforestation and poor management of natural resources. Transboundary conflict between non-state militias in three countries of central Sahel (Burkina Faso, Mali and Niger) has already resulted in millions of people needing humanitarian assistance in 2019 and 2020. OCHA recognises that marginalised or displaced groups are most vulnerable to climate stressors, thus compounding their difficulties and requiring humanitarian assistance.⁷¹ A triple threat of violence, flooding and hunger has also grown in South Sudan.⁷² OCHA explicitly incorporates climate change-related events among the gravest threats facing vulnerable populations in these countries.

1.5 The complex nexus between climate and security

Despite the accumulation of so many stressors and risks, the precise relationship between climate and security is subject to ongoing debate and uncertainty. This reflects a complex and long-standing set of debates that cannot be fully covered here; it is important to summarise some of the main issues, however, as they have an impact on the kind of choices for the CSDP that our analysis then turns to.

1.5.1 Climate and conflict

The link between climate change and conflict is disputed.⁷³ Most quantitative analyses have, thus far, failed to identify a direct causal link between climate change and violent conflict.⁷⁴ Similarly, despite a growing body of scholarship on environmental peacebuilding opportunities, the findings of such research are often mixed and context-dependent. The IPCC concurs and focuses on how the

⁶⁸ Böhmelt, T., et al., '[Demand, supply, and restraint: Determinants of domestic water conflict and cooperation](#)', *Global Environmental Change*, 2014, 29: 337-348.

⁶⁹ Reliefweb, '[Mali's invisible front line: climate change in a conflict zone](#)', February 2021.

⁷⁰ Reliefweb, '[How is ACTED responding to the human impacts of climate change on the African continent?](#)', October 2019.

⁷¹ Reliefweb, '[The Central African Republic in crisis: Critical measures to address humanitarian and security needs](#)', February 2021.

⁷² Reliefweb, '[Urgent action needed to tackle triple threat of conflict, flooding and hunger in South Sudan](#)', February 2021.

⁷³ Salehyan, I., '[From climate change to conflict? No consensus yet](#)', *Journal of Peace Research*, May 2008, 45.3: 315-326.

⁷⁴ Busby, J., '[Taking stock: The field of climate and security](#)', *Current Climate Change Reports*, 2018, 4.4: 338-346.

consequences of climate change may exacerbate factors such as poverty and economic shocks that then in turn increase the risk of violent conflict.

In a recent article published in *Nature*, a group of well-established experts conclude that the impacts of climate change on conflict are not clear yet. They identify four drivers that are considered particularly influential for conflict risk: low socio-economic development, low state capabilities, intergroup inequality (for example, marginalisation of specific ethnic groups) and a recent history of violent conflict. Climate change appears low in their ranking of threats; its effect on the likelihood of conflict is the most uncertain of the 16 factors considered. At the same time, these experts warn, in agreement with the 2014 IPCC report, that additional climate change will amplify conflict risk in the future. They estimate that a 2 °C increase in the global mean temperature above pre-industrial levels will increase the risk of conflict by 13 %, while a 4 °C increase will push it up by 26 %.⁷⁵ Some experts, such as General Nugee, fear a vicious circle whereby climate change creates more frequent and intensive conflict, which in turn drives conflict parties to burn significantly more fossil fuels.⁷⁶ Conversely, preventing conflict and preserving peace is more conducive to lowering hydrocarbon use and green transitions.

Thus, these experts do not discount potential causal effects of climate change on political violence and conflict in the future, not least because climate change might increase the risk of conflict through channels beyond the climate-variability effects that have been studied to date, or compound existing stressors in ways that have never been experienced before. Predictions of the effects of climate change on security in the future are inevitably dependent on historical experience; yet, as uncertainties increase, particularly under the worst climate change scenarios, extrapolation from historical relationships has high levels of uncertainty.

Many studies point to the indirect effects of climate variability. Climate-related hazards and variability are likely to cause instability through effects on agricultural productivity and food prices.⁷⁷ Floods and droughts can increase the likelihood that specific groups already suffering from social exclusion engage in sustained violence.⁷⁸ Above-average rainfall in different regions of sub-Saharan Africa is associated with a higher likelihood of transitioning into conflict during the dry season.⁷⁹ Countries that have to divert military capabilities to deal with climate-related disasters may be less able to deal with other risks like violent extremism.⁸⁰ In short, there is a growing consensus that climate change has an impact on conflict through a range of intermediate factors that are contextual and contingent.⁸¹

1.5.2 Climate and migration

The question of whether climate change prompts migration is also fiercely debated. Chapter 12 of the 2014 IPCC report cautions that there is no strong, empirical basis to the supposed link between climate change and migration.

⁷⁵ Mach, K. J., et al., '[Climate as a risk factor for armed conflict](#)', *Nature*, July 2019, 571.7764: 193-197.

⁷⁶ Speech at the Clingendael webinar: '[Adapt to defend: the security dimension of climate change](#)', 4 March 2021.

⁷⁷ Fjelde, H., '[Farming or fighting? Agricultural price shocks and civil war in Africa](#)', *World Development*, March 2015, 67: 525-534.

⁷⁸ Ide, T., et al., '[First comes the river, then comes the conflict? A qualitative comparative analysis of flood-related political unrest](#)', *Journal of Peace Research*, January 2021, 58.1: 83-97.

⁷⁹ Mack, E. A., et al., '[Conflict and its relationship to climate variability in Sub-Saharan Africa](#)', *Science of the Total Environment*, 25 June 2021, 775: 145646.

⁸⁰ Busby, J. W., '[Who cares about the weather?: Climate change and US national security](#)', *Security Studies*, 2008, 17.3: 468-504.

⁸¹ Ide, T., et al., '[First comes the river, then comes the conflict? A qualitative comparative analysis of flood-related political unrest](#)', *Journal of Peace Research*, January 2021, 58.1: 83-97.

Permanent migration is disruptive and costly, rendering it an option of last resort (in the view of the IPCC, as expressed in its 2014 report). In the areas of focus in this report, climate-related migration tends to occur within Africa and be temporary. This type of migration represents an adaptation strategy to climate events such as droughts and heavy rainfall. The link between climate change and temporary migration is supported by empirical evidence, showing that slow-onset environmental stresses such as droughts and land degradation shape decisions to cross administrative (though not always national) borders in search of land, pasture or work. Internal, labour-related migration occurs regularly in semi-arid areas (the Sahel) and areas with erratic rainfall (East Africa). This type of migration is supposedly circular; migrants plan to return to their original settlements as climatic conditions improve.

The fact that this type of migration is temporary and circular, however, does not imply that it is frictionless. Competition for land between nomadic herders/pastoralists and sedentary farmers/agriculturalists is a recurring theme in the literature⁸² - this competition is exacerbated by increasingly large numbers of climate migrants who travel ever larger distances to find suitable land for their herds to graze. A UNEP report⁸³ on migration patterns in the Sahel suggests that traditional circular migration patterns may be turning into more permanent southward shifts towards central Africa, thus potentially increasing both conflicts between groups searching for land and urbanisation.

Concerns have risen as researchers have uncovered climate-related components of the Syrian conflict, which has driven large numbers of refugees into Europe.⁸⁴ Similarly to the linkages between climate change and conflict, the linkages between climate change and migration are complex and vary strongly across different contexts, times and locations.⁸⁵ Climate change in itself need not result in large numbers of refugees; rather, as the Arab Spring and the Syrian conflict show, migration linked to climate change becomes more likely in countries undergoing highly disruptive political transformation.⁸⁶ These findings echo a 2018 UN Security Council resolution acknowledging the adverse effects of climate change on the already unstable situation in Darfur, Sudan.

The interrelation between climate stressors and political, institutional and economic conditions is plainly acknowledged in the conclusions of the most recent meeting of the UN Security Council. The Council emphasised competition for resources and increased climate variability as fuelling conflict, calling for attention to the area where climate-related security risks are most urgent and apparent: the Sahel and the Horn of Africa.⁸⁷

1.6 Summary

Academic assessment of climate-security linkages is not new and has received a great deal of attention over many years, but recent evidence suggests a significant deepening of the strategic, political, social and economic consequences. There is widespread agreement that climate change is already intensifying tensions within and between states over water, food, overcrowding, migration pressures and the growing risk of disease. Climate vulnerability and environmental stresses have become especially acute in some of the world's poorest and most unstable countries. The Sahel and Horn of African demonstrate the deep and complex place-specific variables through which climate

⁸² Mobjörk, M., et al., '[Climate-related security risks: Towards an integrated approach](#)', Stockholm International Peace Research Institute, 2016.

⁸³ United Nations Environment Programme, '[Livelihood security: Climate change, conflict and migration in the Sahel](#)', 2011.

⁸⁴ Abel, G. J., et al., '[Climate, conflict and forced migration](#)', *Global Environmental Change*, 2019, 54: 239-249.

⁸⁵ International Organisation for Migration, '[IOM Outlook on Migration, Environment and Climate Change](#)', 2014.

⁸⁶ Abel, G. J., et al., '[Climate, conflict and forced migration](#)', *Global Environmental Change*, 2019, 54: 239-249

⁸⁷ United Nations, '[Climate change "biggest threat modern humans have ever faced"](#)', 23 February 2021.

impacts on security dynamics. The climate-related security risks in these regions are particularly evident and pose challenges to the security of the EU via two main channels: conflict onset, which may require humanitarian relief and deployment of military resources, and uncontrolled migration, which would further strain the relationships between Member States insofar as refugee management and allocation are concerned. To map the challenges for EU strategies in such localities, it is necessary to understand not only the broad, aggregate level impacts of climate change but also the micro-level ways in which these intersect with social, political, institutional and economic factors.

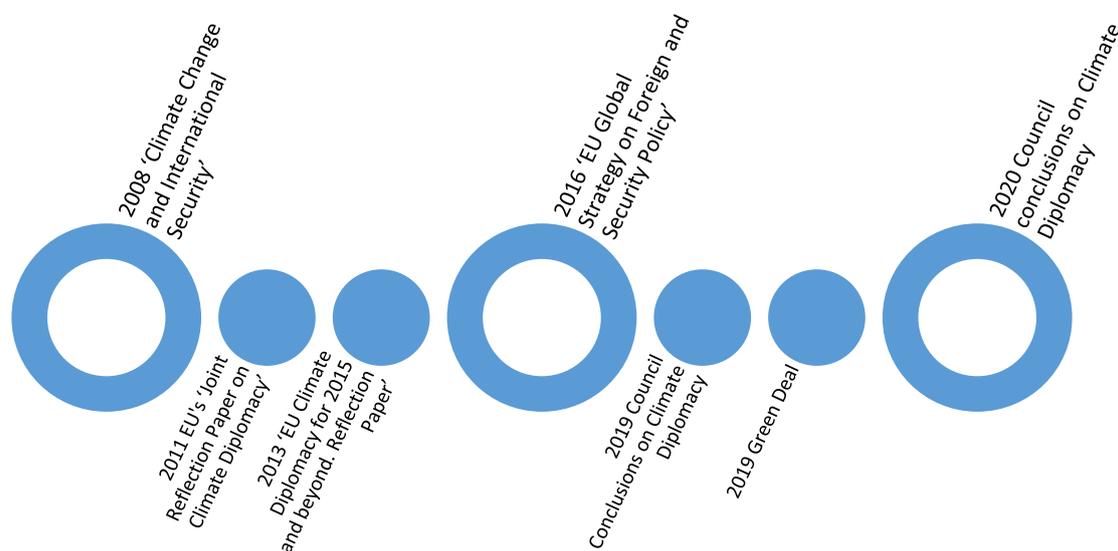
2 Taking stock of EU policies

This chapter relates the analysis of climate-related conflict and instability to the EU's range of policy commitments in this area. It charts the evolution of the EU's rich array of policy instruments, while pointing to the CSDP's relatively limited attention to climate factors so far. The chapters assesses the strong and less well-developed aspects of EU climate security policies and what this balance might mean for the future development of CSDP.

2.1 EU policy milestones

The EU has been formally committed to building climate change factors into its security and defence policies for many years. In 2008, the EU published an influential paper framing climate change as a 'threat multiplier' that needed to be placed at the heart of EU security policy.⁸⁸ Since then, the EU's commitments to this end have incrementally accumulated. Some key milestones in policy development in the last decade include (but are not limited to) the following.

Figure 4 – Timeline of EU climate action



In July 2011, the EU's Joint Reflection Paper on Climate Diplomacy asserted the need to begin engaging in a more tangible and systematic fashion on the foreign policy dimensions of climate

⁸⁸ European Commission and High Representative, *Climate Change and International Security*, 2008; Youngs, R., *Climate change and European security*, Routledge, London, 2014.

change.⁸⁹ In 2013, the foreign affairs council adopted conclusions that promised a mainstreaming of climate security into all external policies and dialogues.⁹⁰ In 2016, the EU Global Strategy on Foreign and Security Policy promised a more ‘comprehensive’ approach to security that increased EU efforts to mitigate conflict and instability associated with climate factors in third countries.

In February 2018, the European Council committed to doing more on all aspects of climate security, promising to ‘further mainstream the nexus between climate change and security in policy dialogue, conflict prevention, development and humanitarian action and disaster risk strategies’.⁹¹ In June 2018, on the tenth anniversary of the 2008 ‘threat multiplier’ paper, the EU promised more of a security-led role in climate issues.⁹²

The 2019 implementation report of the Global Strategy insisted that the ‘climate-security nexus’ was one of the areas where a ‘joined-up’ approach had advanced most effectively between different parts of the EU and claimed that ‘climate action has become an integral part of our work on conflict prevention and sustainable security’.⁹³ Council conclusions in 2019 reiterated the commitment to tackling climate change as an ‘existential’ issue of international security and mentioned the pertinence of CSDP as part of the EU toolbox in this regard.⁹⁴

The Commission’s European Green Deal, published in December 2019, proposed an upgraded ‘green deal diplomacy’ across the world and promised to build ‘green alliances’ through its foreign policy instrument.⁹⁵ In early 2020, another set of council conclusions reiterated the commitment to take climate factors into account in wider foreign policy engagements, once again including the CSDP within the range of instruments to be used in this endeavour.⁹⁶ At the same time, the Committee for Civilian Aspects of Crisis Management (CivCom) agreed to step up efforts at developing climate assessments as part of EU civilian missions.

In January 2021, council conclusions called for reinforced energy and climate diplomacies. This latest statement reinforced the range of existing EU commitments but did not introduce new commitments, ideas or approaches. The conclusions invited the ‘relevant services’ to take forward the Climate Change and Defence Roadmap with actions taken in a number of specific areas, especially with regard to CSDP missions and operations (as discussed below).⁹⁷

Pursuant to this large number of formal commitments, the EU has made considerable progress on awareness-raising, generic dialogue and mapping the likely strategic impacts of climate change. It has overseen and supported data-gathering aimed at revealing climate change’s important political and strategic effects. It has developed policymaking processes that foreground security-oriented debates over climate change.⁹⁸ EU institutions have rolled out regular awareness-raising sessions on climate security.⁹⁹ In parallel, most Member States have also introduced similar efforts at the national

⁸⁹ Council of the European Union, [Council conclusions on climate diplomacy](#), 18 July 2011.

⁹⁰ EEAS, ‘[EU climate diplomacy for 2015 and beyond: Reflection paper](#)’, 2013.

⁹¹ Council of the European Union, [Council conclusions on climate diplomacy](#), February 2018.

⁹² Fetzek, S. and Van Schaik, L., ‘[Europe’s responsibility to prepare: Managing climate security risks in a changing world](#)’, 2018.

⁹³ EEAS, ‘[The European Union’s Global Strategy: Three years on, looking forward](#)’, 2019, pp. 28 and 40.

⁹⁴ Council of the European Union, [Council conclusions on climate diplomacy](#), 18 February 2019.

⁹⁵ European Commission, [The European Green Deal](#), COM(2019) 640, 2019.

⁹⁶ Council of the European Union, [Council conclusions on climate diplomacy](#), 20 January 2020.

⁹⁷ Council of the European Union, [Council conclusions on climate and energy diplomacy: Delivering on the external dimension of the European Green Deal](#); EEAS, ‘[Climate Change and Defence Roadmap](#)’, Working Document EEAS (2020)1251, 2020.

⁹⁸ Bergamaschi, L., et al., ‘[Managing climate risk for a safer future: A new resilience agenda for Europe](#)’, 2019.

⁹⁹ Zwolski, K. and Kaunert, C., ‘[The EU and climate security: A case of successful norm entrepreneurship?](#)’, *European Security*, 2011, 20.1: 21-43.

level. The EP has shown a close interest in these policy developments, for example monitoring the need for concrete steps to incorporate climate factors into the CSDP and wider EU conflict prevention and peace-building strategies.¹⁰⁰

2.2 The Defence Roadmap

EU defence ministers discussed climate change for the first time in August 2019. This discussion began a process that led in 2020 to a Climate Change and Defence Roadmap. This is arguably the EU's most significant and most specific step forward in building climate factors into the CSDP. The Roadmap focuses most strongly on making the CSDP more autonomous from local resource constraints.¹⁰¹ It also complements the raft of existing defence initiatives aimed at making European defence equipment more energy efficient and less dependent on external environments (see also Section 4.4 below).¹⁰² It does not yet attempt to discuss the coordination of other players in the EU's integrated approach, nor the role of instruments and funding tools involved in peace and security, such as security sector reform (SSR), disarmament, demobilisation and reintegration (DDR) or mediation. Some of this may be clarified as part of the ongoing work on an operational concept that would take a broader look at climate, alongside development and humanitarian concerns, and consider synergies across all the players and tools involved in EU's integrated approach.¹⁰³

Under the Roadmap, in December 2020, the EU Institute for Security Studies (EUISS) ran the first of what is intended to be an annual event on the defence elements of climate change. The report from this event gives an insight into the latest thinking on this issue from the defence, military and diplomatic communities. The report is phrased in terms of a series of injunctions for 'things to do' to give the defence dimension greater substance. It focuses on the need to cut defence-sector carbon emissions, understand more about climate-change impacts on security and support dialogue on such issues at the multilateral level. It makes familiar calls for more strategic foresight, early warning and situational awareness capabilities. It stresses 'a need to ensure that climate change and environmental protection are mainstreamed across CSDP missions and operations, and that the EU engage with local and international partners to exchange best practices', and to conduct 'focused studies and questionnaires'.

Probably the main strand of concern relates to the defence sector's own energy consumption and need to reduce this to increase missions' operational autonomy. The thrust is about ensuring that climate factors do not impede CSDP mission mandates and effectiveness. Of course, this is a very different issue to whether CSDP missions need to be deployed to mitigate climate change stresses themselves. On this question, the discussions focused on the need for the EU to be more prepared for more disaster relief and humanitarian assistance deployments related in some form to climate drivers: the report stated that 'EU deployments should be planned for and set up to actively contribute to mitigating and managing climate change'. The report calls for training to help militaries work in harsher climatic conditions, says that local actors need to be consulted to understand local climate factors, and suggests that the EU offer awareness-raising on climate issues for African Union missions.¹⁰⁴

¹⁰⁰ European Parliament Committee on Foreign Affairs, ['The role of the Common Security Defence Policy in case of climate-driven crises and natural disasters'](#), 2012/2095(INI), 2012.

¹⁰¹ EEAS, ['Climate Change and Defence Roadmap'](#), Working Document EEAS (2020)1251, 2020.

¹⁰² See European Defence Agency, ['Consultation Forum for Sustainable Energy in the Defence and Security Sector'](#), 2020, for an overview, particularly on the launch of Phase III.

¹⁰³ Interview with EEAS official, 5 March 2021 (Interview 17).

¹⁰⁴ EU Institute for Security Studies, ['Climate change, defence and crisis management: from reflection to action: Event report'](#), December 2020.

2.3 Themes in EU climate security

In assessing the EU's approaches to climate security, a number of themes are pertinent. These show the kind of strategies the EU has preferred to date, containing both strong and weaker points. This overview helps situate considerations for how the CSDP might improve its coverage of climate factors in the future.

2.3.1 A CSDP blindspot?

Notwithstanding all the general progression in overarching EU climate security initiatives, the tangible impact specifically on the CSDP has so far been relatively limited. This is the case in terms of both where and how the CSDP operates. Climate security stresses have not in themselves prompted the EU to intervene in conflicts. Several EU militaries have begun to ensure that at least they do not use scarce local resources in a way that worsens conflicts in specific contexts, for which the Spanish and UK militaries provide illustrative examples.¹⁰⁵ However, while EU planners have begun to assess climate factors as part of conflict-management scenario-building, governments have not so far seen armed interventions as being a central part of this agenda.¹⁰⁶ Concerned with current shortcomings of operations, in September 2020, the Subcommittee on Security and Defence (SEDE) tabled a report followed by an EP resolution on CSDP in the Sahel and the Horn of Africa.¹⁰⁷

CSDP missions have deployed to climate-stressed areas, but such stresses have not been the reason for their deployment. Climate-related foresight and early warning have improved notably in fragile contexts regarding some aspects of climate change, but it is difficult to pinpoint concrete interventions that have flowed from it. CSDP missions have not yet included explicit or direct operational elements related to climate change. Missions in the Sahel and Horn of Africa have been built around counter-terrorism training and capacity-building, not climate factors. Indeed, the recent, exhaustive evaluation of EU conflict prevention and peace-building activities did not assess climate factors directly. The evaluation noted only that these had become a 'complementary' factor to core EU conflict strategies.¹⁰⁸

EU leaders have often pointed to the climate stresses behind the Syrian conflict, yet the EU's position in this conflict has been strikingly hands-off. There would appear to be negligible appetite for contemplating possible involvement in flashpoints like the fast-rising tensions between Ethiopia and Egypt over the Nile. After a decade or more of gathering activity and policy documents in this area, the EU has not defined a list of target-country priorities where climate-related interventions are likely or deemed potentially desirable.

2.3.2 Climate-related funding and security

Other elements of EU climate security have advanced to a more significant degree. Officials point out that their principal route to linking climate action and security has been through a human security lens. The EU's most significant leverage often comes from its high levels of climate-related funding in third countries. The EU has invested significant amounts of funding in attenuating climate stresses in conflict and fragile contexts. In 2009, the EU committed EUR 7.2 billion to its first formalised package of climate funding. Since then, the EU's climate financing has grown

¹⁰⁵ Kettunen, M., et al., *Reinforcing environmental dimensions of European foreign and security policy*, 2019, p. 20.

¹⁰⁶ Ducrotté, F., 'The impact of climate change on international security: Prospects for an environmental dimension in CSDP missions', *European Security Review*, November 2012, p. 6.

¹⁰⁷ European Parliament, European Parliament resolution of 16 September 2020 on EU-African security cooperation in the Sahel region, West Africa and the Horn of Africa (2020/2002(INI)), 2020 https://www.europarl.europa.eu/doceo/document/TA-9-2020-0213_EN.pdf

¹⁰⁸ European Commission, *External Evaluation of EU's Support to Conflict Prevention and Peacebuilding 2013-2018*, Final Report, May 2020.

dramatically and totalled EUR 23.2 billion in 2019. The EU has provided nearly half the global total of such climate-related financing.¹⁰⁹ Examples of major EU funding initiatives include the Switch to Green programme, the Africa Renewable Energy Initiative and the Global Climate Change Alliance Plus Initiative. The 2021–2027 Multi-Annual Financial Framework stipulates that a minimum of 30 % of all EU funding will be spent on climate-related projects. The European Investment Bank and European Bank for Reconstruction and Development now allot between a third and half of their external lending to green finance.

Crucially, this climate funding has shifted increasingly from mitigation to adaptation projects and in this way has begun to assume a more security-oriented relevance. Still, the links between climate funding, on the one hand, and CSDP aims and operations, on the other, are relatively weak and indirect.¹¹⁰ The EU undoubtedly undertakes valuable developmental-oriented work aimed at addressing the climate-related drivers of conflict and instability in third countries. It remains generally unclear, however, how this might be harnessed to direct engagement in conflict scenarios, if at all. This is the area where climate expertise in DG CLIMA could be harnessed, for example through having its advisors embedded in missions, but it remains disconnected from CSDP debates.¹¹¹

2.3.3 Disaster relief

The main area of relevance to military deployment so far is that of disaster relief and humanitarian assistance. European militaries have deployed to provide rescue operations in climate-linked natural disasters. The EU's Civil Protection Mechanism, managed by DG ECHO, was reformed at the end of 2018, in part around climate risks, but with a relatively narrow mandate of providing equipment for climate-related disasters like storms and forest fires. While DG ECHO has formal institutional links to internal CSDP deliberations, officials point out that the role of the Civil Protection Mechanism in wider security challenges and aims is at present relatively limited.¹¹²

2.3.4 Border control and climate security

For many years, analysts have suggested that, as one of the most tangible impacts of climate change, the EU will need to plan and prepare for higher refugee and migration inflows. This is a dimension of the climate security agenda that has begun to have some, at least implicit, resonance within CSDP planning. That is, a policy link between climate security and the CSDP that has begun to take shape is through EU support for border control and migration management missions. The EU has invested heavily in strengthening its external borders in recent years. Governments have used climate security concerns to justify a certain harnessing of CSDP missions for border-control aims, which are set to have more prominent climate-related dynamics in the future. This issue is particularly salient in the Sahel, where border control is at the core of CSDP missions in Niger and Mali (interview 7). As outlined in Chapter 7, however, establishing border control checkpoints in a region where borders are 'more conceptual than real' (interview 7) is proving a challenge. The EU's evaluation of conflict and peace-building strategies raises a fear that this focus sits uneasily with the 'comprehensive approach' to conflict resolution.¹¹³

¹⁰⁹ European Commission, '[International Climate Finance](#)', n. d.

¹¹⁰ Bergamaschi, L. and Sartori, N., [The geopolitics of climate: Transatlantic dialogue](#), Istituto Affari Internazionali, Rome, 2018, p. 8.

¹¹¹ Interview with representative of European Commission, 9 February 2021 (Interview 9).

¹¹² Interviews with representatives of European Commission and EEAS, 9 February 2021 (Interviews 9 and 10 respectively).

¹¹³ European Commission, [External Evaluation of EU's Support to Conflict Prevention and Peacebuilding 2013-2018](#), Final Report, May 2020.

2.3.5 Governance, climate and conflict

Closely related to the human security strand, it is often argued that governance-building and local-level participation are required within conflict interventions. In practice, CSDP missions, given their specific focus on security and policing, have not linked their activities to climate security-related governance initiatives. The climate security agenda has not yet driven any upgrade in the EU's good governance, human rights and democracy work around the world. There is little sign that the EU has stepped up pressure or support for democratic governance in autocratic regimes that have worsened climate instability. In fact, the governance-reform elements of CSDP missions have become less ambitious and more pragmatic in recent years. CSDP missions now often work with non-democratic regimes which want to boost their security capacities against insurgencies, not to manage climate factors.

Governance challenges are evident in the Sahel. French-led operations there have become more tightly aimed at defeating jihadist forces, with virtually no governance components. The EU and Member States have provided EUR 8 billion in development aid for the Sahel since 2014. Yet a relative lack of focus on more inclusive governance structures to deal with resource strains overlooks growing support for radical groups among locals. Militants are gaining ground as they adjudicate over climate-related resource disputes; security forces backed by EU states often make these resource stresses worse when they attack villages and deplete livelihood ecosystems. The CSDP mission EUTM was briefly suspended after the 2020 coup in Mali; core counter-terrorism support to the post-coup regime has continued separately.¹¹⁴

2.4 Summary

The EU has developed many formal climate security commitments and made undoubted progress in implementing some elements of them. Yet the CSDP strand of climate security has lagged behind other areas of EU approaches. Even if the CSDP cannot be expected to be the dominant element of climate security strategy, there would seem to be untapped potential to use its resources. Levels of commitment are clearly increasing. While the EU's most recent Climate Diplomacy conclusions are mostly focused on Paris emission-reduction commitments rather than security per se, officials stress that they have helpfully galvanised more debate and commitment among security-oriented policymakers. They also point to the emerging idea of creating 'Green Alliances' around the world as a leading edge of policy development that is likely to bring in a more overtly security dimension.¹¹⁵ The CSDP's own 'Handbook for Decision Makers' acknowledges the need for partnerships and dialogues on climate factors to produce more concrete deliverables.¹¹⁶

The challenge is not simply to get the CSDP more engaged on climate issues but to ensure that it does so in a way that dovetails with a consistent overall security strategy towards this issue. The CSDP has yet to move on tackling the underlying causes of conflict and instability within its mandates. Officials argue that even if climate is unlikely itself to be a trigger for a large numbers of CSDP interventions, more can be done to build a more coherent approach to the underlying causes of conflicts and resource wars. The EU's focus on climate-related funding is a strong element of its approach; but this can lead to a risk that security strategy be reduced to project finance, when it needs to be joined up to more political and hard-security forms of engagement.¹¹⁷ The strongest

¹¹⁴ International Crisis Group, '[A course correction for the Sahel Stabilisation Strategy](#)', 2021, pp. 4-5 and 22.

¹¹⁵ Interview with representative of EEAS, 9 February 2021 (Interview 10).

¹¹⁶ Rehl, J. (Ed.), '[CSDP handbook for decision-makers](#)', 2017, p. 29.

¹¹⁷ Interview with representatives of European Commission, 9 February 2021 (Interview 9) and EEAS, 9 February 2021 and 5 March 2021 (Interviews 10 and 17).

focus in the seminal Defence Roadmap is on ensuring that CSDP missions do not worsen climate strains, rather than on the question of how to address those underlying strains.

3 Implications for CSDP effectiveness

This chapter builds on the overview of EU climate security policies and delves more deeply into the implications for CSDP more specifically. It examines the CSDP's need for better early warning intelligence, forecasting and foresight related to climate factors, mandates and operational concepts for missions and operations, defence planning, funding for defence equipment and, finally, cooperation with local and international partners such as the UN and NATO. This chapter looks specifically at how civilian aspects of the CSDP will be pertinent to the range of dynamics that drive conflict, as discussed in Chapter 1.

3.1 Early Warning Intelligence, Forecasting and Foresight

Anticipatory thinking and acting in security and defence can take different forms, address different questions and over shorter or longer time frames – from qualitative reports to indicator-based predictive models and early warning systems, Delphi expert surveys, scenario planning and 'what-if narratives'.¹¹⁸ The common purpose is to move from a reactive approach to attacks, instability and humanitarian crisis towards deterring, preventing or in other proactive ways mitigating the negative consequences arising from human-made or natural hazards. Foresighted decision-making can increase preparedness through advanced finance, pre-positioning key assets in the theatre to speed up response and recovery, and, over the longer run, develop new or augment existing capabilities for better dealing with future crises. Cases often cited as preventive successes are Sierra Leone 2000, Macedonia 2001 and Kenya 2007/2008. An anticipatory, preventive or precautionary approach to conflicts, threats and hazards more generally is also more cost-effective than relying on crisis management alone, even bearing in mind the inevitable false positives inherent in reacting to early or timely warnings.¹¹⁹

The diagnostic challenge for anticipatory intelligence or foresight related to climate change lies in combining diverse data and forms of evidence from different disciplinary fields – forecasts of rising global temperatures and sea levels, acidification, droughts and extreme weather events – with a forward-looking assessment of state instability, mass atrocity risks or the threat posed by state and non-state actors. The EU needs to overlay different kinds of risks in each region and country of the world where it has interests to see how they interact and reinforce each other. A particular challenge is that climate stress does not respect borders, whereas political risks are often analysed on a country-by-country basis.

Predicting the onset of conflict caused mainly or partially by climate change is a challenging task. Currently, there is no data-driven or complex systems method capable of accurately anticipating the occurrence, dynamics or degree of such conflicts. The complexity stems from the need to take into consideration multiple variables at the same time, including factors like agricultural dependency and institutional structures, as laid out in Chapter 1,¹²⁰ and the ample margins of uncertainty

¹¹⁸ For an overview see Wenger, A., et al. (Eds.), *The politics and science of prevision: Governing and probing the future*, Routledge, London, 2020. For "what if" narratives, see Gaub, F. (Ed.), '[What if...? 14 futures for 2024](#)', Chaillot Paper 157, 2020.

¹¹⁹ Zartman, W. I., *Cowardly lions: Missed opportunities to prevent deadly conflict and state collapse*, Lynne Rienner Publishers, Boulder, CO, 2005; Brown, M. E. and Rosecrance N. R. (Eds.), *The costs of conflict: Prevention and cure in the global arena - Carnegie Commission on Preventing Deadly Conflict*, Rowman & Littlefield, Washington, DC, 1999.

¹²⁰ Von Uexkull, N. and Busby, J. W., '[Climate shocks and humanitarian crises: Which countries are most at risk?](#)', *Foreign Affairs*, 29 November 2018.

surrounding climate projections. Furthermore, it is not enough to understand the direct impact in terms of conflict – the indirect and wider secondary consequences to European interests must also be understood, whether they relate to better migration management, reducing energy dependency on Russia or reducing the threat of jihadist movements, especially those with diasporic links to Europe.

However, prediction is not necessary for decision makers to learn how to prioritise and focus resources better for actions on those countries and regions at greater risk. A substantial focus should be on rendering climate and socio-economic data more accessible and understandable to EU and partner countries' policymakers. This can be done through a range of foresight methods whose main purpose is not to predict or seek out the most probably futures, but to combine anticipation and the imagining of plausible and consequential futures with better communication and engagement with local decision makers and other stakeholders. This could involve scenario-planning and horizon-scanning, war games and exercises, as well as computer simulations that make policy options and their potential consequences more visible, tangible and specific. Such methods can also help to engage with disruptive and novel scenarios or visions of the future, as both environmental and political systems can appear stable until they reach a tipping point and change quickly.

Anticipatory intelligence needs to be not only accurate, reliable and timely but also convincing, clear, engaging and actionable. It is a common flaw of many early warning and response systems that a disproportionate amount of effort goes into data collection and analysis, rather than designing data collection and analysis around the receptivity and demands of decision makers and the decision-making process.¹²¹ For instance, research has shown that many senior diplomats and decision makers value more qualitative context-sensitive assessment of emerging conflict situations over country watchlists and quantitative risks assessment.¹²² Media reports often attract politicians more than internal reporting about the same country or situation. We also know that senior decision makers do not simply defer to expert analysts regarding countries with which they are familiar. They may believe in their own better judgements about the intention of foreign leaders, the nature of conflict between communities and, above all, the feasibility of different options for how to act.

Since 2014, the EU has progressively strengthened an Early Warning System on Instability and has already integrated some specific climate change-related indicators such as those relating to droughts and water scarcity. It is welcomed that the Roadmap on Defence already promises to strengthen anticipatory intelligence at the intersection of climate change, environmental degradation and hazards, and security by drawing on a range of existing tools and mechanisms. Concretely, the EU will need to fine-tune its intelligence apparatus to better understand when, where and to what extent climate-induced stress is creating additional challenges for the CSDP:

- Where is it likely to alter the operating conditions for existing CSDP missions, for instance by increasing the heat that personnel and equipment are exposed to, the growing prevalence of certain diseases such as malaria, or heightened difficulties in accessing water, energy and food?
- Where is it likely to create new challenges for existing CSDP missions that may require adjustments to the mandate, geographic scope, operational plan or activities, for instance

¹²¹ Meyer, C. O., et al., *Warning about war: Conflict, persuasion and foreign policy*, Cambridge University Press, Cambridge, United Kingdom, 2019.

¹²² Ibid.

around managing resource conflicts, environmental crime and movement of nomads across borders?

- Where, when and to what extent is it likely to create new threats, risks and opportunities in countries or regions where CSDP missions and operations do not yet operate, but they may need to be deployed in the future because of the combination of climate stress and existing vulnerabilities?
- Where does it create emergencies also affecting countries within the EU which could substantially absorb substantial civilian and military resources that might otherwise be available for extra-European CSDP missions, while potentially engaging EU crisis management structures and assets in managing crises at home?

According to the interviewees, there is growing awareness and understanding within the EEAS, the Commission and Foreign Affairs Council about the generic challenges that climate change poses to security and defence. However, beyond this awareness of the threats, there is a lack of specificity and nuance when it comes to identifying, anticipating and measuring the varied impact in specific countries and regions over time. For instance, the early warning mechanism could look in a more holistic way at the different consequences of climate change beyond the current narrow focus on droughts and water scarcity. For instance, it could investigate its gendered effects and examine the impact across the whole conflict cycle in its conflict analysis. Furthermore, it could also consider the potential undesirable or unintended security implications of low-carbon development responses to climate change.¹²³

The EU has invested in recent years in data collection and analytical capacities of environmental phenomena, as well as the monitoring of political and security risks. For instance, the Copernicus Programme for Earth Observation collects vast and still expanding amounts of data from satellites, as well as a range of land-, sea- and air-based measurement systems, in partnership with Member States and a number of European agencies.¹²⁴ These can be used for statistical modelling and early warning of harmful trends, such as early signs of deforestation and desertification. The data is provided openly and free of charge. The challenge lies in analysing and communicating that data effectively. One of the best ways of bringing forecasts 'alive' and showing how preparedness can matter greatly are war games and exercises.

While 'security' is mentioned as one of the themes of Copernicus, there is still a significant way to go until that data leads to a better understanding of the interplay of environmental, geopolitical and security risks. For instance, the EEAS can draw on the support of the Joint Research Centre in areas such as open-source monitoring and analysis, the civilian and military intelligence analysis functions EU INTCEN and EUMS INT acting as the Single Intelligence Analysis Capacity (SIAC), and the EU delegations and missions in the field.¹²⁵ Yet the EU institutions lack the authority, due to the national security exemption (Art 42. TFEU), to collect their own Signals and Human Intelligence. More broadly, the EU and its Member States collectively suffer from a significant shortfall in what is commonly called intelligence, surveillance and reconnaissance capabilities (ISR).¹²⁶ These capabilities underpin, enable and guide the use of security and defence instruments. Interviewees also said that climate change expertise specifically is currently too dispersed across different units

¹²³ Mirumachi, N., et al., '[Unveiling the security concerns of low carbon development: Climate security analysis of the undesirable and unintended effects of mitigation and adaptation](#)', *Climate and Development*, 2020, 12.2: 97-109.

¹²⁴ Copernicus, '[About Copernicus](#)', n. d.

¹²⁵ Gerhard, C., '[Situational awareness for EU decision-making: The next decade](#)', *European Foreign Affairs Review*, 2021, 26.1.

¹²⁶ Interview with EEAS, 23 February 2021 (Interview 16).

within EU institutions. Member States have been investing in this area, but their expertise is distributed unevenly in terms of both thematic areas and geographic focus.

Improving early warning and foresight therefore depends on achieving greater alignment and synergies between different EU institutional sites where climate change expertise is located. The key challenge is to move from data collection to a more holistic analysis of environmental, climate change- and security-related factors in order to better understand the interplay and causal links between these factors. The EU could learn from intensified efforts and best practices by the Netherlands, Germany and the UK. The efforts should be embedded in a broader strategy to enhance ISR capabilities and enhance the ability of SIAC to provide situational awareness and anticipatory intelligence based on 'all-source intelligence'.¹²⁷

3.2 Mandates, operational concepts and planning

Thus far, the mandate and practice of CSDP civilian missions have been disconnected from climate change. We asked officials, both in Brussels and the field, for their views on whether security and climate change should be connected, and how to achieve this goal. Interviewees emphasised that it was the mandates of civilian not military CSDP missions that are in most need of adaptation to climate change. For instance, civilian CSDP missions could play an important role in helping national authorities in the most at-risk countries and regions to deter and prosecute environmental crime that contributes to GHG emissions. One interviewee mentioned the CAR as an example of a country that still suffers widespread illegal exploitation of natural resources through timber gathering and mining, and the power games and conflicts that flow from such activities.¹²⁸ Any mediation and conflict resolution efforts would need to address these factors. It may make sense in such a case to broaden the mandate of the CSDP missions to include capacity-building in tackling environmental crime and development efforts to ensure young men in particular can feed their families without having to join local warlords and organised crime syndicates. Similarly, in developing a mandate for a training mission in Mozambique (see 2.4), it would be advisable to consider how the mission can assist local actors in tackling resource-conflicts and forced migration that are both causes and consequences of the jihadist insurgency. The EU should also deploy in a more targeted and intensified way instruments and resources from other policy fields to address the underlying vulnerabilities of the country to better cope with extreme weather events, particularly the resilience of supply chains and infrastructure.

More broadly, many interviewees agreed (interviews 1, 2, 3 and 5) that an expansion of the mandate of civilian CSDP missions could help to address the rising problems at the intersection of climate change, environmental degradation and climate change. This could include a focus on training local security, police and forestry personnel; strengthening compliance with environmental laws and improved governance; greater investment in climate diplomacy and mediation efforts sensitive to resource conflicts; and development support specifically aimed at ensuring sufficient and sustainable water and energy supply. This would require a strong emphasis on working with local stakeholders to build support for those actions and the use of longer-term development tools to provide those parts of local communities engaged in deforestation and environmentally problematic activities with alternative livelihoods. Mission commanders might need to engage with civilian actors who they have not worked with before, such as park rangers. One interviewee mentioned as one rare example of where military operation objectives and environmental concerns currently intersect the W-Arly-Pendjari Park Complex – a huge wildlife reserve of parks crossing the

¹²⁷ Ibid.

¹²⁸ Interview with EEAS, 12 February 2021 (Interview 13).

borders of Burkina Faso, Benin and Niger. This is where jihadist groups have moved and congregated over the last two years to conceal themselves, to feed on the wildlife and share revenues with poachers and traffickers.¹²⁹ There could be a security role in such instances to protect habitats and contain violent actors.¹³⁰

However, interviewees also emphasised that the 'where' and 'how' of mandate expansion mattered greatly and could involve risks. Some interviewees considered that in difficult contexts like sub-Saharan Africa, the mandates of CSDP missions need to remain tightly defined around core security deliverables, rather than broadened (interviews 6, 7 and 8). All interviewees cautioned against expanding mission mandates without expanding their resources, staff and duration. Doing so would risk jeopardising the coherence of the CSDP missions on the ground and damage the modicum of trust and social capital created with local partners. With regard to the specific proposal in the Roadmap for environmental advisors to be added to missions and operations, interviewees described this as welcome, useful and overdue, particularly to 'green the missions', but they noted that it would probably not be sufficient to help address the underlying problems in the countries. They instead placed greater hopes on the EU's regional approach towards the Sahel, run by the CSDP mission in Mali, to help mainstream climate change into security concerns and monitor climate factors (interviews 2 and 4).

Another problem identified by interviewees (interviews 1, 2, 3, 4 and 5) is that CSDP works to short-term horizons in two respects: many of the experts are seconded to the missions for periods shorter than 18 months; and budget cycles of EU instruments often have short time spans. The short-termism embedded in budgetary cycles and secondments limits the goals that missions and delegations can set for themselves. This stifles efforts to invest time and resources into activities – such as trust building with local partners – that are necessary for longer-term solutions to climate-related insecurity. The four-year rotation rules at the EEAS and Delegations can also be a significant obstacle in building up and retaining the country, regional and technical expertise so crucial to improving situational awareness, early warning and strategic foresight, as discussed in the previous section.

Furthermore, EU decision makers and planners have given little consideration to how CSDP missions could contribute to increasing a host country's preparedness for dealing with disasters caused by climate change, such as the droughts, flooding or swarms of locusts recently witnessed in the Horn of Africa.¹³¹ ¹³² This is a serious omission for security policy, to the extent that such disasters can trigger broader societal instability, as outlined in Chapter 1, by disrupting harvests, forcing more frequent and longer-term migration flows, and fostering recruitment by criminal organisations, and they are expected to increase in frequency.¹³³ After investing in preparedness, the EU could usefully help build social capital with stakeholders in the countries where missions and delegations operate. Building relationships with local stakeholders, including civil society organisations, beyond national ministries would also help deal with the frequent reshuffling of government roles in politically unstable countries which frequently forces EU officials to rebuild relations from scratch (interview 7).

¹²⁹ Interview with EU CSDP mission, 23 February 2021 (Interview 3); see also ['Burkina Faso and jihadism in West Africa', Strategic Comments](#), 2019, 25:6, viii-x.

¹³⁰ Interview with EU CSDP mission, 23 February 2021 (Interview 3).

¹³¹ Salih A. A. M., et al., ['Climate change and locust outbreak in East Africa'](#), *Nature Climate Change*, 2020, 10.7: 584-585. See also Reliefweb, ['Ethiopia agriculture sector situation and HRP response monthly dashboard'](#), December 2020.

¹³² Reliefweb, ['Ethiopia agriculture sector situation and HRP response monthly dashboard'](#), December 2020.

¹³³ For instance, Guarino, M. ['Misleading reports of lawlessness after Katrina worsened crisis, officials say'](#), 16 August 2015.

Neither the Roadmap nor the wider EU debates have yet homed in on the CSDP's response to actions by state or non-state actors that significantly and irreversibly increase the release of greenhouse gases. This oversight sits somewhat uncomfortably with the claim in the most recent Council Conclusions that climate change is an 'existential threat to humanity'.¹³⁴ This topic has been debated in a growing literature on ecological intervention.¹³⁵ Experts in international law and ethics ask whether the notion of ecocide should be added as another crime to be prosecuted by the ICC and a legitimate cause for limiting, albeit as a last resort, national sovereignty when a state fails to discharge its responsibility to protect habitats of planetary significance. There appears to be growing support for doing so in the EP, albeit in the different context of an own initiative report on the liability of companies for environmental damage.¹³⁶

Examples might include efforts to expand farming in the Amazonian rainforest or measures that would massively accelerate the thawing of the permafrost soil, thus bringing the release of particularly concentrated greenhouse gases. Recent debates in the UNSC showed how contested the security and climate nexus remains at the level of the Security Council. Representatives of China, India and Russia questioned the strength of the causal link between climate and security, then whether this is really a topic for the UNSC.¹³⁷ CSDP missions depend on UNSC authorisation and host country support, and it is hard to see this changing anytime soon. However, if it becomes widely accepted that the pace of climate change has created a state of 'emergency', even previously inconceivable actions can become a possibility. While environmental military interventionism has serious drawbacks and dilemmas, recognising ecocide as a crime, if done in a carefully delineated way, could have a deterrent effect on perpetrators whilst mobilising EU-internal efforts to develop more effective means for preventing and stopping such crimes.

3.3 Planning for capabilities and infrastructure in military and civilian CSDP

Military planning is central to clarifying how the military needs to adjust to climate change and also contribute to the wider goals of the EU's Green Deal. Indeed, several Member States are currently looking into these questions and the UK's Ministry of Defence has recently published a report on a review of such questions chaired by Lt Gen Richard Nugee.¹³⁸ Military leaders' main concern is to enhance missions' operational effectiveness or at least mitigate any potential loss of effectiveness. 'Mission comes first' is the mantra repeated often by our interviewees and various documents published by the EU, other states and organisations. The UK argues that it would 'never' compromise on military 'capability solely for a sustainable solution'.¹³⁹

Yet the operational challenges of adaptation are multifaceted and require careful planning.¹⁴⁰ If new lightweight boots become unusable because they were not conceived for the expected increases in

¹³⁴ Council of the European Union, [Council conclusions on climate and energy diplomacy: Delivering on the external dimension of the European Green Deal](#), 25 January 2021, p. 2.

¹³⁵ Eckersley, R., 'Ecological intervention: Prospects and limits', *Ethics & International Affairs*, 2007, 21.3: 293-316.; Betz, A., 'Preventive environmental wars', *Journal of Military Ethics*, 2019, 18.3: 223-247. See also an overview discussion on this and related topics in a series of blogs by Humphreys, J.: 'Climate-change and war (Part I): Tilting at straw man', 2020.

¹³⁶ European Parliament Committee on Legal Affairs, 'Draft report on the liability of companies for environmental damage', 2020/2027(INI), 2020; see also Politico, 'The global campaign to make environmental destruction an international crime', April 2021.

¹³⁷ The whole debate is [here](#). For a German language summary see Stukenberg, K., 'Konflikte, extra heiß', 25 February 2021.

¹³⁸ UK Ministry of Defence, 'Climate change and sustainability strategic approach', 2021; some underpinning research by RAND Europe [here](#).

¹³⁹ *Ibid*, p. 11.

¹⁴⁰ For a good summary see Heise, R., 'NATO is responding to new challenges posed by climate change', 1 April 2021.

the heat where many missions are likely to be stationed, this is capability issue. The same applies to rifles that cease to work at a certain temperatures or helicopters that cannot fly in more extreme weather conditions, such as more frequent and intense sand and dust storms, or planes that require longer runways to start. In addition, changes in capability requirements will also result from melting ice caps and rising sea levels, particularly for navies. Maritime operations in the Arctic will face the challenges of 'extremely cold air temperatures with high wind speeds, ice obstacles, high sea states or waves, remoteness (e.g. GPS failures/inaccuracies due to space weather effects coupled with high navigation demands) and increased radiation exposure due to the depletion of the ozone layer above the Arctic'.¹⁴¹ Increased salinity in the Gulf of Aden is known to have caused frigate turbines to fail.¹⁴² Ports will need to be adapted to rising sea levels and storm surges. Drones will need to be adapted or built to operate in more severe weather conditions, especially those dangerous to humans. For instance, in the mission planning for an EUTM in Mozambique, the contingency of tropical cyclones and floods will be considered and prepared for to ensure the safety and welfare of deployed staff and the resilience of the mission.

As outlined in Chapter 2, the Roadmap highlights a number of other areas where operational effectiveness could greatly benefit from adaptation. For instance, by becoming more self-sufficient and consuming less energy, missions could become less vulnerable to attacks. Vessels, vehicles and buildings that burn less fuel and consume less energy could become cheaper and easier to run. For instance, a shift to unmanned and rechargeable naval minesweepers could help deliver both greater operational impact and lower cost.¹⁴³ More importantly, greater self-sufficiency could substantially lighten the requirements of resupply operations. The EU Military Staff Focal point for climate change rightly argued that these measures ultimately could save not just costs but also lives: 'most of the US casualties during the wars in Iraq and Afghanistan were due to supply convoys, which themselves draw a high toll on heavy, costly and carbon-consuming force protection'.¹⁴⁴ Similarly, the UK's Lt Gen Nugee cited the case of the most senior British officer in Afghanistan being killed on a logistic resupply operation.¹⁴⁵

By reducing the energy and resource footprint of missions, serving as a role model for better energy use and leaving a positive legacy for local populations through smart camps with wells, CSDP missions would gain stronger support from local stakeholders and populations in areas hard hit by resource scarcity. Moreover, CSDP missions can capitalise on their presence on the ground to set a good example and diffuse good practices to local armed forces and general populations on environmental and climate-change awareness and solutions.¹⁴⁶ In contrast, missions can also set bad examples and easily lose hearts and minds if they leave behind 'white elephant installations' that nobody can use and outcompete with locals for scarce resources such as energy and water. Militaries need to move away from the culture of building camps that look like mini cities as a 'home from home' with extensive infrastructure and services.

To improve such defence planning, more staff will be needed with climate-related expertise. The Roadmap foresees the recruitment of environmental advisors for each CSDP mission and operations, but they may be a challenge to find. A range of other climate expertise will also be

¹⁴¹ Ibid.

¹⁴² Ibid.

¹⁴³ Example given by Wijnands, J. Dutch Ministry of Defence, at the Clingendael webinar: '[Adapt to defend: the security dimension of climate change](#)', 4 March 2021.

¹⁴⁴ Bouyssou, A. 'Global challenges, common responses: Climate Security and the Military', Lecture, EU Union Military Staff, 16 September 2020, slides and text communicated to author.

¹⁴⁵ General Richard Nugee at the Clingendael webinar: '[Adapt to defend: the security dimension of climate change](#)', 4 March 2021.

¹⁴⁶ Interview with EEAS official, 23 February 2021 (Interview 15).

needed in addition to this. The EU could develop such expertise by cooperating more closely with existing Centres of Excellence and NGOs, both outside and inside the EU, and with universities. The EU should make an effort to develop these capacities in all Member States, not just those that already lead the way, for instance through industrial projects for cleaner technologies funded from the European Defence Fund and research in this area supported by the EDA.

Crucially, the issue of CSDP effectiveness and energy sufficiency of missions cannot be tackled without changing how Europe's military sector uses energy and resources at home. A recent study estimated that the 'carbon footprint of EU military expenditure in 2019 was approximately 24.8 million tCO₂e, which is equivalent to the CO₂ emissions of about 14 million average cars'.¹⁴⁷ The armed forces in Europe could use the rather large amount of land they own and use better for carbon capture and promoting environmental diversity. In the Netherlands, approximately half of the whole real estate of the Dutch government belongs to the Ministry of Defence, raising the challenge of making 11,000 building more energy efficient.¹⁴⁸ In the UK, defence accounts for 50 % of the central government's emissions.¹⁴⁹ Our interviewees argued alongside other experts at a recent Clingendael webinar that doing so would not only result in long-term cost-savings but also offer significant opportunities for innovation and a boost to the local economy and jobs. An example is that a recent revision of aviation fuel standards allowed for a much higher proportion of military aircraft fuel to come from sustainable or recycled fuel sources.¹⁵⁰ Similarly, energy efficiency and sustainability should be an integral part of all new defence procurement to make sure any new gear, tank or ship is fit for purpose in a changed environment.

3.4 Funding defence research and capabilities

The EU has already supported some work to support a far-reaching energy transition of the defence sector through the European Defence Fund (EDF) and Permanent Structured Cooperation (PESCO), as the defence roadmap highlights. The European Defence Agency (EDA) created an Energy and Environment Programme in 2014, building on ongoing work under its Military Green initiative. The Energy and Environment Working Group held its 16th meeting in September 2020.¹⁵¹ The EDA oversaw a Consultation Forum for Sustainable Energy in the Defence and Security Sector (CF SEDSS III) in 2015, with a raft of commitments to increasing the use of renewable energy sources within the European defence sector.¹⁵² In June 2020, the Council of the European Union invited the EDA to contribute to the preparation of short-, medium- and long-term actions addressing the links between defence and climate change as part of the wider climate-security nexus. In January 2020, the EDA was tasked by its Steering Board to create an Incubation Forum on Circular Economy in European Defence (IF CEED) co-funded by the Commission with a view to allowing the defence sector to further contribute to the European Green Deal initiative. Based on an initial EDA proposal, the European Commission has identified the Agency as beneficiary of a budgetary grant from the EU LIFE Programme to launch the Incubation Forum in 2021. In order to sign the final grant

¹⁴⁷ Conflict and Environment Observatory, '[Under the radar: The carbon footprint of the EU's military sectors](#)', February 2021.

¹⁴⁸ Example given by Wijnands, J. Dutch Ministry of Defence, at the Clingendael webinar: '[Adapt to defend: the security dimension of climate change](#)', 4 March 2021.

¹⁴⁹ UK Ministry of Defence, '[Climate change and sustainability strategic approach](#)', 2021, p. 6.

¹⁵⁰ Ibid, p. 8.

¹⁵¹ European Defence Agency, '[Energy and Environment \(ENE\) Programme](#)', n. d.

¹⁵² European Defence Agency, '[Consultation for sustainable energy in defence and security launched](#)', press release, 20 October 2015.

agreement and start the implementation of the IF CEED, the EDA will submit a detailed project to the Commission in early 2021.¹⁵³

The listings of the 47 PESCO projects funded since 2017 does not include a separate category related to climate-driven adjustments as such. However, a look through the projects funded so far does suggest that several of these have indirect or partial relevance to climate factors. A Deployable Military Disaster Relief Capability Package (DM-DRCP) creates a specialised military assets package deployable at short notice, including for natural and extreme-weather disaster management. Other projects with tangential utility to climate adjustments and planning include those on an Integrated European Joint Training and Simulation Centre (EUROSIM), Energy Operational Function (designed to improve energy supply to military camps), military mobility and geo-meteorological monitoring. Still, the listing of PESCO projects does not suggest that the participating Member States have so far attached clear priority to preparing capacities specifically for climate-driven CSDP interventions.¹⁵⁴ The 2020 strategic review of PESCO's work since the initiative's inception in 2017 led the 25 participating Member States to conclude that 'more precise objectives' would be needed for climate change-related factors in the next phase of funding.¹⁵⁵

As the vast bulk of military defence equipment spending is at the national level, the EU, including through the EP, should help to raise awareness of how climate change requires changes in defence equipment and spending on it. EU Member States which are also members of NATO could help to shift some of the incentives around defence spending by allowing more of such expenditure to count towards the 2 % of GDP goal for alliance members. The EU itself should also consider setting guidelines or targets, as long as they consider fairly the different starting points of Member State armed forces and remain sensitive to their differences in threat perceptions and defence requirements arising from this.

3.5 Local level (delegations and missions) perspectives and actions

The nexus between climate change and security is experienced on the ground, where security missions and delegations work to implement the goals of the CSDP. In line with our place-based approach, we collected empirical data from EU officials working in the Sahel and the Horn of Africa via semi-structured interviews. We asked interviewees about their perceptions of the security challenges posed by climate change and how they think they could be addressed. A central problem identified by interviewees working in or on these regions was that climate change is intensifying competition for land and water resources between nomadic herders/cattle breeders and sedentary pastoralists, and placing extra strains on traditional dispute-resolution mechanisms led by tribal leaders.¹⁵⁶ The militarisation of transhumance corridors for nomads increasingly protected by armed groups is a worrying sign that tensions are escalating in several of the countries considered.¹⁵⁷ All our interviewees stressed that these trends increase the need for humanitarian assistance and require more international focus on displacement and radicalisation as many are forced to abandon

¹⁵³ European Defence Agency, '[CARDs on the table: What the first Coordinated Annual Review on Defence reveals](#)', 2020, p. 29.

¹⁵⁴ PESCO, '[About PESCO](#)', n. d.

¹⁵⁵ Council of the European Union, '[Council Conclusions on the PESCO Strategic Review 2020](#)', 19 November 2020, p. 12.

¹⁵⁶ Interviews with EU officials in Delegations and CSDP civilian missions, 5 February 2021 (Interview 1), 18 February 2021 (Interviews 2-4), 19 February 2021 (Interviews 5-6), 26 February 2021 (Interview 7).

¹⁵⁷ Interviews with EU officials in Delegations and CSDP civilian missions, 5 February 2021 (Interview 1), 18 February 2021 (Interviews 2-3), 19 February 2021 (Interview 5).

herding and farming and, often, their lands. They also insisted that more attention to ‘water diplomacy’ is urgently needed to find co-management solutions for water scarcity.¹⁵⁸

Addressing these issues, however, is challenging. The main reason is that, according to most of our interviewees,¹⁵⁹ climate change is not a priority issue for governments in the partner countries. On the one hand, more pressing short-term issues related to security and economic development occupy their agenda; on the other, capacity and resources to grasp the complexities of the socio-economic effects of climate change in each country are limited. Without a clear demand for assistance in this realm, all interviewees caution that any intervention or offer of advice would not be welcome at all or only superficially. For this reason, all interviewees stated that ‘local ownership’ of these processes is essential to their success. In the case of Egypt, the government is interested in responding to climate change particularly as a driver of economic and technological development; to that effect, cooperation with the EU is welcome. In all cases, the link between climate change and security goes virtually unacknowledged. Further, the governments of the partner countries spend very little resources on tackling climate change or improving natural resource management.

As previously mentioned, interviewees from the missions carry out training activities aimed at bolstering security in the partner countries. Few wish a broader mandate for the missions, yet nearly all argue that mainstreaming climate change into their activities appears necessary, as they operate in contexts of high environmental degradation which, combined with a changing and volatile climate, compounds security risks. Moreover, most interviewees from the EU Delegations reported working with environmentally focused non-governmental organisations, particularly international ones, by supporting their efforts on the ground. However, they struggle to engage in any meaningful way with ‘local’ environmental organisations. This is partly due to mandate constraints and partly to security issues in countries with very high levels of political and ethnic violence.¹⁶⁰ Several interviewees argued that higher levels of funding to engage with them would be fruitful to the objectives of the delegation/missions in terms of supporting the growth of civil society engagement.¹⁶¹ Furthermore, one interviewee mentioned the need to consider more systemically how to work better with business organisations operating locally, in the region and internationally.¹⁶² In the case of the proposed EUTM in Mozambique this could mean engaging with the owners and operators of the Liquefied Natural Gas facility under development in the North of the country.

In sum, the lesson from these perspectives of EU personnel on the ground is that the CSDP and other EU instruments, especially development and trade policy, need to deal with climate security in the most comprehensive fashion possible, with a nuanced understanding of the most significant underlying political and social conflicts and dynamics. If these are not understood and addressed early, they risk escalating into conflicts that CSDP missions are then called into. The key challenge for EU staff on the ground is to translate a general concern with climate security into daily practice. This is made even more difficult as some of the most immediate security challenges linked to climate change are still somewhat beyond the scope of the key policy interests of the EU in the region, such as counter-terrorism action and irregular migration. A more explicit endorsement from the EEAS and

¹⁵⁸ Interviews with EU officials in Delegations and CSDP civilian missions, 5 February 2021 (Interview 1), 19 February 2021 (Interview 5), 26 February 2021 (Interview 8).

¹⁵⁹ Interviews with EU officials in Delegations and CSDP civilian missions, 5 February 2021 (Interview 1), 18 February 2021 (Interviews 2-4), 19 February 2021 (Interviews 5-6), 26 February 2021 (Interview 7).

¹⁶⁰ Interviews with EU officials in Delegations and CSDP civilian missions, 18 February 2021 (Interview 3), 19 February 2021 (Interview 5).

¹⁶¹ Interviews with EU officials in Delegations and CSDP civilian missions, 18 February 2021 (Interview 3), 19 February 2021 (Interview 5).

¹⁶² Interview, EU official (Interview 17), 5 March 2021.

Member States to analyse and tackle these with local support would help. The EP could contribute to these efforts through its delegations in some of these countries and its membership of parliamentary assemblies such as the ACP-EU.

3.6 Cooperation with international partners

The Council Roadmap identifies multilateral cooperation as one of the pillars of the EU strategy for climate and defence. Indeed, efforts to strengthen partnerships are closely related to and can build on efforts to strengthen climate diplomacy that the EP has supported and shaped in the past.¹⁶³ When asked about their agreement with this goal, all interviewees said more collaboration with other international actors (e.g. the United Nations and NATO, as well as the African Union) would help to pool knowledge and resources and avoid duplication of efforts. This cooperation already takes place in many cases such as UN and the African Union, but the depth, frequency and degree of formality varies. The EP has stressed the 'vital role of parliamentary diplomacy in combating climate change' and gave as examples its 'membership of international parliamentary networks', the use of 44 EP delegations across the world and delegation visits, international interparliamentary meetings and various dialogue platforms, including those with national parliaments and subnational actors/non-state actors and civil society.¹⁶⁴

In the case of EU-NATO cooperation, some interviewees wished for a more structured collaboration, particularly with NATO, given that both organisations comprise almost the same member countries and same defence ministers.¹⁶⁵ In particular, NATO could play an important role as a standard-setter for their participating armed forces¹⁶⁶ and for mainstreaming the climate angle into its policy and capability development.¹⁶⁷ The EU and NATO currently lack a formal agreement to share sensitive information, discuss and agree to a sensible division of labour and joint ways of working. That extends beyond the climate-security nexus, as the recent response to the pandemic showed duplication in coordination roles and insufficient information sharing in the early stages.¹⁶⁸ After Russian actions in Ukraine in 2014, NATO initially focussed more on its core function of territorial defence, but more recently it has branched out again into the security implications of climate change as part of its own discussion of the strategic concept. Although the EU strategic compass (and NATO 2030) discussion could help advance the division of labour and cooperation between both organisations, it could also entrench duplication, confusion and competition if not managed properly. The EP could contribute to these efforts through its Delegation for relations with the NATO Parliamentary Assembly.

Less problematic and more evolved are the EU's relations with the UN where research and discussion on this agenda is more advanced, not least because of the experience of various UN missions in the field. The US was also mentioned as a partner from which the EU could learn more on how to best address the challenges of climate change for security and defence. Several interviewees, however, cautioned that local partners are suspicious of coordination between donors

¹⁶³ European Parliament, '[Resolution of 3 July 2018 on climate diplomacy](#)', 2017/2272(INI), 2018.

¹⁶⁴ Ibid, point 27.

¹⁶⁵ Interviews with EU officials in Delegations and CSDP civilian missions, 18 February 2021 (Interview 2), 19 February 2021 (Interview 6).

¹⁶⁶ See comments made by speakers at the Clingendael webinar: '[Adapt to defend: the security dimension of climate change](#)', 4 March 2021.

¹⁶⁷ UK Ministry of Defence, '[Climate change and sustainability strategic approach](#)', 2021, p. 23.

¹⁶⁸ Interview with EU official, 3 December, 2020, cited in Meyer, C.O., et al., '[How the COVID-19 crisis has affected security and defence-related aspects of the EU](#)', 27 January 2021.

or between international organisations,¹⁶⁹ as they fear being forced into positions they do not agree with or where internal deliberations take more time. Transparency in the objectives of the collaboration would address that concern.

3.7 Summary

The above discussion shows how the CSDP can and should adapt to the changed security environment to retain and enhance its effectiveness on the ground as climate change affects the environmental operating conditions and the security environment in various complex ways. There is a clear case for the EU to engage earlier, more long-term and through better intelligence, with amended mandates to address the underlying root causes of conflicts, some of which are aggravated by climate change. At the same time, such action would also have a preventive or mitigating effect on climate change by preserving habitats and forests. Similarly, investing in research about and procurement of more energy sufficient defence equipment can improve the operational effectiveness of the armed forces and decrease their currently significant carbon footprint.

The EU is well-positioned to work with local and international partners to enhance awareness, build support and set a good example. It also needs to learn from those states and organisations that have started to change their approaches, concepts, guidelines, plans and, crucially, spending to advance innovative solutions. With NATO announcing climate change as a priority for its work, there is a significant opportunity and need for closer collaboration between it and the EU. Further, support from and for local partners and stakeholders, including unusual ones such as foresters or rangers, will be crucial. The EP with its own regular contacts with parliamentarians from third countries and parliamentary assemblies is well placed to contribute to raising awareness, diffusing good practices and devising innovative solutions, as well as bringing them back home. At the same time, the success of attempts to advance and indeed mainstream this agenda will depend on taking differences in risks and threat perceptions within Europe seriously. These include mandate overstretch, existing problems with force-generation for CSDP missions, out-of-area versus territorial defence priorities and different starting points in the modernisation of armed forces.

4 Recommendations

The analysis shows that the cost of not making the adjustments to CSDP now are high as future missions and operations might be launched too late to prevent the loss of life, entrenched community polarisation or environmental degradation with planetary-wide effects. CSDP missions might have to stay longer or return sooner to host countries because root causes of conflicts are not adequately addressed in the mandates, actions and resources. Missions may prove ill-equipped for the more extreme environmental conditions they are facing and, as a result, lose effectiveness and put the lives of deployed staff at greater risk. If CSDP declines to fully take on board climate issues then its missions will struggle to achieve their stated objectives in the realms of security, counter-terrorism, counter-insurgency and stabilisation. Conversely, significant opportunities could be realised through CSDP missions that work better with local partners and international partners and set a good example for how to reduce GHG emissions and operational costs, drive technological innovation, and increase agility and resilience.

The precise implications of climate change for CSDP missions on the ground are likely to differ significantly between countries and regions. They ought to meet local needs as well as be based on

¹⁶⁹ Interviews with EU officials in Delegations and CSDP civilian missions, 18 February 2021 (Interview 4), 19 February 2021 (Interview 6).

the best available evidence on climate change and the risks it creates. The EU will want to focus its reflections not only on regions where it is already engaged through its missions on the ground through its development and humanitarian aid policy but also where security and defence concerns are likely to intensify in the future. The following guidelines should be followed across three areas, related respectively to the CSDP military dimension, possible areas of civilian contribution, and the need for more decisive political leadership behind the CSDP. These should be read in conjunction with more specific and operational ideas, suggestions contained in the main body of this report and with governments' other recent strategy documents.

4.1 Measured and evidence-based military aims and planning

A preventive approach to mitigating climate change is more cost-effective than relying solely on reactive crisis management approach through launching short-term CSDP missions and operations. More preventive engagements are needed rather than just ex-post disaster relief or dealing with some of the indirect consequences of intensifying resource-conflicts such as jihadist groups and organised crime. The military can and must make a contribution to achieving this objective both through the way it operates when it is deployed, but also by reducing its carbon footprint. A good approach is to start with preventive actions on a small scale that deliver tangible benefits quickly, enables learning and subsequent scaling-up, instead of relying solely on large-scale and longer-term actions that may take a long time to deliver on and could run into difficulties.

Beyond the Roadmap and CSDP missions, a major political commitment is still needed to ensure the military contributes to the Green Deal and achieving 'zero carbon' by 2050. This will require action by military planners and also overarching guidance from the EEAS, as well as strong commitment from EU Member State governments to act at home, as this is where most of the funds, capabilities and emissions are. The role of the military needs to be nested within the need for a far-reaching economic transformation and rethinking of EU international relations, and not limited to operational adjustments to CSDP missions in theatre. For instance, will European states push for discussing this topic and setting ambitious targets for adapting the military sector at the forthcoming UN Climate Change Conference (COP26)?

Climate security needs to be a higher-level and more operational EU external priority, but the EU should also avoid 'overselling' climate as a hard security threat. In most cases, climate is not currently the main driver of conflict and some cases where it has been claimed (Lake Chad) do not bear this out – this conceptual over-stretch risks weakening support among military and other security professionals. The EP should play an assertive role both in pushing for military adaptation and in reining back any over-securitisation of the climate agenda.

The aim of 'greening the military' is key, but it needs to be approached with care. With scepticism still evident in many Member States, the EU – the EEAS, PESCO initiatives, the EDA and the Commission leadership – should seek to drive change across member forces by highlighting the benefits of 'greening' for capability enhancement, technological innovation, cost-savings over the lifetime, infrastructure resilience, risk mitigation, training and recruitment, as well as for wider reputational and legal concerns (i.e. rather than framing 'greening' as an ethical imperative). In some instances, this could include demonstrating how green initiatives can lead to savings in some areas (e.g. energy, food and waste disposal costs) that can then be reinvested in mission-critical activities or infrastructures. In other instances, it may require starting small, by concentrating on climate-proofing new equipment/capability demands and integrating climate change concerns into all planning at the EU level and involving different EU bodies. Even in the medium term, the EU could support the use of existing military equipment to monitor environmental stressors and prevention

of conflicts between local groups. In devising a step-by-step process of change and upgrading the roadmap in terms of ambition and scale, the EU must be attentive to the risk that climate change could drive a wedge between those Member States looking at threats from the south, such as migration and piracy, and those looking at threats to their territorial sovereignty from the east.

The EU needs to be conscious that defence budgets are under pressure and existing capability shortfalls are severe. Over the long term, the EU must ensure that mainstreaming climate into CSDP mandates and planning does not reduce effectiveness on the ground but, on the contrary, increases efficiency and operational effectiveness. The 'mission first' principle and realism in terms of troop deployment is needed. Furthermore, it is important to identify and prioritise those areas as well as countries and regions where adaptation is most urgent and where greater sustainability and self-sufficiency can be achieved relatively quickly and with moderate cost. The CSDP should avoid 'mandate stretching' without additional resources and sufficient planning, as this can quickly undermine local trust and support.

While there are things that the CSDP and militaries can do on their own, it cannot be emphasised enough that the EU and Member States need to develop a working and well-resourced civilian emergency and disaster management architecture for the expected increased use at home. Otherwise, the military will be drawn into crises that it is not well-equipped for, with all sorts of problems resulting, including in civil-military relations. More thinking is needed on CSDP roles in climate security short of military intervention, for example in cooperation with non-state actors and disaster relief bodies.

The EU needs to support or even host with other organisations and partners exercises and war games at the EU level for cases of major disasters arising from more frequent and severe hurricanes and flooding. It will also need to consider and plan for the direct and indirect military and geopolitical implications of the risk of the Atmosphere-Ocean System crossing the tipping point towards reaching a new state, thus triggering critical and irreversible changes, for instance, in the direction of the Gulf Stream.¹⁷⁰ The pandemic has taught us that the EU and Member States need to be prepared for those events and implement systematic reviews to ensure the right lessons are identified, actually learnt and not forgotten.

4.2 Broadening CSDP climate engagements

Climate change will require the CSDP missions and operations to engage with more actors and require new expertise for this engagement, particularly around the agenda of environmental crime and policing, local governance and forestry. In parallel, it will require CSDP's civilian dimensions to prioritise climate factors, with a closer synergy between civilian and military instruments. The Commission's various units running cooperation initiatives on the ground will need to take lead role here. They should prioritise such changes as both medium- and long-term objectives. This is an issue to which the EP has paid particular attention in the past, with suggestions for concrete steps to incorporate climate factors into CSDP and wider EU conflict prevention and peace-building strategies.¹⁷¹ It could build on this work and take stock of the recent research on climate change risks to provide further suggestions on how EU could use its new single funding instrument for development, international cooperation and neighbourhood policy (NDICI) to better target the security-related causes and consequences of climate-stress. The whole rationale of creating a single instrument lies in articulating such linkages between different thematic and geographical

¹⁷⁰ Heise, R., '[NATO is responding to new challenges posed by climate change](#)', 1 April 2021.

¹⁷¹ European Parliament Committee on Foreign Affairs, '[The role of the Common Security Defence Policy in case of climate-driven crises and natural disasters](#)', 2012.

challenges, including climate change and wider ecological stresses. This is not to call for any undue securitisation of aid. Rather, it should mean exploring how and where the CSDP can promote human security in climate adaptation projects with EU funds in third countries.

Multiple interviewees lamented that this remains an untapped area of potential for EU interventions on the ground in many climate-stressed states. Interventions could more fully leverage existing equipment and capabilities to monitor areas where climate stressors are contributing to conflict and migration. Their technical capabilities should also be strengthened to carry out tasks like measuring environmental quality, local air and water pollution, and sharing the data publicly. This would make visible the impact of climate change and environmental malpractice to partner governments and provide them with justification for possible interventions to curb environmental crimes.

The scale and breadth of EU climate funding is undoubtedly a strong point of the EU's external action and a vital contribution to the climate security agenda. However, such funding represents a relatively indirect approach to security and would benefit from being joined up in more seamless ways with CSDP contributions. The EU's integrated approach is meant to use all funding instruments – be that the NDICI, the European Peace Facility outside of the EU budget or others – in a consistent way that links the EU's various policy goals together. As the EU moves forward in its new operational concept, there remains scope for improvement in integrating security, climate, governance and development funding more fully. The many different Commission and EEAS units responsible for such funding need to pull together and set this as a long-term priority, with intermediate indicators of progress also established for the medium term, and the EP should work to hold them to these indicators. One key area for attention is how EU funding for new technologies and infrastructure could alleviate or even prevent resource conflicts in the most vulnerable regions, particularly over access to water.

Security forces need to be attentive to efforts to build robust governance structures at local levels around resource management, projects designed to enhance societal resilience and the power dynamics of community climate-adaptation programmes. These are areas where collaboration between EU Delegations and Missions could be strengthened, for instance by providing civilian actors with better protection from hostile local actors. The CSDP should incorporate support for dispute resolution mechanisms over natural resources between local groups, as these represent a source of instability with potential for widespread violence.

In the longer term, the CSDP might explore how it can help fuse together these 'soft security' and 'hard security' assets in ways that give the EU's huge amounts of climate funding more political resonance. When the EU invests large amounts of aid in renewable projects like solar power plants, it can often have far-reaching impacts on local political balances and social issues, with security challenge implications. It would therefore be beneficial to have integrated security expertise as part of these projects. The recently created Peace Facility has attracted headlines for introducing a mandate for military funding, but it could have an especially important leading role in overseeing this soft-hard security nexus in relation to climate factors – this could be a particularly innovative way in which the new facility could make a distinctive mark.

It is also at this level that the HR/VP, with support from the EP, might most usefully strengthen coordination with other bodies like the United Nations and NATO on climate issues, for example by setting up with NATO a protocol for collaboration on clearly defined deliverables within the scope of climate and security. The urgent need to improve EU-NATO cooperation and clarify the division of labour between the two organisations, given their large and shared memberships, has been heightened by the pandemic. As both organisations rework their threat assessments and strategies and offer some complementary capabilities and instruments, the HR/VP and the EP should help to

push Member States to adopt mutually supportive and compatible positions in terms of organisation and processes. This needs to happen in the short to medium-term and not simply be stated as an imprecise long-term goal.

4.3 Political support and leadership

The Climate Change and Defence Roadmap represents an important step forward. It can rightly be considered a major advance to move from rhetoric to practice on climate security. However, it focuses only on selected aspects of CSDP operations, capability and efficiency, rather than elaborating how climate concerns should be reflected in EU external action more broadly or operationalising the EU's Green Deal commitments for peace, security and human rights. It is also silent on the controversial issue of setting targets for adjusting national armed forces. The operational concept currently being developed within the EEAS may help to mainstream climate factors into EU foreign, security and defence policy, but it will require input and scrutiny from the relevant players, including the EP, particularly its committees on Foreign Affairs and Environment, Public Health and Food Safety. Moreover, the full implementation of the Roadmap will rely on sufficient support and leadership, and this currently remains at a lower level than fast-expanding EU defence-related commitments such as PESCO. We have heard repeatedly that levels of awareness and support for such mainstreaming is still uneven among Member States.

To reach this objective will require sustained and broad leadership support over the long term from within EU institutions and the Member States. This concerns particularly the HR/VP who endorsed the aspirations and the Roadmap but could do still more publicly to elevate this issue and invest in better coordination within the Commission as the Chair of the Group of External Coordination (EXCO), Head of the EEAS and Chair of the Foreign Affairs Council. Given the huge amount of work involved, the HR/VP should appoint a senior person from the EEAS dedicated to championing efforts in this area and bringing together the major players outside the EEAS, such as DG Defence Industry and Space, the EDA, DG CLIMA, DG ECHO. The HR/VP or delegate could play a crucial role in ensuring that basic consensus expressed by the Council of Ministers is translated into real ownership and concrete commitments among Member States.

The EP has through its own initiatives and actions made an impact on the evolution of the CSDP, for instance through its support for the setting up of a DG Defence and the European Defence Fund,¹⁷² and through its resolution on Climate Diplomacy in 2017.¹⁷³ The EP could inform, support and scrutinise this process through, for instance, launching an own initiative report on this issue in which it could set out the strategic aspirations, with a step-by-step, realistic and evidence-based approach to the risks and opportunities that climate change brings to security, defence and foreign policy. Here, the EP needs to set out concrete medium-term milestones towards longer-term EU aspirations. Building on previous resolutions on EU-African security cooperation in the Sahel region and the Horn of Africa,¹⁷⁴ the EP can contribute through awareness-raising and building political support at Member States for climate-proofing the CSDP and defence more generally. It can also ask EU institutions and Member States to use their influence at the international level to push for states' commitments to structural adaptations of the military sectors, for instance, at the forthcoming COP26 conference in Glasgow. And finally, it could use its membership of international parliamentary networks, its delegations and delegation visits to identify and engage with legislators

¹⁷² European Parliament, '[Resolution of 13 December 2017 on the annual report on the implementation of the CSDP](#)', 2017/2123(INI), 2017.

¹⁷³ European Parliament, '[Resolution of 3 July 2018 on climate diplomacy](#)', 2017/2272(INI), 2018.

¹⁷⁴ European Parliament, '[Resolution of 16 September 2020 on EU-African security cooperation in the Sahel region, West Africa and the Horn of Africa](#)', 2020/2002(INI), 2020.

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working on similar questions of security and defence, defence procurement and planning, and management of complex emergencies and disasters.

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Appendix: List of interviews

Interview 1	EU Delegation	5 February 2021
Interview 2	EU Delegation	18 February 2021
Interview 3	EU CSDP mission	18 February 2021
Interview 4	EU Delegation	18 February 2021
Interview 5	EU CSDP mission	19 February 2021
Interview 6	EU Delegation	19 February 2021
Interview 7	EU CSDP mission	26 February 2021
Interview 8	EU Delegation	26 February 2021
Interview 9	European Commission	9 February 2021
Interview 10	EEAS	9 February 2021
Interview 11	European Commission	15 February 2021
Interview 12	EEAS	15 February 2021
Interview 13	EEAS	12 February 2021
Interview 14	EEAS	18 February 2021
Interview 15	EEAS	23 February 2021
Interview 16	EEAS	23 February 2021
Interview 17	EEAS	5 March 2021

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