PERSPECTIVE

CLIMATE CHANGE, ENERGY AND ENVIRONMENT

CLIMATE SECURITY AND EUROPE

What are the direct and indirect consequences of climate change?

Anselm Vogler and Martin Webeler
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Climate change poses one of the key security risks for people in Europe and around the world.

This perspective discusses the repercussions of the Russian invasion of Ukraine on climate policy and on political efforts to achieve climate security.

International cooperation on climate adaptation and an integrated policy approach are imperative for promoting peace in Europe and ensuring climate security, smart political communication, and ambitious reductions in emissions.

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CLIMATE SECURITY AND EUROPE

What are the direct and indirect consequences of climate change?

The most recent IPCC Assessment Report clearly identifies the serious consequences climate change will entail. The concomitant security implications are being discussed in many areas, for example in international forums such as the G7 and at the Munich Security Conference. Climate change jeopardizes human security in Europe, too, as water shortages and extreme weather endanger food production.

Security risks stemming from devastating forest fires, heat waves and rising sea levels are on the rise. They threaten people, cities, infrastructures and industries. This paper summarizes the state of research on these and other direct consequences of climate change for security in Europe. It examines possible indirect effects of climate change on migration, conflicts and the geopolitical dynamics in the Arctic. A separate chapter discusses the impact of the Russian war of aggression on climate goals, disaster prevention, environmental protection and food security.

This paper then summarizes the main measures taken at the level of the European Union in climate security and concludes with recommendations for political communication, emissions reduction, adaptation to climate impacts and peacekeeping climate and development policy.

For more information on this topic go to:
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What is climate security? What are the likely direct and indirect effects of climate change for Europe? What impact will Russia's attack on Ukraine have? What measures has the European Union taken so far and what action is needed?

This paper provides answers to these questions.[1] It underlines the central importance of climate security for policymakers to maintain agency in the future. The report discusses the risks and opportunities present in German and European climate security policy. It provides an overview of current developments and offers an introduction for political decision-makers who want to pursue the climate-sensitive security policy that is urgently needed to protect people and life on earth in the long term. Climate change and climate security are among the major issues of our time.

1 The authors would like to thank Ursula Schröder, Delf Rothe, Nicole Katsioulis and Meike Roth for their helpful suggestions and input.

1

CLIMATE CHANGE AND SECURITY

According to the representative "Politbarometer" survey conducted by *Forschungsgruppe Wahlen*, 32 percent of respondents in April 2022 named the issue of environment, climate/energy transition as the most important problem facing Germany at present (*Forschungsgruppe Wahlen* 2022). A Eurobarometer survey carried out in 2021 found that 78 percent of EU citizens consider climate change to be a "very serious problem" (European Commission 2021). These considerable results were obtained despite the ongoing Corona pandemic and even the Russian war of aggression against Ukraine. This emphatically underlines how climate change and its consequences have consistently remained a high priority among the German and European public. In political practice, climate policy is more central than ever. Germany's current Social Democratic-led government is the first to have created a federal ministry portfolio to include "climate policy" in its title. This new shift also has clear European and foreign policy implications; for the first time, German Vice Chancellor and Federal Minister Robert Habeck has combined climate and European policy in a single ministry. In the Foreign Office, the term "foreign climate policy" was added to the title of Department 4. In her speech at the kick-off event for the process of developing a national security strategy, German Foreign Minister Annalena Baerbock named ensuring the natural foundations of life as one of three central pillars and described climate change, after the start of the Russian attack, as "the security policy issue of our time." The German Federal Ministry for Economic Cooperation and Development led by Svenja Schulze supports the setting of ambitious climate targets in emerging and developing countries through its NDC partnership[2].

Statements issued by key scientific and political organizations have also devoted a great deal of attention to the consequences of climate change. In February 2022, Working Group II of the International Panel on Climate Change (IPCC) published the report "Impacts, Adaptation and Vulnerability" (IPCC 2022). The IPCC reports regularly summarize worldwide scientific findings on climate change and its consequences. The new report identifies existential damage caused by climate change, both as a result of extreme weather events and of gradual environmental change. An estimated 3.3 to 3.6 billion people worldwide live in areas that are highly vulnerable to climate change (IPCC 2022, p. 16). Among other things, they face the threat of losing their homeland and economic livelihoods, for example due to flooding or desertification, as well as the danger of infectious diseases becoming endemic in new areas due to global warming. Climate change was also center stage at the 2022 Munich Security Conference (Munich Security Conference 2022a). The current Munich Security Index was published in February 2022. The index surveys risk perceptions among populations of the G7 and BRICS countries. With the exception of the Chinese population, a majority of respondents in all countries expressed concern for climate change, extreme weather events and forest fires, as well as ecosystem destruction (Munich Security Conference 2022b, p. 36). The G7 is also increasingly positioning itself to promote ambitious climate protection policies. At a meeting of G7 foreign ministers on 13 May 2022, they jointly expressed their concern at the devastating impact of climate change and the resulting loss of biodiversity on international peace and stability (German Federal Foreign Office 2022).

2 Nationally Determined Contributions (NDC) are climate policy pledges presented by states parties to the Paris Climate Accords.

How should climate security be defined?

Scientists and policymakers use the term "climate security" to refer to climate change impacts, which we define in this text as safety and security from the destructive consequences of climate change. This also includes defending against the impacts of already unavoidable climate change.

Of central importance here is how "safety and security" are defined. Whose safety and security are at stake? What are safety and security to be protected from? And by what means? These definitions are highly consequential for understanding and addressing climate security, therefore also making them deeply political. A climate policy rooted in democracy and human rights should prioritize human security. The temporal and causal impacts of natural disasters and slow-onset processes such as desertification and the loss of economic livelihoods, decisions to leave a region that has become inhospitable, or an individual's involvement in a conflict are always felt first at the individual level. Human responses to climate impacts set processes in motion that could prove relevant to state security. Therefore, smart policies aimed at preserving peace and natural livelihoods must first focus on the causes and direct consequences of climate change to ensure human security rather than just addressing its spillover effects. Human security places the individual at the center of security policy decisions. Sustainable access to education, work and shelter, protection from hunger, disease and discrimination, and a life in dignity constitute key factors.

Moreover, a policy geared towards solidarity and justice must frame climate security in planetary terms. The direct and indirect consequences of climate change affect fragile states in the global South with particular severity. At the same time, indirect climate impacts triggered by climate change are of global relevance. When climate change prompts a rise in international migration or contributes to geopolitical tensions in a thawing Arctic, it affects countries far beyond the original impact site. This means that climate security should necessarily prioritize the global security of individuals and groups over the conventional security of territories and national interests.

Furthermore, ensuring human security substantially contributes to ensuring national security. Human security deficits within communities that are perceived as unjust create opportunities for conflict parties to ignite domestic conflicts. Sustainable climate security policy must therefore focus on ensuring human security worldwide. The goal is also to guarantee human security across generations; consequently, policies must include the sustainable protection of the natural foundations of human life.

2

DANGERS FOR CLIMATE SECURITY IN EUROPE

Climate change is already threatening human security, in Europe as well. European ecosystems on land, in freshwater systems and in the adjacent seas are subject to profound climate-related changes. Europe's citizens, economies and infrastructures are increasingly experiencing extreme weather events, including prolonged droughts, forest fires, heat waves and flooding. More than 130 people tragically lost their lives in Germany in the 2021 flash flood in the Ahr valley alone. According to estimates, the cost of the damage came to EUR 33 billion, with flash floods in neighboring countries adding another EUR 13 billion (Dpa-afx 2022). It is methodically difficult for the still young field of attribution research to attribute such individual weather events to climate change, and the harmful effects stemming from natural disasters always depend on preventive and reactive disaster control measures on the ground. One study determined that the likelihood of a heavy rain event in the Central European region was 1.2 to 9 times greater than in a world that was 1.2° Celsius cooler, in other words in a hypothetical world without climate change (World Weather Attribution 2021). This wide range shows the significant challenges attribution research faces. However, climate researchers believe that climate change will make extreme weather events more frequent. The European earth observation program Copernicus reports that the ten years with the highest average temperature since recordkeeping began have all occurred since 2000. Rising temperatures are exposing European populations to increasing heat stress in the summer months, and the German Federal Environment Agency has warned of increased heat-related mortality (Umweltbundesamt 2022). The European Environment Agency (EEA) stated in a 2021 report that currently an average of 30 percent of the population in Europe suffers from drought and water shortages. The agency expects droughts to increase even more in the future (European Environment Agency 2021a). In a report published in 2019, the EEA highlighted the predominantly negative effects of climate change on agriculture, citing rising food prices as a risk (European Environment Agency 2021b). Moreover, drought, forest fires, storms, and the bark beetle are damaging forests across Europe (Lindner & Verkerk 2021). In the summer of 2021, devastating forest fires occurred in Greece, Italy, and other countries in southeastern Europe. Heat waves and droughts are important drivers of these fires and are becoming increasingly frequent in the Mediterranean region due to climate change (IPCC 2022). This not only makes environmental protection challenging, but also endangers forests' climate-relevant abilities to purify air, store fresh water and capture greenhouse gases, as well as to function as an economic factor.

Climate change also has indirect effects on European security in addition to these direct impacts. These second-order consequences are effects that are not directly caused by climate change, but stem from other causes that are themselves attributable to climate change. Three of these effects have received widespread public attention in the last decade. First, there is the idea in the public discourse that the effects of climate change could trigger large migration movements from the global South to Europe. Second, there is concern that resource scarcity or climate-induced migration could cause or exacerbate intra-state conflicts. Third, there are fears of possible tensions between Arctic states over newly emerging shipping routes and newly accessible mineral resources.

Indeed, geopolitical tensions in the Arctic also impact the EU. Climate refugees and conflicts over resources, on the other hand, are found less in EU Member States than in fragile states of the global South. Very few refugees currently reach the global North. Climate refugees are also mainly limited to a given region, and the situation can result in suffering and conflict in affected areas. At the same time, migration is an important adaptation measure for people to escape areas that have become uninhabitable. In the worst-case scenario, however, populations may suffer from involuntary immobility, i.e. when they want to leave their homeland, which climate change has rendered uninhabitable and dangerous, but lack the necessary means to do so. However, this does not make this aspect any less relevant for European climate security policy. On the contrary, this makes the EU, as the world's third largest emitter of greenhouse gases, an exporter of climate insecurity. If more pronounced climate change endangers human security worldwide, then this is also a consequence of the actions of EU Member States.
Academic research on these three interconnected aspects has made great strides in the last decade and has shown that there are no simple deterministic links between "climate change" and migration, conflict or geopolitical developments. Instead, multiple intervening factors determine whether and to what extent the biophysical impacts of climate change will directly affect human coexistence and what indirect social dynamics will emerge as a consequence. Even

now, as global warming is already happening, limiting further climate change by ambitious political action can help prevent climate-related insecurity.

Also part of the discussion is the link between climate impacts and conflicts, in addition to its effects on migration patterns. However, researchers agree that while climate change by itself does not cause conflicts, it can intensify existing disputes. This is especially true for intrastate conflicts in emerging and developing countries with weak governance structures (Brzoska 2018; Ide et al. 2020). In some cases, extreme weather events sometimes contribute to intensifying or prolonging these problems, but in other cases to mitigating or putting an end to them. This means that conflict risk caused by extreme weather only increases in certain cases. For example, drought appears to increase conflict risk only for populations dependent on crop or livestock production (von Uexkull et al. 2016). One study demonstrated that extreme weather events increase the risk of armed conflict when there is ethnic exclusion and low levels of development in the affected region and the state has a large population (Ide et al. 2020). New conflicts rarely break out after extreme weather events. However, existing conflicts can sometimes escalate (Brzoska 2018; Buhaug 2018). In such a case, a causal relationship is plausible, but in most cases cannot be clearly demonstrated. Conflicts can be intensified, for example, by creating opportunity structures for conflict parties. For example, the Islamist terror group Boko Haram initiated its violent attacks on the Nigerian security apparatus after an extreme weather event had previously worsened Nigeria's economic situation in another part of the country (Ide et al. 2020, appendix 2, p. 5). When natural disasters weaken one party to a conflict, other conflict parties might seek to exploit the opportunity. This has been true for rebel groups and governments alike (Eastin 2016; Ide et al. 2020).

The evidence on the links between food prices or resource scarcity and collective violence is similarly complicated (Brzoska 2018). Rising food prices increase the risk of conflict, especially the risk of protests and riots, which, however, only rarely escalate into armed conflict. Moreover, these protests mostly stem from other underlying causes (Buhaug 2018). Overall, climate impacts such as environmental degradation and resource scarcity tend to lead to low-level violence and less frequently to armed conflict (von Uexkuell & Buhaug 2021).

Natural disasters not only have a direct impact on the economic underpinnings of states, but also put social and political institutions under stress, leading to the disruption in the provision of public goods and the erosion of trust in governments and civil society organizations. At the same time, however, opportunities open up for creating new institutions, bringing about changes in government or enabling greater political participation. Whether institutions are strengthened or weakened by natural disasters often depends heavily on the interests of leading actors. This again demonstrates how important political-institutional aspects are in the climate-conflict nexus (Brzoska 2018). These findings show that conflicts are currently not caused by climate, but rather by a lack of political goods like inclusion, representation, rule of law, minority protection, and an ability to meet basic economic needs (Buhaug 2018). Climate security policy should aim to strengthen the resilience of local populations and support their climate adaptation, promote sustainable and inclusive economic development, and foster good governance (Barnett 2019; Buhaug 2018).

A third prominent aspect in the debate on indirect impacts of climate change on security involves future dynamics in the Arctic. Due to rising temperatures, Arctic ice cover is thawing and large regions of the North Polar Sea are opening up. This development can be exploited economically because the Northwest and Northeast Passages offer shorter and piracy-free shipping routes connecting Europe and North America with Asia. In addition, extensive gas, oil, mineral, and rare earth resources are located in the region (Umweltbundesamt 2016). The United States Geological Survey estimates that the Arctic contains 13% of the world's untapped conventional oil and 33% of its natural gas resources. China has announced plans to include an Arctic route in its Belt and Road Initiative and started referring to itself as a Near-Arctic State (Yang, Flower & Thompson 2019). Russia, along with Canada, has one of the longest Arctic coastlines and has been economically and militarily active in the region for some time (Brzoska 2012).

Despite fears, the Arctic remained peaceful (Klimenko 2019) and potential for cooperation still exists despite competing interests of neighboring states (Nicol & Heininen 2014; Kari 2021). However, the war in Ukraine may now be causing a shift. The Arctic Council was recently suspended for the first time in its 26-year existence in response to the Russian attack (Gricius 2022; Bloom 2021). Arctic developments are relevant to security because growing commercial development increases the risk of shipwrecks and oil spills as well. The possible exploitation of the considerable Arctic oil and gas deposits would have even more dramatic consequences. This would put an additional strain on the environment, already affected by melting ice, and could ease scarcity-induced pressure for action on energy transformation for a considerable period. Fortunately, it is currently not profitable to exploit raw material resources located in this inhospitable environment. These factors prompted Royal Dutch Shell to end its extensive Arctic program in 2015, and Western sanctions have also put a stop on Russian programs, which do not expect economic exploitation to begin before 2035 (Carayannis, Ilinova & Cherepovitsyn 2021). However, current tensions have led to spiking world market prices and new debates about supply security. It would be fatal to climate security and the EU's long-term supply independence if these resources were to be exploited for short-term supply security.

3

EUROPEAN CLIMATE SECURITY POLICY

Climate change affects state security in various ways. This is why climate security has now been firmly established as a policy objective at the European level, like in other regions of the world (Bremberg, Sonnsjö & Mobjörk 2019). For well over a decade, high-level actors in the European Union have been considering security implications of climate change. As early as 2003, the European Security Strategy identified climate change as a security issue. In 2008, Javier Solana, then Secretary-General of the Council of the European Union and High Representative for the Common Foreign and Security Policy, published the report "Climate Change and International Security", in which he described climate change as a "threat multiplier". This concept assumes that climate change amplifies existing trends and tensions, and threatens to overwhelm fragile states (European Commission 2008). In 2011, the EU launched its *Climate Diplomacy Initiative*, which resulted in the European Commission's *Climate Diplomacy Action Plan* in 2015, which was strengthened in 2018 (European Commission 2018). The European Green Deal, proposed by the European Commission in late 2019, reiterated warnings of climate impacts as a threat multiplier and announced stronger international cooperation aimed at boosting resilience to environmental and climate impacts to prevent conflict, hunger, and displacement. In 2021, the European External Action Service (EEAS) published the Concept for an Integrated Approach on Climate Change and Security (European External Action Service 2021) and the *Climate Change and Defence Roadmap* (European External Action Service 2020).

The EU Commission and a number of its Directorates-General (DG) play a central role in shaping the European Union's climate security policy. The Commission's high-level activities, such as presenting climate change as a threat multiplier, pursuing climate diplomacy at summits, and promoting the Green Deal itself, regularly help set the agenda. It also offers financial support for climate finance initiatives in emerging and developing countries. Commission institutions are directly involved in SWITCH to Green, the initiative for a green, inclusive economy, and in *Global Climate Change Alliance Plus*, the initiative to promote cooperation with developing countries (Switch to Green n.d.; Global *Climate Change Alliance Plus* n.d.). In addition, several DGs are directly or indirectly involved with climate change or its security implications. A study conducted by the Swedish research institute SIPRI examined the activities of various directorates and identified different contexts in which they situate climate security. DG Climate Policy is particularly active in emphasizing the aspect of climate security. DG International Partnerships and DG European Civil Protection and Humanitarian Aid, on the other hand, tend to focus on the broader context of resilience and stability in which climate security is embedded. DG Defense Industries and Space, newly created in 2020, played an important role in writing the *Climate Change and Defence Roadmap* (Remling & Barnhoorn 2021).

The EEAS and its delegations are among the main European Union actors when it comes to climate security (Bremberg, Sonnsjö & Mobjörk 2019). Together with the Commission, the EEAS has been operating the *Conflict Early Warning System* since 2014, which incorporates climate-relevant aspects of water supply and food security (European Commission 2017). EU delegations conduct climate diplomacy in their respective sending countries and play a central role in implementing the *EU Climate Diplomacy Action Plan*. Activities vary markedly among delegations, due to different levels of networking with Brussels headquarters, existing individual expertise, and conditions in the host country (Biedenkopf & Petri 2019).

How well is European climate security policy working?

The EU institutions' activities have been eyed critically. First of all, there is valid criticism that the implementation of climate security policy has been too slow so far. The climate-related activities of the various EU delegations differ widely, apparently due to a varying degree of networking with Brussels headquarters, discrepancies in expertise, and unequal host country conditions (Biedenkopf & Petri 2019). Clear, country-specific priorities for the climate security-related activities of European institutions, on the other hand, seem to be lacking even after more than a decade (Youngs 2021). Moreover, the practical implementation of the ambitious plans appears to be progressing all too slowly. This phenomenon has also been referred to as the EU's last mile problem: Practical measures are taken rather on an ad-hoc basis, and the various EU climate security activities lack strategic coherence (Youngs 2021). Existing activities at operational level appear to be driven by motivated project managers rather than ambitious strategic leadership from Brussels (Brown, le More & Raasteen 2020).

Moreover, climate security is limited to an overly narrow section of EU activities. Discussions on climate security policy at the EU level highlight three deficits. A particular focus is on the unacknowledged, negative impacts that various EU initiatives have on climate security. For example, there is a dilemma in how trade policy incentives are designed. It is true that the climate policy ambitions of partner countries play an increasingly important role in trade agreements and development projects. However, the reward for ambitious partner countries is in turn the expansion of conventional trade, thereby undermining the partner country's climate policy ambitions. Moreover, the design of such conditionalities does not take into account the effects of climate policy measures on local and traditional living conditions in partner countries. This has already led to additional uncertainty on repeated occasions, so that EU policies sometimes even end up exporting climate uncertainty (Youngs 2021). A well-known example of such developments are palm oil imports from third countries. The palm oil is used as food, but also to produce biodiesel, for example. Although palm oil plantations are profitable, they are also very harmful to the environment. In addition, the use of palm oil for fuel competes with its use as food. Consequently, the EU decided back in 2018 to ban the blending of palm oil in biofuels starting in 2030. Another example is the EU Commission's financial support of the Central African Forest Initiative, which has been criticized for cooperating with violent local militias to protect environmental projects in African rainforests and ignoring the indigenous population's concerns about encroachment (World Wildlife Fund 2020). In response to these allegations, the EU halted financial support for the project in February 2020 (Survival International 2020). In sum, the EU's trade policy could be made even more sustainable and democratic and, above all, could be more strongly tied to social and humanitarian standards.

Another narrow view of European climate security policy is the frequent assumption that climate insecurity only occurs in fragile states of the global South and would be imported to Europe from there. This assumption is wrong for two reasons. First, it overlooks the direct effects that climate change has in Europe as well (see above). Second, this assumption also disregards the fact that climate-relevant policies within the European Union cause the export of insecurity (Remling & Barnhoorn 2021). This becomes particularly clear when considering European countries' greenhouse gas emissions. The EU's 27 Member States emit 7.5 percent of the world's greenhouse gases, putting them collectively in third place worldwide behind China and the US. As a result, the EU's ambitious reduction targets have still not kept it from currently significantly helping to fuel climate change, thereby endangering global human security. Incidentally this runs counter to its own interests, as it increases fragility risks and climate-induced displacement in the European neighborhood.

4

HOW HAS RUSSIA'S WAR OF AGGRESSION AFFECTED CLIMATE SECURITY?

On 24 February 2022, Russian President Vladimir Putin launched Russia's attack on Ukraine in violation of international law. However, climate change will not wait for peace to return to Ukraine. Consequently, the war therefore presents policymakers with the dual challenge of protecting Europe from both Russian aggression and the consequences of climate change. This is complicated by the fact that the funds now required for classic national and alliance defense cannot be used effectively for climate protection, and in some places even represent a hindrance. At present, the following aspects are emerging:

For the time being, it can be assumed that climate policy will remain on the political agenda. In his government policy statement at the special session of the Bundestag on 27 February 2022, German Chancellor Olaf Scholz emphasized that ambitiously promoting renewable energies not only benefits the German economy and the climate, but also contributes to supply security. The German government plans to increase funding for climate protection to EUR 200 billion by 2026. The EU Commission's *REPower EU Plan* published on 8 March 2022 also emphasizes how renewable energies help shore up supply security (European Commission 2022). If Russia extends the already enacted gas supply freezes for Poland, Bulgaria, Denmark, Finland, and the Netherlands to other countries, such as possibly Germany, this could, for example, delay the urgently needed phasing out of coal (Climate Analytics 2019). Therefore, it is important to utilize existing climate policy tools and implement the plans effectively, with the dual purpose of protecting both Europe's independence and the climate.

Secondly, the Bundeswehr (German Armed Forces) may be less frequently available for disaster relief in the future. Russian aggression has once again focused the Bundeswehr more on national and alliance defense. More than 2,300 troops were deployed in the wake of the flood disaster in the Ahr valley and at times as many as 20,000 provided administrative assistance during the COVID-19 pandemic. The conflict in Ukraine prompted the dissolution of the Bundeswehr's assistance contingent in March 2022. Strengthening civilian crisis response organizations, such as the *Technisches Hilfswerk* (Federal Agency for Technical Relief), is essential for being able to respond to more frequent extreme weather events in the future. This is important because rapid and effective disaster relief will mitigate the immediate security-relevant impacts of extreme weather events, which are growing more frequent due to climate change, and help prevent indirect security-related climate impacts, such as displacement and conflict. At the European level, in its report on the EEAS Roadmap for Climate Change and Defense, the European Parliament called on Member States to consider creating a military corps of engineers "for climate-related natural disasters and critical infrastructure protection in fragile countries" and for strengthening climate and environmental issues in the future CSDP (European Parliament 2021).

The war in Ukraine has necessitated equipment upgrades and a strengthening of the Bundeswehr. The conflict shows that, for the time being, a peace policy geared towards international and human security can no longer forgo defense capabilities. At the same time, however, global emissions caused by the military are considerable. Calculations suggest that armed forces are responsible for around 5 percent of CO2 emissions worldwide, including the arms industry. Mobilization in Russia, Ukraine and in large units of NATO member states is likely to further ramp up these emissions (Military Emissions Database n.d.).[3] Hard-to-avoid rearmament measures and stepped-up training will lead to increased emissions in production, maneuvers, and missions. This may prolong dependency on fossil fuel suppliers, thereby jeopardizing energy transformation. Nevertheless, some countries have begun to set reduction targets for their armed forces. The US Army, for example, has announced plans to go carbon neutral by 2050 (United States Army 2022). In Europe, Finland, France, the United Kingdom and the Netherlands are planning rapid emission reductions for their armed forces (IMCCS Expert Group 2020). As disarmament appears out of the question at present, European and German climate security policy should continue working towards reducing military emissions. The EU's Climate Change and Defense Roadmap has laid out this intention, but implementation is still pending (European External Action Service 2020). Setting similar reduction targets in Germany's planned National Security Strategy would constitute an important contribution to climate protection and a clear signal for a security policy that addresses climate insecurity at its source: Emissions.

3 In comparison, the global steel industry accounts for ca. 8 percent of CO2 emissions.

5

CONCLUSIONS

Engage in productive education efforts, avoid apocalyptic rhetoric.

Political communication about climate policy is central to building support for climate action. Alarmist portrayals of "resource wars" and "waves of refugees", however, divert attention from the problem's root causes and promote only short-term, self-serving protective measures that contribute nothing to addressing the progress of climate change. Political communication about climate-induced migration is particularly critical. This kind of migration is an indirect result of industrialized countries' fossil emissions and simultaneously serves as adaptation strategy of those population groups who are particularly affected. On the other hand, it is by no means the causal problem. If we want a value-oriented climate security policy based on international cooperation to succeed, it is imperative to point out these challenges without lapsing into overly broad descriptions of the problem, calling only for nationally oriented, conventional security policy measures. Climate security must be thought of from a planetary perspective and must be geared towards human safety and security.

Be more ambitious in implementing climate protection.

From the International Labor Organization to Oxfam and the World Bank, a large number of international governmental and non-governmental organizations are calling for more robust climate protection measures (International Labor Organization n.d.; International Organization for Migration 2021; Malpass 2021; Oxfam 2014; World Wildlife Fund n.d.). They rightly point out that climate change jeopardizes employment and livelihoods, threatens global food security, causes ecosystems to collapse and much more. A vast array of areas of human and non-human activities are affected by climate change. European climate security policy must address the root cause of these threats. It must set ambitious targets for emission reductions and step up its commitment in implementing them. Climate policy is peace policy.

Strengthening development cooperation - inclusive and climate-oriented.

Climate change has already increased the average global temperature by more than 1°C compared to the pre-industrial era. Emission reductions alone are already no longer sufficient to ensure climate security. Adapting to climate impacts is essential. The necessary steps go far beyond local nature conservation measures. A results-oriented, Europe-wide coordinated development cooperation is required to support local institutions in becoming more resilient, more inclusive, more reliable and more transparent, and therefore better able to cope with growing climate stress. An important focus will be on diversifying income opportunities in societies that rely heavily on agriculture. A fairer organization of world trade is also necessary. Utilizing established conflict resolution mechanisms will help manage conflicts. Practices can be made more sustainable by ensuring civic participation (local ownership) and tapping the experience of indigenous populations.

Benefiting from synergies between climate policy and peace policy.

Ambitious adaptation programs and resilience-building measures require a minimum of local stability. Many of the states particularly affected by climate change are fragile. Therefore, promoting peace is an important prerequisite for making climate security policy a success (Buhaug 2018). At the same time, environmental and climate policy programs and measures, for their part, offer potential for conflict prevention but also for the resolution of ongoing conflicts. The field of environmental peacebuilding is therefore receiving increasing attention both from academia and society (Conca & Beevers 2018; Ide 2018). Climate security and peace are mutually dependent. European climate security policy should take this into account and draw on insights gained from environmental peacebuilding for using resources peacefully and sustainably. This will promote both peace and climate change mitigation equally.

Act now!

The most important finding at this time is that good policy can still prevent many of the indirect negative impacts of climate change. Establishing a one-stop shop in the EU Commission for coordinating the cross-cutting issue of climate security would be another important building block (Youngs 2021; Brown, le More & Raasteen 2020). Overall, the challenges are diverse and daunting, and the necessary action is complicated. But we must act now, before we have irreversibly exceeded natural thresholds to the point where security policy is no longer effective (Buhaug 2018).

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