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Contrasting the US' and the EU's Approach to Climate Security

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Abstract

This paper examines the trend in the European Union (EU) and the United States (US) to frame climate change as a future security threat or 'threat multiplier'. Using the Copenhagen School's work on the securitisation of environmental problems as theoretical background, I contrast the American and European approach to climate security to clarify how the EU seeks to tackle the security implications of climate change. The focus is on the similarities and differences between American and European assessments of the urgency of climate change, its main security implications and possible security responses. The paper concludes that a securitisation of climate change has not yet happened in either the US or EU. This may be due to the lack of understanding among policy-makers of the causal links between the future impacts of climate change, political and social stability and violent conflicts.

About the Author

Geert De Cock studied law at the University of Ghent and holds an M.A in European Studies from the Catholic University of Louvain. Since 2006, he pursues a Ph.D. in the Department of Political Science at the University of Alberta. His doctoral research focuses on the EU's foreign policy in multilateral negotiations on climate change, its leadership role and the bilateral EU-China dialogue on energy and environment. His main fields of study are International Relations, Comparative Politics and Security studies. He has published on a wide range of topics, such as the EU Neighborhood Policy, the EU's approach to 'climate security' and recent developments in US foreign and domestic policy on climate change. Since 2008, he holds a Social Sciences and Humanities Research Council of Canada Ph.D. Scholarship.

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Introduction

Would former British Prime Minister Thatcher repeat the following quote made in 1982 in 2010? Referring to the Falklands conflict, she stated: "It is exciting to have a real crisis on your hands, when you have spent half your political life dealing with humdrum issues like the environment". Or would she reverse it and consider the battle for a tiny island in the South Atlantic an unwelcome distraction from climate change as "the greatest of challenges for the world", as current British Prime Minister Brown (2007) put it?

Climate change is happening and its impacts are being felt around the world. The last report from the Intergovernmental Panel on Climate Change (IPCC) (2007) states that there is clear evidence for a 0.7 degree Celsius increase in global temperatures over the last century. Scientists have become increasingly alarmed about runaway climate change (Adam 2009). Once average global temperature increases exceed more than 2°C, a 'tipping point' is very likely to be reached in the earth's climate system and large feedback loops will start to kick in. This is due, for example, to increased temperatures causing the ice sheets over Greenland and Antarctica to melt, resulting in less solar radiation being reflected back into space - as open waters absorb the heat better - in turn causing more ice to melt.

These effects of climate change are claimed to have security implications. Why? Less snowfall and melting glaciers increase the risk of drought for populations who depend on these runoffs for water. Climate change affects weather patterns, which in turn negatively impact food production. Rising sea levels can cause coastal flooding, which puts many of the world's major cities at risk. The combined effects of climate change will potentially lead to of the extinction of certain species, political and social instability, conflict and mass loss of human life (Hillman *et al.* 2007: 28). In

recent years, news coverage of hurricane-stricken New Orleans and the subsequent disastrous relief effort in 2005, and reports of raging forest fires in Australia in 2009, has helped worst-case scenarios gain credibility, including in Europe. Policy-makers are increasingly aware of the security risks linked to climate change and talk about possible 'dangerous' levels of temperature increases as a result of climate change.

Since the Kyoto Protocol was concluded in 1997, the science on climate change has developed considerably and the mitigation targets for dealing with climate change have become more precise: The negotiated emission decreases under the Kyoto Protocol will be wholly inadequate in averting runaway climate change and mitigation efforts will need to be stepped up. However, little progress on mitigation targets in the negotiations on a post-2012 agreement to replace the Kyoto Protocol has been made and a schism between developed and developing countries remains salient. After much wrangling, the 13th session of the Conference of Parties (COP) to the UNFCCC Convention (2007: 3) agreed upon the Bali Action Plan which indirectly sets the benchmarks for the mitigation targets that the Copenhagen COP will need to agree on:

> *"Recognizing* that deep cuts in global emissions will be required to achieve the ultimate objective of the Convention and emphasizing the urgency (1) to address climate change as indicated in the Fourth Assessment Report of the Intergovernmental Panel on Climate Change".

The footnote attached to this preamble refers to different tables and figures in a report of the IPCC, which boils down to the following conclusion: To have a 50% chance of making a 2ºC stabilization target, the Intergovernmental Panel on Climate Change (2007) recommends to cut global emissions by 50–85% relative to levels in 2000 by 2050. Global emissions would need to peak by 2015 and industrialized (or Annex I) countries would need to decrease their emissions by 25-40% below 1990 levels by 2020.

Apart from the continued focus on such mitigation targets during ongoing negotiations in the context of the UNFCCC, adaptation, defined as "adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities" (UNFCCC 2009), has also preoccupied policy-makers. Given that some degree of global warming is inevitable, policy-makers everywhere understand that populations and economies will need to adapt to a warmer climate. For example, the European Council (2009) concluded that adaptation is a necessary element in a Copenhagen agreement and has supported the creation of a Framework for Action on Adaptation as part of this agreement in order to increase

support for adaptation "in developing countries, until and beyond 2012, focusing on countries and regions that are particularly vulnerable to the adverse impacts of climate change". Such 'adverse impacts', like prolonged droughts and sea level rise, could also include potential political and social unrest, with knock-on security threats for the EU, such as violent conflict, disrupted supply routes, humanitarian crises, mass migration, etc.

'Securitising' climate change

Treating questions of energy and environmental policy as security issues is nothing new. There is a long tradition in International Relations literature of treating issues related to e.g. resource scarcity à la Malthus as challenges to national security in a geopolitical sense. This literature emanates mainly from the US, where it has been used to justify additional resources and instruments for the Department of Defence to deal with these new – environmental – threats. By framing environmental problems as a security issue, environmentalists hoped that such a tactical move to would result in two effects. First of all, such a 'securitisation' would elevate the environmental issue out of the normal day-to-day politics and inject a sense of urgency into the debate on environmental degradation, which is normally reserved for military and security threats. Secondly, linking environmental policy to American national security helps – particularly in the US – to legitimise a role for government interference in the free market, because "US military investment has functioned as a surrogate for industrial planning in a political climate where such things could only be justified in terms of providing for national security" (Dalby 1994: 31).

As environmental issues started to appear on the agenda of the multilateral organisations in the 1970s (e.g. the 1972 United Nations Conference on the Human Environment), security analysts joined other IR scholars in analysing the significance of the appearance of trans-boundary environmental problems on the international agenda of a world dominated by sovereign states. In his book *This Endangered Planet: prospects and proposals for human survival*, Richard Falk (1972) described the security threat resulting from the inability of an anarchic system of sovereign states to address global environmental problems. The end of the Cold War generated a renewed interest in environmental security among policy-makers and academics interested in charting a new course for foreign and security policy in the US and elsewhere.

The main focus of analysing possible links between the environment and security was to explain "environmental scarcity as a catalyst to violence" (Haas 2002: 6). The work of Homer-Dixon kick-started this research program. While his work has been much criticized as taking a narrow view of

the links between resource scarcity and violence, Homer-Dixon's research does warn against viewing violence resulting from environmental scarcity in isolation:

> "In other words, reduction in the quantity and quality of resource shrinks the resource pie, while population growth divides the pie in smaller slices for each individual, and unequal resource distribution means that some groups get disproportionately large slices. Unfortunately, analysts often study resource depletion and population growth in isolation from the political economy of resource distribution" (Homer-Dixon 1994: 9).

Unfortunately, all of these caveats were ignored in some of the subsequent research, popularised in the work of Robert D. Kaplan (1994), specifically 'The Coming Anarchy', which causally linked environmental degradation and violent conflict.

Among peace researchers of the Copenhagen School, there has been a reaction against an overly broad interpretation of the term security to also include non-military issues as security threats. In the introductory chapter of his classic book *People, States and Fear*, Buzan (1991) shows how scholars have concentrated their analytical focus on two concepts, power and peace, while leaving the concept of security under-developed. He objected, in particular, to interpretations of 'security' as a concept of 'national security', which closely linked military threats to the security of individual states and perpetuated the thinking about international politics as an endless struggle for power. Following this lead, Buzan, Waever and de Wilde (1998: 21) pursued the following central question in their research: What makes something a security issue at international level? Linking a specific international problem to questions of 'security' turns the problem into "an existential threat to a designated referent object". Traditionally, this was understood to be another state, but could also refer to a territory, society or environmental phenomena. Debates about security challenges are often linked to a question of survival, which helps justifying emergency measures to deal with the security threat in question.

To an extent, anything non-political can be politicised and ultimately become securitised. Securitisation can be studied through an analysis of a discourse that makes a securitising move, which displays a specific rhetorical structure: By labelling something as a security issue, an agent performs a speech act, lifting an issue outside the normal political realm and asking for authorisation of extraordinary measures (Buzan *et al*. 1998: 24-26). In contrast to 'normal' politics, with its cost-benefit analyses, a security issue requires extraordinary responses from governments equal in magnitude and urgency to their response to military threats. Such change in discourse is

not just a question of representation, but also has policy implications as it changes legitimate modes of engagement and facilitates more militarised responses to environmental problems.[1]

However, an issue can only be securitised if it is accepted as such by a relevant audience. While Realists hold onto a positivist, objective understanding of security threats, the Copenhagen School of security studies highlights that securitisation needs to be understood as an essentially inter-subjective process within a highly hierarchically structured field, where some have the power to speak about security and others do not: "National security should not be idealised, as it silences opposition to security policies and gives power holders the opportunity to exploit 'threats' for domestic purposes. […] Basically, security should be seen as a negative, as a failure to deal with issues as normal politics" (Buzan *et al.* 1998: 29-31).

In the same vein, Deudney (1990) warned that 'securitising' climate change carries considerable risks: It could lead to 'us versus them' thinking (e.g. blaming China for its coal-fuelled rapid economic growth) and militarised responses to the effects of climate change. Such trends are evidenced by Canada's reassertion of its sovereign rights over the Northwest Passage, which as a result of global warming is soon to be ice free, and its promise to build ice-strengthened armed patrol ships. Another example is Russia's planting of its flag at the North Pole, claiming it as part of the Russian land mass (Dyer 2008: 32-33).

However, the literature on environmental security shows that the process of securitisation with regard to environmental issues has rarely led to "mobilised exceptional measures or inscribed any enemies in any context" (Trombetta 2009: 133). De Wilde (2008: 596) emphasizes that a 'successful' securitisation of an environmental issue like climate change requires action on two levels: First of all, intersubjective agreement needs to be achieved (e.g. that climate change constitutes a security threat) and, secondly, resources need to be mobilised to provide a strategic answer to the threat of climate change. While it is easy to describe climate change as a security threat, military means and other defence capabilities are not easily mobilised against such a diffuse threat as climate change, because climate scientists remain uncertain about the regional and sub-regional impacts of climate change as well as about the likelihood and timing of dangerous 'tipping points'.

[1] Abrahamsen (2005) convincingly demonstrates this with regard to the 'War on Terror' discourse and a securitised approach to the underdevelopment of the African continent under UK PM Tony Blair. Other examples include the American-led 'War on Drugs' and 'War on Terror', which shifted the policy framework away from using diplomacy and the criminal justice system towards an increasingly militarised approach to trade in illicit drugs and international terrorism.

How does the EU approach the threats posed by climate change?

Already in 2003, the European Security Strategy identified the security risks related to climate change: "Competition for natural resources - notably water - which will be aggravated by global warming over the next decades, is likely to create further turbulence and migratory movements in various regions" (European Union 2003). The EU is far from the only international organisation to have explored the link between climate change and international security. While recognizing that the response to climate change cannot be exclusively military, NATO Secretary-General Rasmussen (2009) stressed that climate change has "potentially huge security implications". The United Nations Environment Programme (UNEP), the United Nations Development Programme (UNDP), and the Organization for Security and Co-operation in Europe (OSCE) launched a project, entitled the Environment and Security Initiative (2009), which seeks to facilitate an exchange between policy-makers in South Eastern, Eastern Europe, Central Asia and the Caucasus on this issue.

To provide a clearer picture of how the EU tackles the security implications of the impacts of climate change, this chapter examines the commonalities and differences in how the transatlantic partners – the US and the EU – tackle climate change by comparing the discourse used in recent key documents dealing with this issue. Much like the comparison of the American National Security Strategy and the EU's European Security Strategy by Berenskoetter (2005), the objective is to present a structured comparison of three dimensions of climate change as a security threat, namely (1) the urgency of climate change, (2) the main threats identified that flow from the impacts of climate change and (3) the responses deemed necessary to secure climate security.

Intimately related to this topic is the question of 'energy security', a concept that is quickly gaining ground in international politics (Conley & Philips 2005: 108). The EU's foreign policy is no exception to this development, particularly since the protracted Ukraine-Russia gas dispute in the last five years. While I recognize the close links that exist between the EU's foreign policy on climate change and its new focus on energy security, the limited space of this chapter is dedicated to exploring American and European approaches to 'climate security' *sensu stricto*, i.e. the threat of violent conflict and instability that could be prompted by the impacts of climate change. Suffice it to say: Linking climate security and energy security could be problematic, "since energy security is traditionally associated with national security and its logic, whereas climate security is supposed to promote a cooperative approach to global issues" (Trombetta 2009: 142). A pursuit of energy security will likely focus on bilateral agreements for a secure supply of energy rather than on

multilateral agreements like the UNFCCC and its preamble, which acknowledge the need for the widest possible cooperation by all countries to address climate change.

How urgent is the threat of climate change?

Particularly in the US, where environmental security as a concept has made inroads in the mainstream national security decision-making circles since the 1970s, climate change is the latest in a series of environmental problems to be presented as the next big threat to US national security, paralleling the inclusion of environmental problems such as acid rain or ozone depletion as security challenges at the end of the Cold War.

Even during the presidency of George W. Bush and its obstructive foreign policy towards global climate change negotiations, the Pentagon commissioned a study on "Abrupt Climate Change" which recommended elevating climate change to a national security concern. The authors of the study, Randall and Schwartz (2003: 4-5), explore a scenario of 'abrupt' climate change as a result of warming feedback loops:

> "Rather than decades or even centuries of gradual warming, recent evidence suggests the possibility that a more dire climate scenario may actually be unfolding. [...] While future weather patterns and the specific details of abrupt climate change cannot be predicted accurately or with great assurance, the actual history of climate change provides some useful guides. Our goal is merely to portray a plausible scenario, similar to one which has already occurred in human experience, for which there is reasonable evidence so that we may further explore potential implications for United States national security".

While the projections used in this report are not the most likely and rest on a pessimistic view of mankind's ability to stem or even reverse greenhouse gas (GHG) concentration levels in the atmosphere, these are plausible projections in the coming 15 to 30 years which challenge the notion of a society's ability to adapt.

Randall and Schwartz's exercise reframed the debate on climate security in two ways: First of all, most scenarios of future climate change impacts, as well as ongoing negotiations within the UNFCCC framework, had focused on the lack of resilient state structures in developing countries that could help their societies adapt to climate change (e.g. Kofi Annan & the Global Humanitarian Forum 2009). In contrast, Randall and Schwartz use the scenario of a sudden shutdown of the thermohaline circulation in the North Atlantic as a result of rising sea surface temperatures to

demonstrate the possible negative impacts for the US and Europe. This worst-case scenario warrants elevating climate change to a national security concern for advanced industrialised countries as well. Secondly, their exercise also had the effect of making the direst projections more accepted among mainstream policy-makers and academics in the US. Much of the information presented to American policy-makers starts from (or at least include) cataclysmic scenarios. For example, in Campbell's (2008) book *Climate Cataclysm*, a conservative estimate, based on IPCC figures, is supplemented with projections of a 2.6 or even 5.6 degree Celsius increase in average global temperatures. In such scenarios, preparations to simply adapt to a changed climate are no longer feasible, as weather patterns will change beyond recognition.

It should be emphasized that the models used by Randall and Schwartz are in fact becoming increasingly more plausible according to climate scientists (Monthly Review 2004: 10). Three reasons make a pessimistic outlook more realistic: First of all, climate scientists continue to refine their mathematical models to include recently observed trends. For example, the IPCC's projections in 2007 regarding sea level rise exclude future rapid dynamical changes in ice flow. This assumption has become outdated by the recent observation that ice sheets in Greenland and Antarctica are indeed melting and that the melted water is finding its way into the ocean, rather than refreezing on land. All experts consulted by Campbell (2008: 58-60) agree that the prediction in the IPCC's (2007) Fourth Assessment Report underestimate possible sea level rise and that "at least 1 meter of sea level rise by the end of the twenty-first century was plausible" as opposed to the IPCC's most pessimistic scenario of a maximum 59cm increase in sea level rise. Secondly, ambitious mitigation efforts in industrialized countries have either not materialized, as in the case in the US, or mitigation policies have not succeeded in reducing emissions that climate scientists say are required to avoid runaway climate change. For example, in its 2009 submission on behalf of the EU to the UNFCCC Secretariat, the European Environment Agency (2009: 8) stated that, in 2007, the reduction of GHG was 5% compared to the 1990 base year, which falls 3% short of the EU's overall 8% target in the Kyoto Protocol. Thirdly, developing countries like China have experienced a prolonged period of carbon-intensive economic growth with significant contributions to the world's overall GHG emissions. This rapid growth of Chinese emissions is not taken into account in more optimistic scenarios.

In contrast, the EU assumes more gradual global warming. For background evidence, the EU's 2008 paper on 'Climate change and international security' refers mainly to UN sources, and primarily the IPCC's scientific assessments of the impacts of climate change. The IPCC's (2007: 8-9) synthesis

report focuses on phenomena such as an increase in the frequency of hot extremes, heat waves and heavy precipitation, increases in tropical cyclone intensity and decreases of precipitation in most subtropical land regions. Moreover, "annual river runoff and water availability are projected to increase at high latitudes (and in some tropical wet areas) and decrease in some dry regions in the mid-latitudes and tropics". Some systems and regions are *likely* to be especially affected by climate change, e.g. low-lying coastal systems, due to the threat of sea level rise. Three regions are specifically singled out as areas of concern; "Africa, because of low adaptive capacity and projected climate change impacts; small islands, where there is high exposure of population and infrastructure to projected climate change impacts; Asian and African megadeltas, due to large populations and high exposure to sea level rise, storm surges and river flooding".

The EU has not (yet) produced its own estimates for more severe climate scenarios. While recognizing the security challenge of climate change, the EU discourse continues to rely on the language of Article 2 of the UNFCCC, specifically that "dangerous anthropogenic interference with the climate system" can be avoided, if the overall emission trend can be curbed in the not too distant future by mitigation measures. Furthermore, if mitigation policies are successful, economic development can proceed in a sustainable manner, rendering more dramatic scenarios very unlikely to happen.

What are the main security implications of climate change?

In the abovementioned Pentagon-commissioned study, Randall and Schwartz (2003: 14-16) state that "it seems undeniable that severe environmental problems are likely to escalate the degree of global conflict" as a result of food shortages due to of a lack of fresh water and resource shortages. This 'perfect storm' will overstretch the carrying capacity of the Earth, "the ability for the Earth and its natural ecosystems including social, economic, and cultural systems to support the finite number of people on the planet". Wealthy countries will find it easier to adapt to climate change (provided the shift is no too abrupt). Developing countries, on the other hand, with weaker governance structures are predicted to face a sharp decline in their carrying capacity, which in turn "may give rise to a more severe have, have-not mentality, causing resentment toward those nations with a higher carrying capacity", leading to warfare. Randall and Schwartz even forecast a proliferation of nuclear arms "as countries develop enrichment and reprocessing capabilities to ensure their national security".

Senator John Kerry, Chairman of the US Senate's Foreign Affairs Committee, has recently started referring to climate change as "a serious national security threat", when defending the passage of a climate change bill by Congress (Kerry: 2009):

> "Worldwide, climate change risks making the most volatile places even more combustible. Climate change injects a major new source of chaos, tension, and human insecurity into an already volatile world. It threatens to bring more famine and drought, worse pandemics, more natural disasters, more resource scarcity, and human displacement on a staggering scale. We risk fanning the flames of failed-statism, and offering glaring opportunities to the worst actors in our international system. In an interconnected world, that endangers all of us".

In the same speech, Kerry referred to a 2007 study coordinated by the Center for Naval Analysis (CNA), which brought together retired high-ranking military officers to explore the impact of climate change from a military perspective. This report, entitled "National Security and the Threat of Climate Change", attracted much attention in American security and defense circles by presenting climate change as a "a new and very different type of national security challenge" for the United States. The report recommends "mov[ing] beyond the arguments of cause and effect" and urges the U.S. military to begin "planning to address these potentially devastating effects", because climate change "can act as a threat multiplier for instability in some of the most volatile regions of the world […]" (CNA 2007: 3-7).

Conflicts over water, energy and the environment could lead countries towards armed conflict according to the report. Analysing possible impacts of climate change in the Middle East, the CNA report (2007: 31) quotes retired CENTCOM commander General Anthony Zinni: "It's not hard to make the connection between climate change and instability, or climate change and terrorism". Clearly, making this link struck a chord with political officials in Washington. In a debate in the US Senate on the passage of the 2009 Kerry-Boxer proposal for *The Clean Energy Jobs and American Power Act*, Kathleen Hicks, the deputy undersecretary of defence for strategy, was invited to share how the US military is beginning to focus more intensely on the threat posed by climate change. Hicks told the Senate that climate change constituted a dangerous "accelerant"; fuelling conflicts and speeding the breakdown of fragile states, and creating opportunities for extremist groups such as al-Qaeda (Goldenberg 2009).

Another concern in the US about the impacts of climate change is the effect of more frequent tropical storms and the rise in sea levels etc., on the ability of the US military to conduct its

operations. The CNA report identifies specific examples such as added stress to weapon systems and the possible need to close the airbase Diego Garcia in the Indian Ocean due to its low elevation. Given that access to energy resources might also become constrained as a result of the effects of climate change, improving the energy efficiency of the American military capabilities by reducing the battlefield tonnage in terms of fuel and water can only benefit its operational capability, as it reduces the need to continuously secure supply lines (CNA 2007: 26).

In language similar to American assessments of climate change as a security threat, a 2008 paper prepared by the EU's High representative and the European Commission stated that "[c]limate change is best viewed as a threat multiplier which exacerbates existing trends, tensions and instability" and identified "the link between global warming and competition for natural resources" (Solana & European Commission 2008). The thinking that sees a causal link between environmental degradation and violent conflict also appears to be gaining ground among European policy-makers. The EU's Roadmap Process is a mechanism to stimulate discussion on this topic within the EU and implement the necessary changes in the EU's approach to the impacts of climate change. The EU foresees to further institutionalise this process in 2010 (Villa 2009).

The threats identified by the EU (Solana & European Commission 2008: 3-5) mirror almost exactly the IPCC's assessment of the likely impact of climate change, focusing on issues such as "widespread shortage of water", "diminishing food and fish stocks", "receding coastlines", etc. The EU paper, however, goes beyond merely identifying the negative impacts of climate change and projects knock-on effects in terms of future security threats. Climate change will "fuel existing conflicts over depleting resources, especially where access to those resources is politicised". The EU's 2008 paper highlights in particular the danger "from intensified competition over access to, and control over, energy resources", leading to greater "energy insecurity". It will increase the likelihood of "[m]ore disputes over land and maritime borders". The EU "must expect substantially increased migratory pressure". Climate change will "increase instability in weak or failing states by over-stretching the already limited capacity of governments […]", possibly leading to frustration among the local population which could in turn "lead to tensions between different ethic and religious groups within countries and to political radicalisation". This final threat identified by the EU is an increased pressure on international governance, which undercuts efforts by the EU to build up effective multilateral security governance:

> "Climate change impacts will fuel the politics of resentment between those most responsible for climate change and those most affected by it. […] The already burdened international

security architecture will be put under increasing pressure".

The EU's paper on 'climate change and international security' claims to be "conditioned by the impact of climate change on Europe itself" (Solana & European Commission 2008: 3). However, the paper does not deliver on this, focusing mainly on the negative impacts of climate change outside the European continent. A follow-up to this initial paper explores in more detail the security threats for the EU. The threats emanating from Africa, the Middle East and Central Asia clearly dominate the EU's thinking on the link between climate change and international security (Solana 2008: 2-6). For Africa, the EU's main concern is that drought in North Africa and the Sahel region, combined with rising sea levels in the Nile Delta, could result in mass migration towards Europe. The EU explicitly links the conflict in Darfur to climate change. Water shortages are also the primary concern for the EU in the Middle East, a region rife with potential conflict. The EU is concerned about the problematic mix of high population growth and lack of economic opportunity, compounded by the impacts of climate change. Water management issues also dominate the case study on Central Asian states, which depend on the Amu Darya-Syr Darya river basin, the Kyrgyz glaciers and the Aral Sea for their water supply.[2]

Given the EU's geographic proximity to the Middle East and Africa, the potential migration of millions of 'environmental' migrants from these areas towards the European continent is a priority security challenge for EU policy-makers. Regular reports about illegal immigrants that cross the Mediterranean already make headlines and have led to a heavy-handed treatment of immigrants in EU Member States in Southern Europe. The Solana and the European Commission paper (2008: 4) projects "millions of 'environmental' migrants by 2020", referring to unnamed UN sources. A frequently referenced source on environmental refugees is a study by the Institute for Environment and Human Security (UNU-EHS), which predicts 50 million refugees by 2010. Academic experts like Norman Myers (2002) predict about 200 million environmental migrants by 2050.[3] The Environmental Justice Foundation (2009) – an environmental NGO – reported that 26 million environmental migrants are currently already displaced and 500 million to 600 million people or nearly 10% of the world's population are "at risk" of displacement by climate change (Vidal 2009).

[2] In 2008, the European Commission (2008: 2 and 6) presented a communication as a basis for reflection on a common Arctic Policy for the EU. This was considered necessary because "environmental changes are altering the geo-strategic dynamics of the Arctic with potential consequences for international stability and European security interests calling for the development of an EU Arctic policy". The Arctic's resources are considered to have the ability to enhance "the EU's security of supply concerning energy and raw materials". As the focus of the Communication was mainly around energy security, this topic lies beyond the scope of this paper.

[3] The International Organisation of Migration (IOM) uses the term 'migrants' rather than 'refugees', because the United Nations High Commission for Refugees (UNHCR) has insisted that the word "refugee" has a specific legal meaning in the context of the 1951 Geneva Convention Relating to the Status of Refugees.

These different sources demonstrate the absence of consensus on the phenomenon of environmental migrants and its potential threat. Forecasts about the magnitude of the challenge of environmentally-induced migration depends largely on two variables. First of all, the severity of climate change scenarios used in various studies significantly affects the number of people at risk of displacement. In its 2007 Synthesis report, the UNFCCC projects different scenarios, using several estimates of temperature increases. The IPCC's own warming scenarios (2007: 8) result in different levels of sea rise with higher levels obviously of great concern to low-lying islands and coastal areas. Secondly, the scope of the concept of 'environmental migrants' influences the numbers significantly. As a working definition, the IOM defines "environmentally-induced migrants" as "persons or groups of persons who, for compelling reasons of sudden or progressive changes in the environment that adversely affect their lives or living conditions, are obliged to leave their habitual homes, or choose to do so, either temporarily or permanently, and who move either within their country or abroad" (IOM 2007: 1-2). Climate change is included under 'changes in the environment'.

In a report for the UNHCR, Richard Black (2001: 3) has been very critical of the many studies that estimate the numbers of environmental migrants to be in the millions, in particular the tendency to focus exclusively on environmental factors, "which might as well be seen as impossible given the multiple and overlapping causes of most migration streams". Reviewing the evidence on "refugees from rising seas", Black (2001: 8) cautions against the tendency to equate the identification of "a population 'at risk' from sea level rise" with the prediction of a "mass flight of a 'refugee' nature with its attendant need for international protection and assistance". In other words, crossborder migration is only one of the many responses to flooding. Other responses could include early warning systems, flood insurance, rehabilitation efforts and more local migration.

How do the US and the EU respond to the security threats resulting from climate change?

The 2002 National Security Strategy of the George W. Bush administration did not address the security threat posed by climate change, though it makes a cursory reference to the need to contain greenhouse gases "at a level that prevents dangerous human interference with the global climate" in the context of a renewed focus on energy security.

Given the low profile of environmental security under the George W. Bush administration against a background of growing multilateral efforts to mitigate climate change, the abovementioned CNA

report (2007: 7) issued the following recommendation: "The intelligence community should incorporate climate consequences into its National Intelligence Estimate. The National Security Strategy should directly address the threat of climate change to our national security interests". More concretely, the American military should examine its capabilities "to respond to the consequences of climate change, in particular, its preparedness for natural disasters from extreme weather events, pandemic disease events, and other related missions and "conduct an assessment of the impact on U.S. military installations worldwide of rising sea levels, extreme weather events, and other projected climate change impacts over the next 30 to 40 years".

The Central Intelligence Agency (CIA) launched the Center on Climate Change and National Security as the focal point for its work on the subject. The press release states that the Centre's mission is not to review "the science of climate change, but the national security impact of phenomena such as desertification, rising sea levels, population shifts, and heightened competition for natural resources" in order to provide support to American diplomats working on international agreements on environmental issues (CIA 2009). Also, the US Department of Defence initiated a "Navy Task Force Climate Change" in July 2009, whose job description is to "to assess the Navy's preparedness to respond to emerging requirements, and to develop a science-based timeline for future Navy actions regarding climate change" (Freeman 2009). The US Navy is particularly interested in newly opening sea lanes in the Arctic as a result of global warming.

Apart from focusing on the military implications of climate change, the CNA report also urges a renewed diplomatic focus for the US on climate change: The US should be "a more constructive partner" in international negotiations in mitigation targets and also help "to assist nations at risk build the capacity and resiliency to better cope with the effects of climate change". Senator John Kerry has been the main actor linking climate change and American national security, but Kerry has not asked for an increased role for the military on this issue. Senator Kerry has used the national security argument exclusively to push for aggressive mitigation targets in the Senate bill, introduced by himself and Senator Boxer, that aims to establish a cap-and-trade system.

How has the Obama administration pursued climate security? President Obama's approach to climate change has been to work with Congress on passing a host of measures, such as a cap-and-trade bill, energy efficiency measures and an $ 80 billion 'green stimulus' package. The White House frames these measures mainly as an effort to break American dependence on foreign oil, in other words improving 'energy security'. The White House uses climate change and energy security almost interchangeably. The focus on climate change as a national security threat has not gained

much prominence under the Obama administration.[4] Neither has the Obama administration shown much interest in playing a leadership role in the multilateral climate change negotiations leading up the Copenhagen summit in December 2009. Since Obama came to office, it is fair to say that the American policy debate on climate change has had a domestic focus.

Dire predictions about an acceleration of levels of global warming and its possible impact gained credibility after tropical storm Katrina swept through New Orleans. Yet, five years later, US policy-makers still seem unable to curb their economic reliance on fossil fuel consumption. This may be part of the reason why geo-engineering has been suggested by Randall and Schwartz (2003: 22) as well as Victor (2009). The latter published an article in the widely read American journal Foreign Affairs, which helped geo-engineering to shed its science fiction image. Geo-engineering refers to a variety of emergency strategies that deliberately modify the Earth's climate systems on a large-scale to counteract climate change. Examples include blowing seawater in the lower atmosphere, placing sulphur particles in the stratosphere or launching "a huge cloud of thin refracting discs into a special space orbit that parks the discs between the sun and the earth in order to bend just a bit of sunlight away before it hits the planet" (Victor 2009: 4). On geo-engineering, Obama's science advisor John Holdren was quoted as saying that climate change poses such an enormous challenge that all options need to be looked at, including geo-engineering. However, Holdren later refuted this quote and denied that a geo-engineering strategy for climate management was under serious consideration at the White House (Lohr 2009; Revkin 2009). Nonetheless, the US House Committee on Science and Technology (2009) held a hearing in November 2009 to examine geo-engineering beyond traditional strategies to reduce emissions.

There is no evidence that geo-engineering is given serious consideration within the EU. In contrast to the reluctance of US President Obama to engage in multilateral climate change negotiations, the EU's main focus has been on the multilateral level, aiming to bring the climate change negotiations to a good end by December 2009 by achieving "a fair and effective UN climate change agreement that sets the world on a path to preventing global warming from reaching dangerous levels" (European Commission 2009). The EU described its dual focus on investment in mitigation as well as adaptation as being in line with 'preventive security policy'. The EU sees itself as "at the forefront" of these efforts and "the security challenge [of climate change] plays to Europe's strengths, with its comprehensive approach to conflict prevention, crisis management and post-conflict reconstruction, and as a key proponent of effective multilateralism" (Solana & European

[4] The Waxman-Markey bill, which was passed by the US House of Representatives in July 2009, does recognize that global warming impacts can significantly increase threats to our national security (NRDC 2009: 5).

Commission 2008). However, EU-level discussions on the link between climate change and international security have not (yet) led to a major increase of the role of the military and defence capabilities. The strategy of the EU to achieve 'climate security' is composed of three elements.

First of all, the EU is focused on improving its capacity for monitoring and analysing the impacts of climate change, in particular the development of an 'early warning' system to detect a very broad range of negative impacts. These include a long list of possible security threats, such as e.g. "situations of state fragility and political radicalisation, tensions over resources and energy supplies, environmental and socio-economic stresses, threats to critical infrastructures and economic assets, border disputes, impact on human rights and potential migratory movements". The EU considers it necessary to improve its ability to detect certain situations at an early stage, but also its ability to intervene by building up its "capabilities including civil protection and the use of crisis response instruments (civil and military)" (Solana & European Commission 2008: 9-10). No detail is given about the kinds of – in particular military – capabilities that would be needed to respond to environmental stresses. As part of the EU's efforts to enhance its monitoring capacity, the GMES, or Global Monitoring of Environment and Security was established in 2001, which is a European Initiative for the establishment of a European capacity for Earth Observation. The European Commission has identified this as a priority area of work and, with the European Space Agency, committed a total of about 500 million Euros to GMES (European Commission 2005: 6 and 9).

The ambition of GMES is to provide the EU with an independent and comprehensive "Earth observing system, using space-borne and in situ techniques (land, air and sea) through well-defined operational services", which is considered "key to ensuring the implementation and monitoring of environmental and security policies in the context of sustainable development" (European Commission 2005: 3). The need for such an Earth Observation system is defended by reference to natural and manmade catastrophes in Europe, America, Asia and Africa, coupled with increased security needs. The GMES is presented as an important contribution to a wide range of EU policies by meeting the EU's civil security needs (e.g. the European Community Humanitarian office or ECHO) and by adding capabilities for the European Security and Defence Policy (ESDP). It will contribute to the EU's policies on justice, home affairs and customs, including surveillance and management of external borders and to the effectiveness of European humanitarian efforts and development aid by increasing the quantity and quality of available information. The geospatial information provided by the GMES will also help the EU achieve its environmental commitments,

within the EU and globally, through the surveillance of land-use changes, natural hazards (e.g. forest fires, floods, tsunami response) and global climate change monitoring (European Commission 2005: 6-7). A statement by a GMES Working Group on Security (2003: 3) demonstrates that the high-definition imagery provided by GMES can serve both civilian and military functions: "The borderline between civil and military responsibilities is becoming fuzzy and the term "security" finds itself used in a variety of contexts". However, a European Commission official stressed that GMES is only a tool for policy-makers to make informed decisions, a tool whose operationalisation in the area of climate change is currently under development. Based on the improved data provided by GMES, it remains to be seen what the specific policy response to e.g. climate refugees in the EU's Common Foreign and Security Policy will be in the years to come (interview European Commission GMES Bureau, January 2010).

Secondly, a renewed diplomatic effort to achieve "an ambitious post-2012 agreement in 2009" was considered necessary, after the negotiations were launched in December 2007 at the Bali COP. An example of the EU's "multilateral leadership to promote global climate security" was how the EU raised awareness around the security risks related to climate change in the UNSC arena (Solana & European Commission 2008: 10). In April 2007, the UNSC held its first ever meeting on energy, security and climate change. This meeting was called for by the United Kingdom, which held the UNSC presidency at that point. British Foreign Secretary Margaret Beckett pointed out that climate change could exacerbate many threats, such as violent conflict and the struggle over resources like energy and food. She insisted that climate change was a security issue, but not of "narrow national security". Framing climate change as a security threat "was about collective security in an increasingly fragile world for all" and "climate change can bring us together, if we have the wisdom to prevent it from driving us apart" (UNSC 2007: 11). The German representative of the EU presidency echoed the UK's position that climate change is *both* a development *and* a security issue. This means that climate change is a crosscutting issue over which no single institution can claim exclusive competence: If states or institutions wish to prevent the negative security implications of climate change, they must develop "coherent, integrated and holistic responses of the United Nations family and institutions to address the challenge" (UNSC 2007).

Despite the IPCC's warnings about increased incidence of vector-borne diseases, long-lasting droughts resulting in food shortages, etc., many developing countries, such as China, expressed concerns that the UNSC was not the proper forum for debating climate change. According to the Chinese representative, climate change is first and foremost a socio-economic and development

issue, not a security issue. Germany, which held the EU presidency, justified having a debate on climate change within the UNSC by stating:

> This Council usually deals with more imminent threats to international peace and security than those caused by climate change. However, less obvious and more distant drivers of conflict should not be neglected. This is true especially against the background of one of our central tasks: the prevention of violent conflict. The Security Council is committed to a culture of prevention as incorporated in resolution 1625. And today we know: there is a clear link between climate change and the need for conflict prevention.

Not all developing countries shared the Chinese position that debating climate change in the UNSC was an encroachment on the prerogatives of other, more representative UN bodies like the UNGA or the Economic and Social Council. For example, Papua New Guinea's representative agreed that the UNSC was the appropriate setting for the debate, as "the impact of climate change on small islands was no less threatening than the dangers guns and bombs posed to large nations" and that island states "were likely to face massive dislocations of people, similar to population flows sparked by conflict" (UNSC 2007).

Thirdly, the EU must engage its global partners on the impact of climate change on security. Key partners for the EU include the US, China, India and Russia, regions at a particular risk (e.g. the Alliance of Small Island States, the Arab League and the African Union) and institutions such as the UN and OSCE. In the follow-up to the initial report by Solana and the European Commission, the EU's High Representative recommends to incorporate adaptation as a key concern in political dialogue with third countries: "Integration of climate change adaptation into development cooperation will help to enable vulnerable societies to cope with the additional pressure brought about by climate change" (Solana 2008: 1). By mainstreaming climate change as an issue in development cooperation, the EU, as the world's largest donor of development and humanitarian aid, seeks to prevent climate change impacts from leading to full-blown crises, which would reduce the effectiveness of its development aid. By focusing on early warning and the prevention of, for example, hunger as a result from prolonged periods of drought, costly crisis responses can be avoided.

How do the US and the EU's approaches to climate security compare?

A number of interesting observations can be derived from contrasting the American and European approaches to climate security. Even though the EU has frequently proclaimed its leadership and

has taken the strongest action on climate change of all industrialised countries, the projections about a changed climate that are most frequently referred to in the EU are the more conservative IPCC estimates. In contrast, American projections about future climate change almost always include more 'abrupt' and 'cataclysmic' scenarios. Yet, these more dire predictions have not spurred American policy-makers to action. On the contrary, these predictions seem to have instilled a sense of resignation to considerably higher average global temperatures among American politicians and as a result an appetite for rather extreme responses to climate change such as geo-engineering. The EU's projections feed the conviction that GHG concentrations in the atmosphere are still manageable and that action on both mitigation and adaptation is not only necessary, but also possible. While it is maybe counter-intuitive, the EU's more optimistic scenarios inspired greater efforts to mitigate climate change. An explanation for this divergence could be found in the sources of future scenarios of climate change. While the EU relies mainly on the 'multilateral' data of the IPCC, the intelligence and military community have been far more influential in the debate on climate change in the US. The EU's High Representative Solana is a latecomer in the European debate on climate change – the first debate on climate change as a security threat took place in March 2008 – and EU intelligence and defence agencies may have less expertise on climate science.

Even though European foreign policy, intelligence and defence officials were quite late to get involved in the debate on the impacts of climate change, they have been very quick learners. It is remarkable how quickly the consensus around climate change as a security threat has materialised in the EU. Moreover, it is astonishing how similar the language about 'climate change as a threat multiplier' is now shared across the Atlantic. Speeches in both the EU and the US now assume a causal link between climate change, droughts, pressure on scarce resources like fresh water, violent conflicts between rival religious and ethnic groups and international instability. Even though the language around climate change as a 'threat multiplier' is shared, there are also differences. The main threats identified by the US are – geographically speaking – more distant in terms of failed states as 'safe havens' for international terrorist networks, whereas the main threat for the EU is located closer to home, namely the threat of "millions" of 'environmental migrants' fleeing from potential conflict zones in the EU's neighbourhood, i.e. North Africa and the Middle East. Furthermore, the EU does not address the effect of climate change on military capabilities and installations, whereas this is prominent in the American approach.

In terms of possible responses to climate change as a security threat, both the US and the EU focus on improving their respective data gathering and surveillance capabilities. The EU is keen to close

match the existing American surveillance capability by investing heavily in the GMES. The GMES should give the EU an independent capacity for Earth observation, which is considered crucial in monitoring environmental hazards e.g. the effects of climate change as well as dealing with its security implications.

Both the US and the EU also agree that military solutions are ineffective in dealing with a threat like climate change, due to continued uncertainty about the location, timing and severity of its impacts. Both the US and the EU urge for a renewed diplomatic effort that involves all major polluters, including developing countries like China. After the disastrous role of the George W. Bush administration in international climate change negotiations, the Obama administration has not taken on a leading role in the ongoing international negotiations. Specifically, the US has so far refused to commit to any stringent multilateral mitigation targets and has sought to develop a new international legal framework that significantly departs from the Kyoto Protocol. In contrast, the EU has been seriously committed to the multilateral negotiations and seeks to play a leadership role, but has found few countries willing to follow its lead. The different ways that the US and the EU have framed their responses to) climate change as a security challenge help to explain this divergence: Both George W. Bush and Barack Obama have framed the need to address climate change in terms of national security, energy security and energy independence. In contrast, it has been an integral part of the EU's strategy to frame climate change as a threat to collective security, as evidenced by the contributions of EU Member States and the EU presidency during the 2007 UNSC debate on climate change.

Conclusion

To paraphrase a well-known expression, if the US sneezes, Europe catches a cold. It is clear that a securitizing discourse on climate change has been gaining ground within the EU since its inclusion in the 2003 European Security Strategy. Based on the evidence presented, it is fair to say that the EU has drawn considerable inspiration from the American efforts with regard to environmental security.

However, a full-blown securitisation of climate change has not yet emerged in either the EU or the US. For example, improving climate security has not led to a mobilisation of military capabilities against environmental migrants or a defence of carbon sinks like rain forests. Even so, the EU's 500 million Euros spent on an advanced global surveillance mechanism may be a sign of things to come. If the negotiations on a post-2012 follow-up to the Kyoto Protocol fail to reach an agreement or the

largest polluters commit only to minimal mitigation targets, recriminations will abound and will likely introduce a significant chill in international relations. Such a development should not be ruled out, certainly as the negative effects of climate change become increasingly obvious.

As scholars of the Copenhagen School, like Buzan and Waever, pointed out more than a decade ago, 'securitising' environmental degradation like climate change is not an innocent way of framing the debate, because a securitisation alters the legitimate modes of engagement and facilitates more militarised responses. Vigilance should remain in place to closely scrutinise the EU's next steps on 'climate security'. Particular attention should be paid to how the EU will respond to the threat of "millions" of 'environmental migrants' in its neighbourhood.

Stephen Walt (2005: 28-29) convincingly argued that bad IR theory leads to bad policy. Heeding Walt's warning, Dabelko (2008: ix) warns not to oversell the links between climate change and conflict or terrorism, emphasizing that even though "climate change is expected to exacerbate conditions that can contribute to intrastate conflict, it is neither a necessary nor a sufficient cause of conflict", because it obscures the political, economic, demographic and other factors that can influence a region's stability and peace. For example, Raleig and Urdal (2008: 31) advocate paying greater attention to "how resources are distributed and how political institutions create vulnerability to climate change". Black (2001: 14) suggests that the greater attention paid to the issue of 'environmental migrants' may have more to do with "bureaucratic agendas of international organizations and academics than with any real theoretical or empirical insight".

It is encouraging to hear Helga Maria Schmid (2009), director of the EU's High Representative's Policy Unit, make the point that a gap continues to exist between science and politics and that an understanding of the security implications of climate change requires a strengthened collaboration between environmental and security experts. Such cooperation will hopefully help to avoid an oversimplification of the causal links between climate change and security threats for the EU by providing a more nuanced picture of the future threat posed by climate change than the catastrophic scenarios of "millions" of 'environmental migrants' at the EU's borders.

Securitizing climate change may have been a tactical move by the EU to put extra pressure on other countries to sign up to ambitious targets, but such an approach comes with considerable risk. The reasons for a violent conflict such as the crisis in Darfur are always manifold: Simply labelling Darfur as the first conflict directly produced by climate change, resulting from prolonged period of drought experienced in Sudan, undervalues the many other contributing factors. Such a simplified

view of 'environmental conflict' could lead the EU to more militarised responses to the symptoms of climate change rather than sticking to the EU's 'core business' of conflict prevention, addressing the root causes of conflict and insecurity. The most effective contribution by the EU to global climate security is likely to be its strict compliance with the IPCC's science based mitigation targets.

Climate change risks making the Earth uninhabitable for most people. To avoid the 'tragedy of the commons' with regards to the Earth's atmosphere, a sense of world community will be necessary to enable responses that will pursue ambitious mitigation targets. The impacts of climate change challenge states to think in terms of a "single, planetary class interest" (Monbiot 2004: 9), which is fundamentally different from thinking about climate change as a security threat.

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