EBERHARD KARLS
UNIVERSITÄT
TÜBINGEN

Wirtschafts-und
Sozialwissenschaftliche Fakultät
Institut für Politikwissenschaft

ClimaSec

Working Paper Series

Working Paper 12 (April 2016)

The successful securitisation of climate change in Germany:
A Climate Change in Energy, Economy and Diplomacy

Zehra Wellmann, University of Tübingen

DFG

The successful Securitization of Climate Change in Germany:

A Climate Change in Energy, Economy and Diplomacy

Zehra Wellmann, Research Associate and Ph.D. Candidate, ClimaSec Project,
Department of Peace and Conflict Studies at the Institute of Political Science, University of Tübingen

ClimaSec Working Paper #12

Acknowledgements

This Paper is part of the ClimaSec Project at the University of Tübingen that analyses the securitization of climate change in four different countries. Thanks to Professor Thomas Diez and my colleague Franziskus von Lucke as well as research assistants Schielan Babat, Thea Güttler and Josefa Velten for their contributions. Research for this article has been funded by the German Science Foundation (Deutsche Forschungsgemeinschaft), Grant No. DI 1688/2-1.

1. Introduction

This paper is part of the "ClimaSec" – "*The Securitization of Climate Change – Actors, Processes and Consequences*" research project at the University of Tübingen. The theoretical assumptions that underlie the analysis have been published before in a special issue of "Geopolitics" (Lucke et al. 2013) and the ClimaSec Working Paper series (Lucke et al. 2013; Diez/Grauvogel 2012) and for a better understanding can be obtained from www.climasec.org. This paper analyses the German case of the securitization of climate change while at times referring to the cases of the US, Mexico and Turkey as parts of the research project.

I start by clarifying the underlying (2) Theoretical assumptions and Methodological Approach of the analysis and then go on to describe the (3) General Climate Debate in Germany, in which I identify two broader phases of climate security debates – one starting in the eighties and the other one after the turn of the millennium. In this section, I highlight the related main events on the international level, the attempts of securitization and related policy processes. In the fourth section, I outline (4) the dominant climate-security discourses that have been identified according to our analytical framework, before I present (5) the dominant actors of securitization. In the sixths section, the (6) discourse resonance and political changes that have partly been legitimized or triggered through distinct climate change securitization discourses in Germany will be outlined. In a last step, I will explore the (7) Facilitating conditions and context for the successful securitization before coming to a (8) Conclusion that locates the German case within the overall project.

2. Theoretical Assumptions and Methodological Approach

This research is based on an analytical framework that has been developed by the ClimaSec Project. It takes Securitization Theory (Buzan et al. 1998) as a basis and then develops an own specific framework for the analysis of climate change securitization, taking three different levels of referent objects (territorial, individual and planetary) and two dimensions of threats (security threat and risk) into account (for a detailed description see (Lucke et al. 2013)). Generally speaking, securitisation can be defined as a "discursive process through which an inter-subjective understanding is constructed within a political community to treat something as an existential threat to a valued referent object and to enable a call for urgent and

exceptional measures." (Trombetta 2012). Through this process, securitisation shifts the focus "from the allegedly objective threats to the way they are socially constructed" (Trombetta 2012: 2). According to this understanding, it is not necessary for a real threat to exist. The point is that a securitising actor presents the issue (in our case Climate Change) as an existential threat to a valued referent object (in our case the state, individual or planet) and achieves the acceptance of this discourse by a relevant audience, (Buzan et al. 1998: 24), which can be society as a whole or also only a set of important decision makers that then legitimises distinct policies and measures. Accordingly, the securitisation of any issue requires the presence of securitizing actors who are capable of successfully labelling it as a "security issue" by employing the specific logic and grammar of securitization (Leung et al. 2014: 5). The act of labelling an issue with "security" is understood as a "securitizing move" that can either be successful or unsuccessful (Buzan et al. 1998: 6). The success of the move depends to a large extent on the question if the audience accepts the threat as such and legitimises distinct policy measures (Buzan et al. 1998; Balzacq 2005; Roe 2008).

Especially with regard to environmental security, the Copenhagen School asserted that attempts to securitize climate change have been unsuccessful, due to lacking evidence of distinct measures that it could have invoked. Other authors pointed out that the fact that climate change is being discussed in high-level conferences and organizations is alone a sufficiently obvious and extraordinary phenomenon that counts as much as "legitimized policies" (Floyd 2008; Trombetta 2008). Especially with regard to climate change and securitization, different kinds of environmental and climate-security discourses have been identified by scholars during recent years (Lucke et al. 2013; Detraz/Betsill 2009; McDonald 2013). According to our framework (Lucke et al. 2013), in this analysis I will especially identify if attempts to securitize climate change rather developed on the territorial, individual or planetary level and if they put forward either the security or the risk dimension of representing an issue as a threat (Lucke et al. 2013). It will be especially important to make a distinction between attempts that stayed on the political level and were therefore unsuccessful, and successful securitization, as political leaders can also ignore climate change, tackle it through normal political processes - or they can address it as a security issue that requires what by many has been called "extraordinary measures" (Hayes/Knox-Hayes 2014).

Regarding a normative evaluation, contrary to the general viewpoint which been asserted by the Copenhagen School and other scholars (Buzan et al. 1998), ClimaSec does not consider securitisation as a negative and normatively problematic act or process per se (Lucke et al. 2013). Depending especially on the referent object and the proposed measures of securitisation, we regard securitisation as a phenomenon that rather than closing down the political debate (Buzan et al. 1998) also has the potential to open it up. This has in other studies been demonstrated especially with regard to climate change securitisation (Brauch/Scheffran 2012: 161). Therefore, securitisation can also lead to rather progressive policies (i.e. development policies, technical assistance and humanitarian aid), as we have observed in the German case. The successful securitisation of climate change in a broader understanding of legitimising and motivating policies that would not have been possible without it (Floyd 2010; Trombetta 2011; Brzoska 2009: 144) has become visible in our comparative four-country case study (Diez et al. 2016). We have analysed the climate change policymaking processes in Germany, Turkey, Mexico and the U.S. over the period from the 1990s until 2014. In this paper, the milestones in German climate policymaking, such as institutional changes, law making and commitments in the international regime will be explained on the basis of earlier research (Wellmann 2014). Through this earlier process tracing, over 150 actors that influenced climate change policymaking and over 50 relevant actors that have taken moves to securitize climate change in Germany have been identified. The identification of these actors was conducted on the basis of primary and secondary literature references as well as through interviews. Regarding the publications and sometimes also events organized (i.e. conferences, roundtables) and speeches held by actors, we have identified over 50 incidences that contained an openly securitizing language. We have analysed these incidences regarding their specific framing of climate-security as described in our analytical framework. In order to trace the process of securitization throughout different levels of society and politics and identify if securitizing arguments have entered the political and government discourses, over 90 parliamentary debates on climate change and global warming have been analysed. This has led to the identification of a country-specific framing of climate change and the related threats it is perceived to pose. To challenge the findings of the process and discourses analysed, over 25 mainly semi-structured but at times informal interviews with state representatives, environmental activists, scientists, think tanks and NGOs have been conducted and helped to draw an extensive picture of the process of climate change securitization, its actors and policy consequences for Germany.

3. The General Climate Debate and Securitization in Germany: An increasingly hot debated topic

Germany has been a consistent advocate of binding international climate agreements, passed various rounds of legislation to curb CO2 emissions and reduced emissions to a considerably higher extent than many other countries. Accordingly, Germany takes a high position in the Climate Change Performance Index (Germanwatch and CAN 2015). From 1990 until 2012, Germany decreased CO2 emissions by 26 per cent, thus outperforming its Kyoto aims of 21 per cent of reduction and contributing to an overall success of EU reduction targets (Werland 2012: 55). Also, Germanys history of emission reduction policies reaches relatively far back (Bruyn 2000: 212). For example, emission regulations for vehicles were introduced in 1983 (Jänicke 2009). Furthermore, an Enquete Commission "Preparation for the Protection of the Atmosphere" was set up in 1987, and an "Interministerial Working Group on CO2 Reduction" (*Interministerielle Arbeitsgruppe CO2 Reduktion*) in 1990. Its aim was to reduce GHG emissions by 25 per cent until 2005 (Feindt 2002; Bayerisches Landesamt für Umwelt 2011: 2). In an effort to continue and improve the commitments in the aftermath of the end of the Kyoto Protocol, the German government set ambitious GHG reduction targets of 40 per cent by 2020, and 80-95 per cent until 2050 (compared to 1990) in 2007 (BMUB 2014). However, due to sometimes heavily conflicting policy objectives and a trade-off between unrestricted economic growth and environmental protection, it is not yet clear if Germany is going to achieve all of its ambitious goals.

Regarding the policy process on the international level, Germany has been heavily involved not only in processes such as the European Integration (Die Welt 2010; The Economist 2010) but also in the international climate change regime. Once convinced by the necessity of actions for climate protection, Germany supported the UNFCCC process with financial, institutional and organizational capabilities. The first Conference of Parties in 1995 was conducted in Berlin and from 1997 onwards, Germany annually organised the meetings of the subsidiary bodies as "Bonn Climate Change Conferences" and the "Petersberg Climate Dialogue" (UNFCCC 2013a; DKK 2015). Therefore especially in Germany, the climate discourse cannot be analysed without taking into account developments of the international climate debate (Mederake/Duwe 2014). On the other hand, German climate security discourses have also strongly influenced the international level (EU or UN) and even

discourses in other countries such as Mexico and Turkey. Therefore, this section on the climate security discourses looks not only on their evolution in Germany, but also on the mutual influences and dependencies of discourses on the national and the international level.

In our study period, I have identified two broader phases of climate change securitization[1]: The first one is related to earlier discourses on resource scarcity, environmental degradation, sustainability and then the depletion of the ozone layer, triggered by the Club of Rome Study the "Limits to growth" (Meadows/Meadows 1972; Eastin et al. 2011), the Brundtland Commission report on "Our Common Future" (1987) and domestic reports of the German Enquete Commission on the Protection of the Atmosphere (Deutscher Bundestag 1989, 1992, 1994, 1995; Litfin 1995; Arnold et al. 2012). Through this first phase of partly successful securitizing moves that were made mainly on the international level, the ozone and climate catastrophe discourses materialized in the Vienna Convention for the Protection of the Ozone Layer, which was agreed on in 1985 (UNEP 2011) and the Montreal Protocol on Substances that deplete the Ozone Layer (1987) (UNEP 2011). An outcome on the domestic level in Germany was the setup of an "Enquete Commission on the Protection of the Atmosphere" by the German government.

In the second phase of attempts to securitize climate change happened mainly after the turn of the millennium, an initial concern about climate change and global warming that was related to the first phase developed into climate security discourses on both domestic and international levels, especially from 2005 onwards (Scott 2012; Brzoska 2009; Richert 2012). The second phase of climate change securitization encompassed more concrete debates on global warming and climate change. The 'new' climate-security discourses were triggered by different factors: A growing body of knowledge and analysis on climate change was facilitated through technological progress and new possibilities of data collection and processing. Furthermore, appearing natural phenomena were interpreted as signs for a dangerously changing climate and further supported the global warming thesis (O'Brien 2006).

In the following two sections, I will outline the dynamics within these two broader phases of climate change securitization in greater detail.

[1] for a similar classification of the general climate change discourses in Germany see Weingart et al. 2002; Weber 2008; Reusswig 2010, 2010: 80

Precursors of of successful climate change securitization (1960 – 1990)

Theories and Warnings on a changing climate date back to the late 19th century, but did not develop in such a way that they became relevant discourses or successful securitizations that resulted in distinct legitimized policies (Arnold et al. 2012: 189; Arrhenius 1896). Only in the second half of the 20th century, when human influence and disruption of the environment had grown and become visible together with industrialization and technological and scientific progress in the 1960s, a small discourse coalition of climate scientists evolved and supported a discourse on global anthropogenic climate change. However, this discourse rather stayed within the scientific community (Weber 2008: 62). At the same time, the narrative of technological progress remained dominant and even climate scientists, who believed in the possibility of a changing climate were widely convinced of the irrelevance of climate change as a threat due to new and growing technological abilities and progress (Arnold et al. 2012: 189). A decade later, the until then rather scientific discourse on climate change as a threat reached a relevant audience: the emerging environmental and grassroots movements of the 1970s and 1980s, which evolved in the face of increasingly visible environmental pollution out of which also later debates on environmental security evolved (Floyd/Matthew 2013). But at that time, the climate change narrative was not yet connected distinctly to the notion of "global warming" as it is today. It also included narratives such as "global cooling" and most importantly, the "global greenhouse" narrative (Arnold et al. 2012: 189). Still, this second phase of the discourse on climate change among scientists, that has been called "politically oriented" phase (1986 – 1990), increasingly addressed not only scientists but also politicians (Weber 2008: 62).

As a consequence of the global and domestic environmental movements of the 1970s and 1980s, more actors became involved and convinced of the scenario of an anthropogenic and dangerous climate change that was regarded to be induced through greenhouse gas emissions and threatening the ozone layer (OECD 1993; Litfin 1995; Arnold et al. 2012: 189). International events such as the "United Nations Conference on the Human Environment" in Stockholm in 1972 and the Club of Rome study on the "Limits to Growth" (Meadows/Meadows 1972; Mederake/Duwe 2014) influenced the international and German environmental and development discourses. The first "International Climate Protection Conference" of the UN that was conducted in 1979 in Geneva and the initiation of the World Climate Programme (WCP) by the World Meteorological Organization (WMO) (UNFCCC

2015) further advanced the narrative on an environment threatened by development. It also corresponded to the "Limits of Growth" debate. Although some authors state that the efforts of the organizers of these first world conferences on climate change proved unsuccessful in attracting participation of policymakers (Bodansky 2001), the development and strengthening of an international climate security discourse turned out to be an incentive for Germany to act (Mederake/Duwe 2014).

The German Federal Environmental Agency (*Umweltbundesamt*) had already organized an international expert conference on climate issues in 1978 and a "Governmental Committee on Climate Research" was established in 1979 (Weidner/Mez 2008: 362). Furthermore, the Federal Parliament (*Bundestag*) decided to set up a (West-) German climate programme in 1979, which was then finally brought to life in 1984 (WMO 1989). In the course of these developments in the beginnings of the 1980s, the notions of *ecological modernization* and *sustainable development* emerged and slowly began replacing the "Limits to Growth" paradigm (Arnold et al. 2012: 194; Eastin et al. 2011: 2). However, notably, the "Limits to Growth" authors had already recognized anthropogenic climate change that was in their words causing "serious climatic effects" (Meadows/Meadows 1972; Eastin et al. 2011). Another factor in the strengthening of the climate change and global warming narrative was, as already mentioned, the fact that improvements in computing power allowed scientists to develop more sophisticated computer models which led to increased confidence among securitizing actors considering global warming predictions and scenarios (Bodansky 2001: 24).

Only shortly after the establishment of the German climate programme in 1979, a first wave of concrete attempts to securitize climate change in Germany started. Most importantly, the report of the Working Group on Energy of the renown and long-established German Physical Society (DPG) named "*Warning of the coming Climate Catastrophe*" (DPG 1986) had an unprecedented impact on the early German climate change debate and can be regarded as an early, successful move to securitize climate change. The German Physicist Klaus Heinloth, who later became one of the members of an Enquete commission on the topic, was one of the main authors of this "warning". The publication was taken up by the popular news magazine "Der Spiegel" and other actors in the media, science and politics and thereby transformed into an increasingly established narrative on the "*climate catastrophe*" with a strong impact on the public debate (Norck 2012: 26; Kirstein 2013). The cover page of "Der Spiegel" with a half-

submerged Cologne Cathedral became the symbol of the "climate catastrophe" (*Klimakatastrophe*). In the debate that followed, it was disputed if it was right to dramatize the issue in this way (Mauelshagen 2009: 218). However, the strategy had already turned out to be successful and effective. Developments on the international level also supported the view of a vulnerable and threatened environment and climate. In addition to the discourse on the stratospheric "ozone hole" as a threat to humanity and the planet, the Brundtland Commission report "Our common Future" (1987), issued by the UN World Commission on Environment and Development (Bodansky 2001: 23) established the notion of "*sustainable development*" as a new and successful buzzword (Gardizi 2009).

Consequently, only one year after the publication of the DPG warning and in the year of the publication of the Brundtland report, it was not even the relatively strong German Green Party, but the CDU/CSU and FDP parliamentary groups who applied for the installation of the "*Enquete Commission for the Protection of the Atmosphere*" (1987). Even more focused, the Green Party, that later increasingly became an important actor considering environmental policies in Germany, was engaging for the installation of a commission on "*Long-Term Climate Protection",* but failed with this endeavour (Altenhof 2002: 139). This example shows that there was already some interest in the topic, but the notion of "*climate change*" was not yet sufficiently established as an urgent and important issue. The "Protection of the Atmosphere" seemed to be equally or even more important – and successful. Consequently, the Green party did not only fail with its proposal on setting up an Enquete Commission for climate change, but also lost the parliamentary elections in the 1990s, during which it had put an emphasis on climate change as a priority (Kellerhoff 2010; Interview 2014b, 2014c).

The Enquete commission for the Protection of the Atmosphere was finally setup in 1987 with 9 Parliamentarians and 9 external experts. The composition of the commission points to its role as a mediator between science and politics (Altenhof 2002). Its task was to analyse knowledge about the condition of the atmosphere and propose national and international measures for its protection (Deutscher Bundestag 1992). In the three reports it published throughout its mandate from 1987 until 1995, the commission addressed climate change and global warming as threats to global development from different perspectives such as agriculture, tourism and mobility (Deutscher Bundestag 1992). The reports emphasized the importance of the replacement of dangerous atmospheric gases (Deutscher Bundestag 1989, 1994) and the protection of the tropical forests. The focus was not so much on *global*

warming and the *effects* of climate change, but rather on the diminishing and threatened ozone layer, the reduction of the greenhouse effect, and possible and related changes in the climate (Deutscher Bundestag 1989, 1995: 14).

National actors from science, media, politics, and even international observers considered the reports of the Enquete Commission as the most comprehensive and important political document in the worldwide discussion on threats to the climate (Deutscher Bundestag 1989: 3). For its explicit occupation with the atmosphere, climate shifts and global warming (Deutscher Bundestag 1989: 9, 1994: 3, 1995: 14) the Enquete Commission together with the foundation of the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMUB) in 1986 has been regarded as the emancipation of the field of climate policies from environmental policies in Germany. The political success and international respect for German climate protection efforts was no coincidence: Already by the time that the IPCC was established (in 1988) and the first international Climate Conference took place in Toronto (1988), the German climate research system had become one of the best in the world (Krueck et al. 1999: 1; Bodansky 2001: 24).

These early German attempts to securitize climate change have also been criticised: With regard of the successful discourse on the "climate catastrophe", it has been scrutinized that the issue was brought up by the German Physical Society (DPG) as an institution of physicians and not meteorologists who were regarded to be more suitable for such an analysis (Kirstein 2013). Notably, the DPG group included nuclear physicians, who have been suspected to have used the climate change and security discourse for their own interests of supporting nuclear energy technologies (Kirstein 2013) during the time of the Chernobyl crisis, as such strategies had become evident also in other and earlier cases (Arnold et al. 2012: 208). Accordingly, the engagement of the CDU/CSU and FDP parliamentary groups for the framing of climate change as a security threat has been suspected for being employed for the support of nuclear energy against the fossil energy lobby (Kirstein 2013; Bickerstaff et al. 2008). Summing up, in the course of the on-going debate in the 1980s and 1990s, the media took up the climate change-security argument and the *Climate Catastroph*e turned out successful (DER SPIEGEL 1986; Norck 2012: 26; Beck et al. 2009: 14).

Similarly successful on the international level, the *global greenhouse*, *ozone depletion* and *climate change* or *climate catastrophe* narratives led to the Montreal Protocol on Substances

that deplete the Ozone Layer (1987) (Litfin 1995). At that time, the greenhouse and ozone narratives remained dominant and climate change was rather "a threat behind the scenes" and potential side effect of ozone depletion (UNEP 2006; Velders et al. 2007). However, the Montreal Protocol has been regarded as the most successful international treaty, as it has been signed by more 197 states and led to internationally effective policies for ozone and climate protection (Litfin 1995; UNEP 2015). The Protocol, its subsequent revisions and their success were the outcomes of a highly effective collaboration among scientists, policymakers and activists (Litfin 1995). In the Ozone case, the radical reduction of substances that deplete the ozone layer has been regarded as "emergency measures" from a securitization perspective (UNEP 2011).

Summing up the first wave of securitization attempts related to climate change, the climate-discourse came up increasingly in the 1980s and was linked to the discussion on ozone depletion on the international level. In Germany, this framing was adopted relatively early and parallel to the international debate. Especially through the activities and publications of the Enquete Commission on the Protection of the Atmosphere, the country was at that time already regarded as a forerunner (BMUB 2014; Deutschlandfunk 2012; UBA 2015). However, the climate-security discourse of the 1980s and early 1990s was different from the second climate change security discourse.

The second wave of climate change securitization (1990 – 2014)

Some authors argue that climate change did not emerge as a political issue until the 1990s (Bodansky 2001: 24). I assert that the international climate change and climate security discourses were already there (see also Weber 2008: 59), as described in the former section, and gained renewed momentum during the 1990s together with a growing alignment of actors participating in the *climate change* and *global warming* discourses.

Still, there have been strong pushes and pulls among different actors on the nexus of climate change and security in Germany. Especially the strong German automobile sector and heavy industries have lobbied against too tight law- and policymaking in the past. Accordingly, while innovative climate policymaking from the 1990s onwards continued to ascribe Germany the role of a leader in climate policymaking, the country at the same time took ambivalent stances in international climate negotiations. For example, Germany has been

giving in to the automobile industry (*Verband Deutscher Automobilhersteller, VDA*) and blocked CO2 emission reduction policies on the EU level (Focus Online 2013; BÜNDNIS 90/DIE GRÜNEN Bundestagsfraktion 2013).

Furthermore, especially after the reunification of East- and West Germany in 1990, there was a priority shift among policymakers and social and economic issues became dominant over environmental issues (Jänicke 2009). Therefore, the period after 1990 has rather been regarded as a period of setbacks in German environmental policymaking. However, on the other hand, Germany continued to appear as a forerunner on many occasions. The country continued to support UN institutions such as the UNFCCC secretariat that was opened at the UN Campus in Bonn after its ratification in 1996 (Gemeinsame Informationsstelle der UN-Organisationen in Bonn 2013). It also initiated the "Bonn Conferences on Climate Change" of the subsidiary bodies of the UNFCCC that have been held annually in Bonn since 1997 with the aim to prepare the sessions of the conferences of parties (UNFCCC 2013c). Furthermore, through distinct initiatives, German chancellors and ministers of environment have gained much attention and respect for their determination on climate protection at international conferences, such as the UN Earth Summit in Rio de Janeiro in 1992 as well as at G7/G8 conferences. An amendment of the German constitution (*Grundgesetz*), through which the concept of environmental protection became a national objective, constituted a milestone in environmental policymaking in 1994 (Jensen 2009). The constitution emphasized the responsibility for further generations: „The state within its responsibility for future generations preserves the natural resources" (Deutscher Bundestag 1949, Article 20a; own translation). Especially through such changes in law- and policymaking, new technological possibilities for research and the activities of civil society, Germany in sum, despite of the priority shift after reunification managed to further improve its role as a leader in environmental protection and policies in the early 1990s (Feindt 2002).

Important climate research institutions, such as the *Potsdam Institute for Climate Impact Research* in 1992 and the *Wuppertal Institute for Climate, Environment and Energy* (1991) were founded at the dawn of the Rio Earth Summit in 1992 (PIK 2015b; Wuppertal Institut 2013). In the German scientific landscape as well as in international climate change research, these organizations still today play outstanding roles. Among the 100 most active and effective climate think tanks worldwide, the PIK ranks 5th and the Wuppertal Institute 45th (ICCG 2014). Through research and data of such institutions in Germany, which has with

very few exceptions generally been perceived as reliable, scientific actors have provided the basis for securitizing moves of civil society and other actors from then on (Krück et al. 1998). Apart from that, Klaus Töpfer, who later was also designated as the executive director of the United Nations Environmental Programme (1998-2006), became minister of the environment of the Kohl government from 1987 until 1992 and the Alliance 90 and Green Party through unification emerged as a stronger political actor (Ağcı 2010). On the other hand, in 1992, a growing opposition to a CO2 and energy tax was lobbying on behalf of its own interests (Damm 1996: 25). Therefore, in the context of the Rio Summit in 1992, Germany was one of the last industrialized countries to submit a formal strategy of sustainable development in terms of the Agenda 21. In the European context, there was at the same time a domestic German opposition against the implementation of regulations of the European Community (Jensen 2009; Beck et al. 2009: 16).

Despite of it's on the one hand reluctant attitude during the 1990s, Germany had also initiated the independent "German Advisory Council on Global Change" (*Wissenschaftlicher Beirat der Bundesregierung für Globale Umweltveränderungen, WBGU*) as an expert advisory council in 1992. The council had the task to analyse global environment problems and report on these, initiate new research and elaborate recommendations for action. It was also obliged to issue reports every two years and was free in choosing the subject areas of these (WBGU 2014). The WBGU set a milestone in the securitization of climate change nationally as well as internationally in 2007, as will be explained later. As another important and influential institution, only three years after its foundation, the Wuppertal Institute on Climate, Environment and Energy published the influential study "Sustainable Germany" (*Zukunftsfähiges Deutschland*). The study was commissioned by BUND and Misereor and meant to support the process of the implementation of the Agenda 21 that required a yet underdeveloped expertise. The early collaboration of semi-state financed research organizations such as the WBGU and the Wuppertal Institute and humanitarian-environmental NGOs displays the rather unusual closeness of such organizations to state institutions and their continued possibilities to influence policymaking at least during that period.

The increasing importance of the climate change discourse in Germany during the 90s and after the turn of the millennium has to be regarded against the background of an important change of government in 1998, when a Red-Green Coalition government came to power and

lasted for two legislatures until 2005 (Ağcı 2010). Studies and publications by scientific and non-governmental organizations in Germany continued to play a role and now addressed an easier accessible and open government, which further nourished the climate security discourse. In 1998, after their election, the coalition under chancellor Schröder attempted to overcome the relative standstill in climate policies that had prevailed since re-unification (Beck et al. 2009: 17). The nuclear phase-out, together with new climate policies and laws, such as the renewable energies law, the regulation on energy consumption reduction and the ecological tax reform that began in 2000 became an important pillar of the "Ecological Modernization" of Germany. At the time that the programme was implemented, pushes and pulls on the nexus of economic competitiveness vs. ecological and sustainable policymaking reappeared between different lobby groups. However, the years from the turn of the millennium until 2005 were not marked by disruptive or strong securitization attempts of scientific or civil society actors. This has rather been a long-haul regarding attempts of securitization, which can be explained by the fact that the government was already acting itself quite determinedly. The period was marked by the climate-change and energy law-making and institutional changes of the Red-Green Coalition government. The various actions taken by the government and the recognition of a necessity to act rendered securitization attempts for securitizing actors rather futile (Weidner/Mez 2008: 359). Additionally, it was the time of the implementation of the Kyoto Protocol, that was agreed on in 1997 (Werland 2012: 55). Climate change was therefore approached technically rather than from an alarmist perspective of securitization. Parallel, also the international climate policy process had slowed down in this period: In 2001, the Intergovernmental Panel on Climate Change (IPCC) had published its 3rd assessment report at the 6th Conference of Parties (COP) in Marrakesh in 2001, and the 4th report was being prepared to be published in 2007 (IPCC 2007).

Exemplary for the fact that climate security arguments were rather unwelcomed in this period was the publication of one of the rather rare reports at that time on climate change and security, "Climate Change, Environmental Stress and Conflict" (Brauch 2002). The report was conducted in collaboration of the "Working Group of Peace Research and European Security Policy" (*AG Friedensforschung und Europäische Sicherheitspolitik, AFES Press)* and the German Think Tanks *Adelphi* and *Ecologic* for the German Environmental Ministry (BMU). The report was presented at the UN Conference of Parties in Marrakesh and later published under the auspices of the BMU (Brauch 2002). At the UN conference, the authors were blamed to shift the focus away from mitigation policymaking to a focus on adaptation

by employing the notions of conflict and security (Interview 2014m). Accordingly, until renewed attempts of securitizations of climate change parallel to the international discourse that started in 2005, no further notable climate security narratives or attempts to securitize climate change emerged in Germany.

On the eve of the COP 15 in Copenhagen (2009)

A decisive trigger for attempts to securitize climate change increasingly from the mid-2000s onwards was the coming climate conference in Copenhagen in 2009 that was perceived as an important opportunity and possible turning point in the process of the international climate negotiations. However, while some actors consciously acted in this strategic mind-set, others just appeared within an emerging discursive cloud of climate-security framings after 2000. For example, the Hollywood Blockbuster "The Day After Tomorrow" was released in 2004 and affected a huge audience around the globe (Leiserowitz 2004), including Germany (Becker 2004) and even appearing in German parliamentary debates on climate change (Loske 1999). Furthermore, the initiated and renewed focus on climate security and the "climate catastrophe" occurred in the aftermath of natural disasters such as Hurricanes Katrina (2005) in the US. The Hurricanes drew attention to the catastrophic effects of climate change that happened not only in unstable regions and societies, but also threatened the industrialized world (O'Brien 2006). Shortly after Katrina, the publication of the Stern Report on the "Economics of Climate Change" (2006) and the shared Nobel Peace Prize for the IPCC and Al Gore for his movie "Inconvenient Truth" of 2006 (Weidner/Mez 2008: 371; Gibbs/Lyall 2007) further disseminated the perception of climate change as a threat to a broader national and international audience.

As a consequence, in Germany, a number of civil society actors that had until then not focused on climate change shifted their focus – sometimes out of conviction and sometimes out of opportunity – and put climate change on their agenda[2] (Interview 2014a). For example, from 2005 onwards, the climate NGO *Germanwatch* started to publish the influential and annual "Climate Change Risk Index" and the "Climate Change Performance Index" (Germanwatch 2015, 2014). In the German insurance sector, several foundations that were assigned the task to deal with the security implications and risks of climate change were founded at the same time[3]. However, parallel to this accumulation of events after 2005, the

[2] e.g. Mercator Foundation, Diakonie Katastrophenhilfe, among others
[3] e.g. Munich Climate Change Initiative; Allianz Environmental Foundation

Red-Green coalition government lost the elections and the Green Party quit the Coalition Government (Baus: 166). This added to the fact that actors of securitization in Germany felt even more bound to take action and raise awareness of climate change as a security issue (Interview 2014b, 2014c). Summing up, a gathering and growing cloud of national and international attempts to securitize climate change, paired with natural disasters and climate phenomena that were analysed and projected with ever improving methods and techniques had a triggering effect on the public discourse and resulted in a new and stronger wave of successful climate change securitization in Germany after 2005.

The climate-security discourse reached a peak in 2007 and developed parallel to the international, EU and US climate-security discourses (Hayes/Knox-Hayes 2014). In particular, the report of the Scientific Council on Global Change (WBGU) on "Climate Change and Security" (WBGU 2007b), which was published almost simultaneously with the Fourth Assessment Report of the IPCC had a huge impact nationally as well as internationally. The two influential studies were surrounded by a series of seemingly coordinated and orchestrated smaller publications, events and alignments and led to a further formation of actors in Germany that made strong attempts to securitize climate change (Richert 2012). Likewise in the media and public, the climate-security argument was represented more massively than ever before (Norck 2012: 27). Events such as the G8 summit in Heiligendamm in Summer 2007, the German EU Presidency of 2007 and the "17th Forum Global Issues" in the Federal Foreign Office were held with a special focus on climate change as a security issue (Richert 2012; WBGU 2007b; Norck 2012; BMUB 2015; Auswärtiges Amt 2008). Germany already then demonstrated a framing of climate security that was characteristic and different from other countries and especially the US. In Germany, the military and defence sector explicitly played no important roles. Development and foreign policy were at the fore, as will later be explained in the section on the dominant securitization discourses.

Due to the increased attention and financial support that the climate change received, 2007 was also the year of the foundation of the "Climate Alliance" (*Klima-Allianz*) in Germany, an NGO platform that aimed at coordinating the actions of climate organizations (Interview 2014b). Likewise, the Climate Action Network (CAN), an international umbrella organization and the "German Climate Consortium" (*Deutsches Klimakonsortium*, DKK), a consortium of scientific organizations, were founded in 2008. Together with the increased attention, the UN climate conferences in Bali (December 2007) and the preparation of the Copenhagen Summit

in 2009, the notion of *climate catastrophe* ("*Klimakatastrophe*") reappeared in debates in the parliament as well as civil society and insurance sector (Jäger 2010: 10; PIK 2007; Germanwatch et al. 2013). Accordingly, the notions of "climate change" (*Klimawandel*), "climate protection" (*Klimaschutz*) and later also "climate migration" (*Klimamigration*), "climate refugee" (*Klimaflüchtlinge*) (WBGU 2007b: 124; Greenpeace 2007; Brot für die Welt 2010) and "environmental refugee" (*Umweltflüchtlinge*) became popular. In 2007, the Society for the German language declared the notion of "climate catastrophe" as "Word of the Year" and argued that it represented concisely the "dangerous developments that climate change induced" (Die Welt 2007). The notion of "environmental refugee" for the first time had been employed in a study of the United Nations Environmental Programme (UNEP). NGOs such as Greenpeace used the term in attempts to securitize climate change from individual security perspectives (Jakobeit/Methmann 2007; Brot für die Welt 2010; Germanwatch et al. 2013).

However, not only NGOs but also scientists and governmental organizations with a focus on climate change and/or security produced publications on climate change as a threat increasingly after the mid-2000s - all from their own specific perspectives on the issue (Interview 2014j). For example, the German Society for International Cooperation (GIZ) was assigned by the Federal Ministry for Economic Development and Cooperation to publish a report on "Climate Change and Security – Challenges for German Development Policy" (GTZ 2008a). Furthermore, the influential "German Institute for International and Security Affairs" (SWP) setup a research programme on "Climate Change as a Security Problem" (2009 to 2011) that produced numerous publications on German, EU and International Climate Security Policies (SWP 2011). Again in 2007, in the framework of the Excellency Initiative of the Federal Government that aimed at quality research at universities, the Excellency Cluster "Clisap" (Climate System Analysis and Prediction) was founded in cooperation with the Helmholtz Society and Max Planck Institutes, both leading research organizations in Germany (Clisap n.d.). Apart from several other publications, CLISAP´s anthology "Climate Change, Human Security and Violent Conflict" (2012) represented a comprehensive and detailed analysis of the field with an emphasis on "human security" and therefore the threats that climate change posed to the individual level (Brauch/Scheffran 2012).

A discursive Shift after Copenhagen

Regarding the further evolution of the climate change – security discourse after Copenhagen, a discursive shift took place after Copenhagen that for many actors was characterized by "less alarmism and securitization and more objectification" (Interview 2014e, 2014d; BAMF n.d.). Not only for the public, but also especially for many actors involved in its preparation, the Copenhagen Summit turned out to be a disappointment. This was also why the climate security framing and urgency that had been attached to climate change debates beforehand for many actors lost its attraction after Copenhagen (Interview 2014e, 2014f). Mostly out of strategic considerations or intuition, actors after Copenhagen proceeded communication on climate change from rather technical perspectives and tried to provide concrete and directly usable manuals to policymakers[4], of which some turned out to be important blueprints for the German Energy Turn (Interview 2014e). However, even if the climate security framing and climate change discourse in general lost some attraction in public and media debates, as a consequence of the successful securitizations from 2005 to 2009, the climate change security discourse had entered the policy sphere and was integrated in policy planning. Even if German Ministries only slowly began to coordinate among each other on issues of climate change and security (Interview 2015a), climate change had become an important pillar of development policies, foreign policy and energy policy. This will also be outlined in the section on the legitimized policies of this paper. Showing that climate change had entered the political sphere as an important issue, Foreign Minister Steinmeier for the first time declared climate change as an issue of National and International Security at the International Munich Security Conference in 2008 (Ederer 2007: 2). Similarly, Minister of State Gernot Erler, in the framework of the G8 summit in Heiligendamm in June 2007 stated that "We don't face a classical enemy, but we are in the act of rendering ourselves to be our own enemy" (Bundesregierung 2009).

Climate Change Securitization Discourses on the national and international level

Apart from analysing climate change securitization at the national level, it is an important task to reconstruct which actor, report or initiative in one country affected other countries or institutions abroad. Regarding this question, several instances of German actors influencing the international debate can be observe. Generally speaking, a discursive impact and influence exists in both directions – from the international to the national and from the national to the international level. For example, Great Britain's then foreign Minister Margret Beckett (2006

[4] such as the WWF Study "*Modell Deutschland – Vom Ziel her denken"*

– 2007) as well as her successor David Miliband (2007 – 2010) had a strong influence on the international, European and German climate security discourses (Scott 2012: 221; Richert 2012; Interview 2014o). When it came to climate change and security, the British were quite frequently referred to in German parliamentary debates. Especially, references were made at initial stages of securitizing moves such as the publication of the WBGU study (WBGU 2007b). After British economist Nicholas Stern had calculated the immense costs of climate change and by doing this altered the climate change security discourse from an economic perspective (Stern 2006) then foreign minister Margret Beckett declared climate security to be one of the highest European priorities (Richert 2012). In Berlin, Beckett held a keynote address on climate change security in the British embassy on 24.10.2006 (Richert 2009). Especially the stern report has been frequently cited in German NGO and think tank reports and parliamentary debates. In early 2007, the British also managed to put climate change on the agenda of the United Nations Security Council (Richert 2009), which then also triggered and supported already well-known publications such as the WBGU study "Climate Change as a security risk" (WBGU 2007b). From 2007 onwards, Germany - affected also by the international climate security discourse - was determined to take up a key and forerunner role in drawing attention on climate change.

An important securitization attempt from the German side on the international level was the Speech of Hans-Joachim Schnellnhuber, the Director of the Potsdam Institute for Climate Impact Research (PIK) and former advisor to then Environmental Minister Angela Merkel in climate policy (1994 – 1998) at the UN Security Council in 2007. He was one of the main speakers together with World Bank President Rachel Kyte and the UN General Secretary Ban Ki Moon (Germanwatch 2013b). Schnellnhuber as the director of the Potsdam Institute of Climate Impact Research has been regarded as one of the most prominent, but also contested German climate scientists. Apart from being the chairman of the WBGU, he has several other functions in the climate policy field and therefore plays a key role in the securitization of climate change in Germany, as will outlined in the section on the dominant actors of securitization.

Another German initiative on the international level was led by a delegation of the Federal Foreign Office, the German Government, Adelphi and other partners. They initiated a full-day debate on climate change and security at the UN Security Council in 2011 (Weinlich 2011; Auswärtiges Amt 2014), similar to the debate that Great Britain had initiated in 2007. The

initiative was supported by some of the Western Security Council members as well as Russia and China. Germany clearly stated that the initiative was neither aiming at a direct action of the council, nor at replacing the international climate policy process. It was rather motivated by the discussion of the opportunities for the prevention of conflicts and the critical aspects of climate change (Weinlich 2011).

Regarding the European level, parallel to the peak in the German and international climate security discourse, the climate change-security debate has been on the European agenda since 2007 (Geden 2009). Such as in Germany, European discourses emphasize scientific findings and themes of opportunity and leadership rather than mere national or regional security implications (Hayes/Knox-Hayes 2014: 82). Climate change and therefore also climate security has in the European context also been regarded as an issue that has the potential of uniting European policymaking for a global cause and therefore also contributing to a pan-European identity. Climate change expands the role of the EU as a domestic and international actor: "The EU has no competence in foreign affairs, whereas the environment is a competence. Climate change legislation has to some extent unified the EU… even in the UK, in which is more (EU) sceptical and conservative, there is acceptance to fight climate change…" (Hayes/Knox-Hayes 2014: 93). By employing climate security discourses, Germany, Great Britain and the EU tried to profile themselves as the driving forces in the international climate change debates in the important year of 2007 and afterwards, when at the Bali Climate Summit in December the future of international climate policies after Kyoto was on the agenda (cp. Richert 2012). Then foreign ministers Frank Walter Steinmeier and David Miliband together issued a contribution for the German Federal Foreign Ministry in which they underlined the role and importance of the European Union within the process of international climate negotiations, drawing also attention to the security implications of climate change. As will be documented in the section on the dominant actors of securitization also, many NGO actors and think tanks that have pursued attempts to securitize climate change on the national and European level are networked very well among each other. The lines between the German and the European climate security discourses therefore at times also appear blurred and overlapping (i.e. Adelphi; European Climate Foundation; CLICO).

Summing up the process of climate change securitization in Germany and the international context, I assert that climate change has been securitized successfully in Germany, the EU and on the international level from the mid-2000s. However, different from the securitization in

the US, in Germany it was not framed mainly on the territorial security level but rather on the human and planetary security framing. Actors did not belong to the military or defence sector but rather had a scientific background or were engaged in environmental protection and development policy. The securitization attempts and the distinct climate security discourses that these actors put forward had an impact on the kind of discourse that later decision makers promoted also on the international level. Likewise, policies that have been partly legitimized by the specific German climate security discourse can be traced back to the specific German climate-security framing. In the following section (4) on the Dominant Climate Security Discourses, this specifically "German" framing of climate security will be explained before (5) presenting the main and dominant actors of securitisation in Germany, analysing the (6) policies that were legitimized by these specific securitization discourses and the (7) preconditions and context for the successful securitization in Germany.

4. Dominant Securitization Discourses

In Germany, the country-specific securitization discourses are different from countries such as the USA, Mexico or Turkey, but not so much from the European climate security discourses (Hayes/Knox-Hayes 2014; Cass 2008). European and German climate security discourses diffuse and influence each other extensively, as also sometimes actors have functions both on the national and the European level (i.e. Clico; Adelphi; European Climate Foundation; Mercator Foundation) and strong cooperation's between both levels exist.

With regard to the *dominant securitization discourses*, it is not arguments on the territorial level, such as in the US case, but rather discourses on the individual and planetary level. Still, even if Germany has generally been more cautious in presenting climate changes as a threat to territorial security, there has been an increasing awareness of this dimension especially with regard to the melting arctic (Bundeswehr 2014; Federal Foreign Office 2015 (2015b)). However, generally the focus has been on weak and threatened individuals in weak states as *referent objects* (e.g. WBGU 2007b: 139–164; Jakobeit/Methmann 2007; Planungsamt der Bundeswehr 2012; GTZ 2008b). The territorial security or risks of Germany as a nation state and its inhabitants is - at least in the first place - not presented as threatened. The perception of risks and security challenges addresses rather far regions, which are regarded to be future hotspots of climate change such as Africa, Central Asia or the small Island states (i.e. WBGU 2007b; Planungsamt der Bundeswehr 2012). This framing becomes obvious in the statement

of German diplomats, who were concerned about how to convince decision makers in Africa that climate change is a security threat and challenge for them (Interview 2015a). When compared to the U.S. case (cp. Lucke 2015), the German discourse seems rather "objectified" in the sense of relying on a broad basis of scientific data while at the same time being articulated less alarmist and patriotic. This is partly because scientific and civil society actors do not regard the invocation of "Horror-scenarios" as useful for their aims of policy change[5], whereas American actors have less hesitantly used rhetorical overstatements in their framing of climate change as a security threat (cp. Fischer 2014). Exemplary for the German attitude the following statement of a director of a German Climate NGO, who argued that: "We do not want to address the human reptile brain, but the cerebrum. If we address the reptile and invoke fear, the reaction will be a crude panic-reaction that may destroy more than it is going to help us" (Interview 2015b).

What is generally being put forward by securitizing actors from science, civil society and politics is a sort of "good global citizen"-attitude, as one expert called it (Interview 2014l), that rather obscures and deceives a self-interest and national or territorial security thinking. The perception and attitude to do good is connected to what has also been called a German political culture of "guilt", that has especially been fostered after the second World War (Berger 2012a). In line with this thinking and attitude of a rather reserved, peaceful and "soft" German Foreign and Security Policy, also no distinct emergency measures for protection, apart from mitigation and adaptation, have been proposed (cp. WBGU 2007b; Planungsamt der Bundeswehr 2012; Auswärtiges Amt 2008). Especially aspects of defence and military measures in this regard are rejected and rather tabooed. One of the few public reports of the armed forces in Germany in this regard typically addressed distinct hotspots, as the WBGU had already done in 2007. It was prepared by the section "Foresight Analysis" on "Climate Consequences in Context – Implications for Security and Stability in the Near East and Africa". In the report, the Bundeswehr distances itself from any kind of military action (Planungsamt der Bundeswehr 2012: 133) as the following citation illustrates:

> "Supporting resilience of external actors is in the first place not a military task, but a challenge for the whole of society. For the armed forces, the tasks derived from this study is the support of an all-encompassing policy approach" (Planungsamt der

[5] Interview with Government and NGO representatives on 09.01.2014 in Berlin; Interview with an NGO representative on 19.01.2015 in Bonn

Bundeswehr 2012)

Ranging from civil society organizations to the foreign office and the armed forces, the individual security dimension that is being put forward by actors includes the identification of risks and threats such as water and food scarcity. These are mainly regarded to happen in spots such as Africa, Central Asia, the Middle East or Small Island States. Therefore also, mainly preventive measures and further development and mitigation policies are proposed in this regard (Planungsamt der Bundeswehr 2012: 133; Auswärtiges Amt 2008).

Regarding the influential WBGU Study of 2007, it also mainly draws on individual security arguments and emphasises the risk dimension (cp. Brzoska 2009; WBGU 2007b). However, as already mentioned before, the *territorial dimension* has also appeared in the German climate security discourse, but in the German case does not address the armed forces such as in the US case. Furthermore, it is much less frequent than for example in the US case:

> "As a threat multiplier, climate change can exacerbate existing conflicts, for example over access to resources. Extreme weather events caused by climate change, such as tornadoes, drought and floods, and their impact (conflicts triggered by food and drinking-water shortages and migration) have the potential to destabilise entire regions. Rising sea levels and the resulting loss of territory also harbour considerable potential for conflict." (Federal Foreign Office 2015b).

Apart from the few publications of the armed forces or other ministries (Federal Foreign Office 2015b) we have found evidence for the territorial security discourse mainly in parliamentary debates (Kelber 2004). However, contrary to the US case, there is no discussion about a distinct role of the military other than stabilization. Here too, the lack of security focused think tanks and the presence of a multitude of humanitarian, development, environmental and church organizations is displayed. An apocalyptic scenario as has frequently been put forward by American actors about so called "impoverished masses outside fortresses such as Europe and the US" (cp. Fischer 2014) is rather unpopular and not frequently - if ever - employed in Germany. A statement such as the following represents the more cautious German attitude that is rather down to earth:

> "There won't be any masses that will pour into Europe as a consequence of climate change. Most of them don't want to leave their homelands and they also do not have the capabilities to do so." (Interview 2014i)

Another quite strong distinction can be made between Germany and the other cases when it comes to the planetary discourse, which is relatively strong and frequently articulated by church and development organizations such as Misereor, Diakonie Katastrophenhilfe, and Bread for the World (*Brot für die Welt/EED*). These organizations emphasize the responsibility of mankind for creation, i.e. the whole planet and not solely states or human individuals or societies. At the same time, they stress the notion of climate justice (cp. EED/Brot für die Welt 2009: 12) and in relation to this frequently food security (Bals et al. 2007; Diakonie et al. 2011). The related issues of climate migration and refugees have also been discussed by these organisations (Brot für die Welt 2010; Germanwatch 2013a) and finally also the political debate has been influenced by this. An example for this discourse is the following:

> Climate change affects us all, but not equally. Climate change is more than an environmental issue; it is primarily a matter of global justice and equity.
> (Misereor 2008, own translation)

Apart from that, the German climate change securitization discourse has been coined by formulations that emphasize the risk dimension rather than the security dimension of climate change. Especially in earlier parliamentary debates until 2005 and then again after 2009, the risk dimension appeared to be dominant. Long-term perspectives rather than short-term security concerns have been mainly put forward with this framing. Also, distinct regions and communities at risk have been addressed and adaptation together with mitigation measures have been proposed as policy measures. The central message of the WBGU in its 2007 report illustrates this viewpoint: "Without decisive action, climate change will overstrain the coping capacity of numerous societies (…) and may induce environmental migration" (WBGU 2007a , own translation). Similar to the WBGU, a number of studies that addressed climate change as a security issue have based their argumentation mainly on the climate risk dimension. The representation of distinct and concrete security threats that would emphasize a security dimension especially on the territorial level have not been put forward.

Considering the parliamentary debates and development of climate security discourses in Germany, climate security was debated as early as in the beginnings of the 1990s, when the rhetoric on the "*climate catastrophe*" and the "*climate death*" (*Klimatod*) emerged and was taken up by parliamentarians.

Generally, one can distinguish the climate security discourses in German parliamentary debates into at least three different phases: (1) 1990 – 2003, (2) 2003-2007 and (3) 2007 – 2013. In the period of 1990 – 2003, and especially during the 1990s, concepts like "Klimatod" and "Klimakatastrophe" have often been articulated in relation to climate change in the German parliament. However, threats to individuals, countries or the planet have seldom explicitly been mentioned. It has been left open what exactly is meant by "Klimatod" or "Klimakatastrophe". During this first phase of parliamentary debates on climate change, speaker almost exclusively centred on measures to be taken, such as CO2 emission reductions. Furthermore, the debates have been marked by an opposition – government divide. Starting in 1998, debates centred on mitigation and adaptation measures and seldom engaged in principle discussions on the negative impacts of climate change. During this time, when the Red-Green coalition government took power, politicization rather than securitization seemed to remain dominant.

Starting in 2003, securitization on the territorial level found its way into German parliamentary discourses. The Pentagon study on climate change and security was referred to by German parliamentarians such as Reinhardt Loske (Green Party) who was at the same time working for the Wuppertal Institute of Energy, Economy and Climate and also later referred to in parliamentary debates and reports (Deutscher Bundestag 2008). Still in general, references to individual security have been most frequent, whereas references to planetary were less frequent. It appears that these securitizations and riskifications have mainly been used to signify the importance of countering climate change; they are an argumentative tool used to support the politicians' argument. They are thus not used to justify extraordinary measures or even other measures than those presented in other climate security articulations on the individual and planetary level.

In the period from 2007 onwards, adaptation measures have increasingly been mentioned in parliamentary debates. Furthermore, increasingly studies have been cited that showed the negative impact of climate change on Germany and Europe**.** Actors started to link

securitizations and riskifications to specific measures (albeit non-military ones). Hence, different from the previous period, now the climate security discourses directly addressed possible measures. Furthermore, as the measures became more specified, their influence on politicians increased. Summarizing the overall influence of climate security discourses that have been started by scientists and on parliamentary debates, the NGO-reports played a very important role in framing them. Nevertheless, measures are only seldom influenced by these arguments (for example, none of the politicians use territorial securitization to justify military interventions).

Due to its framing of climate change as a long-term challenge, which cannot be met by short-term interventions or planning, the German debate, already in the 1990s and still today, focused rather on mitigation measures and technical questions than on adaptation – at least in a national context. The lack of a strong territorial security dimension and the emphasis on risk and the individual level in Germany can be supported by the fact that actually a consensus that something has to be done about climate change has already been achieved in Germany.

Summing up, the German climate change securitization discourse reflects the rather cautious and soft power foreign policy that Germany has been known for since the end of the cold war (Berger 2012b). While it is possible to identify the general and country specific trends that have been outlined in this section, climate security discourses can also be differentiated between different sectors and divided into scientific, civil, bureaucratic and parliamentary securitization discourses, which will be a task for additional and further research.

5. Main Actors of Securitization

This section will account for the most influential and successful actors of securitization in Germany. They encompass science, civil society, insurance companies, media and political actors (Weber 2008: 59) and have also been regarded as "norm entrepreneurs" (Finnemore/Sikkink 1998). Compared to other countries, environmental actors in Germany are more pluralistic and especially the German Green Party has played a more prominent role in the securitization of climate change and the environment in Germany than elsewhere (Schreurs 2002: 7). Within our research project, the media has rather been regarded as a facilitating actor. It has influenced national policy responses to climate change and can be regarded to have broadly affected translations between science and policy. The extensive

coverage of global warming and climate change from the late 1980s created public concern and amplified calls for political action (Weingart et al. 2000: 261). Keeping this in mind, we have regarded the media as an amplifier rather than a discursive entrepreneur of securitization. Likewise, we have largely not taken the economic sector into account. Only German insurance and re-insurance companies that have been identified to undertake securitizing moves on the national and international level have been included in the analysis. Furthermore, securitizing speech acts on the government level, i.e. in parliamentary debates or speeches have rather been counted as follow-up and an outcome of previous securitizations of other actors and not initial securitizing moves. While initial moves have mostly been undertaken by scientists, environmental activists and NGOs and have taken policymakers as the target audience, policymakers have become securitizing actors only in a second step. This is why we located them mainly in the sections on the "dominant securitization discourses" and "legitimized policies". However, there are interesting overlaps of individual actors of securitization who pursued attempts in different contexts such as science, civil society and parliament at the same time that will be referred to. Lastly, as it is the nature of a discourse, the participating actors and coalitions as well as the borders of what securitization is sometimes appeared blurred.

Regarding potential actors of securitization in Germany, there is a multitude of scientific research organizations, foundations, associations and related umbrella organizations (Wellmann 2014: 34). In a network analysis of the reports of actors in the German case that have been identified as important, the relevant publications on climate change of 66 actors have been analysed. The analysis of the reports and publications was conducted according to their references to each other. Important securitizing actors of the international level, such as the EU, UN and some influential American think tanks such as or CSIS have been included. Furthermore, also important and strategic individuals, such as Dennis Tänzler, Director of the International Climate Policy Unit; Hans-Joachim Schnellnhuber, Director of the Potsdam Institute of Climate Impact Research and Dirk Messner, Director of the German Institute of Development Policy (DIE) and Chairman of the WBGU, have been included. The analysis showed the actors or institutions that have been cross-referenced the most. Among these were in almost equal amounts the WBGU, IPCC, UN and EU. Apart from this, a second level that was most often addressed in the reports included the German Federal Government, the UN Security Council, the World Bank, and the German Society for International Cooperation (GIZ). Furthermore it included NGOs such as Oxfam and WWF.

Institutions, organizations or individuals belonging to the security sector, such as the Bundeswehr, have not turned out to be dominant. This mirrors the general perception of climate change as an issue that should be tackled by institutions of everyday politics, such as the Federal Government, and not emergency politics such as the military. The analysis, in comparison to the other country cases at the same time reflected the international orientation of the German climate-security debate, because it mostly addressed international organizations on the international level and on the national level mainly development organizations. For Germany, especially identified climate-security hotspots abroad have been successfully securitized – more than domestic spots.

Considering their numbers, more than 50 organizations that act along the climate-security nexus by conducting research, issuing publications and being present in the international climate change regime have been identified in the course of this analysis. More than 200 organizations have generally claimed to be active in climate protection in Germany or have been listed in climate change databases or networks such as the Climate Action Network CAN or the German Climate Consortium (DKK 2013). Furthermore, the capacity of German climate research and civil society organizations is due to different larger financial, technical and human resources far bigger than the one of countries such as Turkey or Mexico. Of course over time, actors can change. Some may disappear and others emerge. Some actors were more important during the first phase of climate change securitization in Germany while others emerged only during the second phase. However, regarding the evolution of the climate security discourse, it can also be traced by analysing the changing wording and argumentation of distinct outstanding actors such as Dirk Messner and Dennis Tänzler over time. While during the first phase, it was rather "environmental protection" and "environmental threats" (Carius/Lietzmann 1998; Crutzen 1996; Eberwein/Chojnacki 2001), during the second phase, this wording changed towards a more differentiated "climate protection", "climate threats" and "climate diplomacy" (adelphi 2012, 2013; Pieper 2011).

Regarding the starting point of climate security discourses in Germany, it was scientific actors who started it (Weingart et al. 2002). In politics, mass media and the public, the focus for a long time was on other environmental topics. However, between 1975 and 1995, reports on climate change in civil society as well as the media increased. Going back to the early 1990s, the German Physical Society and its warning on the "Climate Catastrophe" (DPG 1986) together with the echo in the media and the succeeding Enquete Commission and its members, such as scientist Klaus Heinloth, must be mentioned as the main securitizing actors

during the first and early wave of climate change securitization. During the second wave of securitization discourses, numerous actors attempted securitizing moves and increasingly became successful after 2000. Most outstanding was the report on "Climate Change as a Security Risk" (*Sicheitsrisiko Klimawandel*) of the German Advisory Council on Global Change (WBGU 2007b). Arguments put forward by scientific actors such as the DPG in the early days and later the WBGU, PIK, Wuppertal or Max-Planck Institute have often been taken up by civil society as well as governmental actors for their own securitizing moves.

The evolution of Germany´s climate change-security discourse has shown how actors and policies depend on each other and have partly also influenced one another. For example, because of the first German climate security discourse in the late 1980s and 1990s, a number of important research institutes, such as the Potsdam Institute for Climate Impact Research, the Max Planck Institute in Stuttgart and the Wuppertal Institute were established. Notably also, specialized security think tanks, defence organizations or ministries have not taken up the topic prominently and rather regarded it as a responsibility of the Federal Foreign Office on the state level. By doing this the reflected also the German notion of climate change being a security problem abroad that has to be addressed through foreign policy, diplomacy and development aid.

The PIK, Wuppertal Institute, CLISAP Excellence Cluster and the institutions and personalities included in their networks are dominant scientific players who are able to work at the nexus of (natural) science and policy. Research institutions such as the Helmholtz Society, the Max Planck Institutes and the German Climate Computing Centre (DKRZ) appeared to need actors who translate their findings for decision-makers and others and therefore did not appear as primarily securitizing actors in the analysis.

By the early 1990s, the German climate research system had become one of the best in the world and enabled an increased collection and analysis of data and knowledge (Interview 2014k). Scientific output in the form of data collection, modelling, processing and projections has generally been considered as reliable and was only rarely challenged (e.g.Die Weltwoche 2010). This is also mirrored in the frequent references made to the Potsdam Institute for Climate Impact Research, the German Meteorological Organization (DWD), the Wuppertal Institute (Enkelmann 1995), Helmholtz-Centres or Max Planck Institutes by actors who purse securitization in Germany. In Parliamentary debates on climate change in which moves to

securitize climate change have been attempted by a number of different parliamentarians, the Potsdam Institute for Climate Impact Research is one of the most cited institutions (cp. Schwabe 2009). Unlike in the cases of Turkey and Mexico, German actors who built their arguments of climate securitization on scientific data, do not have to rely on "foreign" findings and knowledge. Most of the German scientific and civil society actors share the distinct discursive consensus that climate change is a threat to valued referent objects, such as individuals, biodiversity or the ecosystem as a whole. A relatively small group of climate sceptics continues to follow the antithetic narrative that the climate catastrophe, global warming or climate change are lies produced by an overly hysterical coalition of national and international climate scientists (cp. Bachmann 2007; Vahrenholt/Lüning 2012) .

Regarding the dominant securitization discourses in Germany, they can be regarded as a mirror of the structure of actors. Both differ distinctively from the other country cases of our project. For example, church organizations and the planetary security discourse play a relatively important role, while at the same time security organisations or think tanks are together with the territorial security discourse relatively unimportant. Apart from the mass of scientific research organisations, it is environmental and development organizations who are the main drivers of the dominant German securitization discourse: the individual and planetary security.

Compared to other country cases, most German climate organizations are highly professionalized and mainly focused on climate change, such as the "Potsdam Institute for Climate Impact Research" (PIK), "Germanwatch", "Climate Analytics" and "Adelphi Consult" are actors that had strong securitizing effects, even if they have different structures, and strategies. Partly, these actors can be located on the state level. They are often financially supported by the Federal Government or the EU. Above all, the think tank Adelphi is the most important definitely securitizing actor in Germany. This is also due to its closeness to government institutions such as the Federal Foreign Office (Interview 2014n). Adelphi is also active on the European and International Level and one of the leading agencies for political analysis and strategy consulting with a focus on sustainability and global environmental- and development challenges. The agency realized over 500 projects for 100 clients during the past 10 years. Adelphi has been involved in attempts of securitizing climate change as early as from 2001/2002, when it carried out a study in cooperation with other partners on "Climate Change and Conflict" (Brauch 2002; BMU 2002). Several studies financed by the "Ministry

of Environment, Nature and Nuclear Safety" were carried out by Adelphi in the following years. Among them was the "Action Plan on Civil Conflict Prevention" (*Aktionsplan Zivile Krisenprävention*) that was published in 2004 - even before the most important period of securitization attempts started. The Platform on "Environment, Conflict and Cooperation" (ECC n.d.), a platform for climate change vulnerability and conflict emerged from this initiative and supported by the Federal Foreign Office (ECC n.d.). In the period of 2009 – 2010, Adelphi was responsible for the EU process "Roadmap on Climate Change and International Security" that had the goal to take the security challenges of climate change stronger into account within EU policies and programs. Furthermore, in 2014, interested G7 members commissioned an international consortium consisting of International Alert, the Woodrow Wilson International Center for Scholars, the EU Institute for Security Studies and Adelphi as lead in order to conduct an independent study on climate change and fragility and establish an open online platform to share and disseminate the collected knowledge and research. The study and platform has been launched in May 2015. Regarding the civil society sector, mainly internationally acting NGOs such as Greenpeace and WWF are capable of producing knowledge on climate change, including the security perspective. An example is the 2013 Greenpeace study "*Point of No Return – the massive climate threats we must avoid*" (Greenpeace 2013) and the dramatic report on climate refugees that explicitly emphasized individual security (Greenpeace 2007).

Individual Actors

Even if unlike other country cases such as Turkey (cp. Wellmann 2015) there is a comparatively high level of institutionalization, professionalization and routine in Germany that would imply a rather weak influence of single actors on the whole machinery. However, the role of individual actors in the climate-security discourse should not be underestimated. Looking closer at a number of attempts to securitize climate change, key individuals that have participated in the debates over longer periods of time in different functions and roles and not necessarily within an institutional framework but rather a personal belief system can be identified. Correspondingly, the network analysis described before has carved out some of these individuals. Still, some individuals have been that much united with their respective institutions, that they rather stay invisible. Undoubtedly, Hans-Joachim Schnellnhuber, director of the Potsdam Institute for Climate Impact Research, is a main securitizing individual actors who has also been criticized as no other for his partly exaggerated and alarming speeches. Schnellnhuber has not only national but international influence. On 15th

February 2013, he spoke as the only participating scientist at an informal meeting of the UN Security Council on climate change (PIK 2013). Earlier, he also participated in a visit of international climate scientists to inform the White House and then President George W. Bush on international climate policies in 2004. For many years, he was advisor of the President of the European Commission, José Manuel Barroso (PIK, n.d). From 2007 onwards, he became the Chief Advisor to the Federal Government on Climate Change during the German Presidencies of the G8 and the Council of the European Union and was at the same time director of the WBGU and PIK (PIK 2015a). On 17th April 2013, Schnellnhuber was invited as the only scientist to hold the inaugural speech at the preparatory conference of the EU commission for the UN Climate Conference in Paris in 2015 and inform about the recent state of climate research. In Summer 2015, Schnellnhuber presented the "Laudatio Si" together with the Pope on his concerns about the environment at the Vatican in (Vatican 2015; Der Tagesspiegel 2015).

Church- Humanitarian and Development Organizations

Apart from environmental NGOs, scientific organizations and think tanks, a huge number of development and church organizations in Germany has participated in the climate change-security discourse,. Among them are "Diakonie Katastrophenhilfe", "Misereor", "Brot für die Welt" and "Oxfam". As influential development organizations, the German Society for International Cooperation (GIZ) as well as the German Institute for Development Policy (DIE) have coined the climate-security discourse, also through the fact that they were partly included in the work of the WGBU and other securitizing institutions and initiatives. Another important factor that is special and noteworthy for the German case in comparison to the other cases is the influence of the Green Party that was already mentioned as an important player. For the Green party, foreign and security policy, among other important issues, also means the "handling of the climate catastrophe" (BÜNDNIS 90/DIE GRÜNEN Bundestagsfraktion 2014).

Insurance Sector

Even if they are not the focus of this research, the role of (re-)insurance companies as important actors in the securitization of climate change in Germany and the world has to be taken into account especially in the German case. As economic organizations, insurers have decisive financial capacities. German insurers and re-insurers own a decisive share in the international insurance market (Statista 2015). The world's largest re-insurance group,

MunichRE, is a German company and with a net premium of 36.797 Million Dollar (2013), which is already 20 per cent more than the second largest (SwissRe with 30.478 Million US Dollar net premium) and double of the third largest re-insurer, the German Hannoversche Rück with 17.101 Million US Dollar in 2013 (Risk Management Monitor 2011; Statista 2015). Only 20 years ago, Munich Re stated that it is "a business organization that cannot act political" (Die Welt 2013). This seems to have changed over time. In the meantime MunichRe started to connect and cooperate with environmental organizations in the country (e.g. United Nations University; Germanwatch or PIK) and even initiate two own foundations or initiatives that work on environmental matters and climate change and support the PIK also financially (Die Welt 2013). MunichRe´s Geo Risk Research Unit has been researching and documenting loss events caused by natural hazards around the globe for more than 40 years, thereby creating a database that is unrivalled by others and contains the world's largest data base on natural disasters (Höppe 2008; Die Welt 2013; MunichRe 2016). Already before the publication of the popular Stern Review in 2006 (Stern 2006) it was according to MunichRE representatives obvious for the insurance sector that climate change was not only an ecological but also an economic problem and risk that has to be managed and tackled also by insurers and especially re-insurers (Höppe 2008). As a consequence, also non-profit organizations and research units have been founded by insurers. Non-profit organizations related to German insurance companies are for example the MunichRe Foundation (MunichRe Foundation) the Munich Climate Insurance Initiative (MCII)), the Allianz Environmental Foundation (*Allianz Umweltstiftung*) or the German Insurance Federation (*Gesamtverband der Deutschen Versicherer, GDV*). The Munich Climate Change Insurance Initiative was initiated by MunichRe in April 2005 in response to a growing awareness of the role of insurance solutions in the adaptation to climate change, as was also suggested in the UNFCCC and the Kyoto Protocol. The closeness of these companies and organizations to the climate change negotiation and policymaking process is reflected in various instances. MunichRe, for example, has accompanied the climate negotiations, latest in Warsaw in 2013 (MunihRe 2015; Die Welt 2013). Furthermore, Hannoversche Rück has published a series of reports on emerging risks and on climate change (HannoverRE 2013). Likewise the Munich Re Foundation has conducted the 7-year long study "Addressing Loss and Damage in the Context of Social Vulnerability and Resilience" in cooperation with United Nations University. The study was presented at the climate conference in Doha 2012 (UNU-EHS 2012/2012). The options and role of the insurance industry has been examined in several studies ever since the sector became increasingly aware of the "potential" (Die Welt 2013;

Loster 2005). Especially MunichRe's influence can be traced in documents that represent attempts to securitize climate change. The Munich Climate Change Initiative (MCII) is mentioned in government documents such as the German Adaptation Strategy of 2011 (Die Bundesregierung 2008/2008). Furthermore, the German Insurance Federation GDV has been warning of an accumulation of extreme weather events for years and was referred to by the Federal Government in 2015 (Die Bundesregierung 2015). Obviously, there are many mixing points of the insurance, civil society and science sector when it comes to knowledge transfer and sharing. For example, the PIK has conducted a study on the financial damages caused by climate change in the German Insurance Sector ("*Auswirkungen des Klimawandels auf die Schadensituation in der Deutschen Versicherungswirtschaft*") for the GDV (GDV 2011). Furthermore, Christoph Bals, managing director of Germanwatch, is at the same time Vice-Chair Member of the Board of MCII (MCII 2015). GIZ, WBGU, PIK and publications of other actors cite MunichRE for data on for example natural disasters that has been collected (PIK 2007; Wissenschaftlicher Beirat Globale Umweltveränderungen 2012; PIK 2007). Other studies that refer to insurance data (of MunichRE from the 1980s on) are for example "Climate Change, Food Security and the Right to Adequate Food", (Diakonisches Werk der EKD e.V. et al. 2008, 2008: 64), a study of the Federal Ministry for Development and Economic Cooperation on "Climate Change and Development" (BMZ 2011: 35) and several others. Furthermore, in May 2015, the Federal Ministry for Economic Cooperation and Development (BMZ) organized a stakeholder conference in preparation of the G7 summit in June 2015 on "Climate Risk Insurance" and included representatives of developing countries, industrialized countries, the insurance sector and the German Development Bank (KfW) (MunichRe 2015/2015). Related to the aim of the conference and the long-term goal of extending insurance mechanisms against climate change effects, the Federal Government has promised to support the setup of finance mechanisms for the insurances with 150 Million Euro for a start until 2016 (MunichRe 2015/2015). The plan is that until 2020, the increased risks of 500 million individuals through climate change will be absorbed by the new mechanisms. This includes an increase 400 million individuals compared to 2015 numbers (MunichRe 2015/2015). Summing up, climate change is an issue that naturally insurance companies have to deal with. On the other hand, their interests always have to be considered as naturally having a rather exaggerating effect on their risk assessments and framings of climate change (Die Welt 2013).

6. Discourse Resonance and Legitimized Policies

> *"Climate change is one of the greatest challenges of the 21st century and also a key foreign policy task"* (Federal Foreign Office 2015a).

As a consequence of the successful securitization of climate change in Germany that has an emphasis on individual security, individual risk and planetary security discourses, the policies that have been legitimized and triggered differ considerably from the in the US case. In the Turkish and Mexican cases, there have been only few or no policies legitimized at all, whereas in the German and American cases, distinct policies have been legitimized. Most importantly, the climate security discourse has influenced not only German development policy but also its foreign policy, whereas visible effects on military policy and planning have been rather limited (Interview 2014g). This is also evident in the fact that the German Federal Armed Forces to date have published only two reports that consider climate change as a security threat (Planungsamt der Bundeswehr 2012, 2014). The fact that the report was issued relatively late and mainly contains statements that give away responsibility and ability of the armed forces to tackle climate change as a security issue to other sectors such as development and foreign policy confirms this. The possibilities and necessities of military intervention are openly rejected (Planungsamt der Bundeswehr 2012). According to some insiders and specialists, the German Federal Armed forces have become well aware of climate change as a security issue, partly through reports such as the CNA or CSIS reports that were published already in 2007 (Interview 2015c). However, the Bundeswehr refrained from articulating this publicly until recently 2011 (Bundeswehr 2011). After 2011 only one further publications that addresses climate change as a possible national security issue was published (Planungsamt der Bundeswehr 2014). In 2014, the Bundeswehr issued a report on the Arctic as a possible new security issue in the 21st Century (*Der Klimawandel in der Arktis – ein neues Sicherheitsproblem des 21. Jahrhunderts?*) (Planungsamt der Bundeswehr 2014). While the first publication of 2011 rather dealt with climate change from an individual security perspective and explicitly framed climate change as an issue that had not primarily to be tackled by the military (Planungsamt der Bundeswehr 2012: 7) in 2014, the framing addressed increasingly the territorial level. Here, the referent objects that could be threatened by climate change have not been vulnerable and weak societies and individuals, but the states together with their rights and agreements that share the arctic as a common and international ground (Planungsamt der Bundeswehr 2014: 1).

Regarding German development policy, it has - influenced by climate security discourses - shifted its development policy and technical assistance measures towards financial and technical assistance in countries, regions and communities that have been regarded as vulnerable to the effects of climate change (Planungsamt der Bundeswehr 2012). Even if in 2007, it was still at a preliminary level, German ministries have since then started to cooperate on these issues (Interview 2014n). Considering the Federal Foreign Office, which has been accepted by most of the actors to be the main responsible and leading institution in tackling climate change as a security issue, efforts to draft a coherent strategy and concept that is consistent with the principles and priorities of German Foreign policy have been made. At the G8 Summit that was held in Germany in 2007, Gernot Erler, Minister of State in the Federal Foreign Office, stated that "Regarding climate change, we do not face a classical enemy, but we are about to make ourselves the enemy" (Bundesregierung 2009). Through the inclusion of environmental matters and climate change into foreign policy, Germany aims at motivating (actors in) other states to act and increasingly comply to the international climate change policy process. Different from the US case, it is not the defence ministry or military that delves into the climate-security discourse but rather – and in the view of the German defence institutions and decision makers – rightfully – the Federal Foreign Office. The notion of "climate diplomacy", which has been becoming increasingly popular in Germany during the past few years confirms this impression (Federal Foreign Office 2015a; adelphi 2013, 2012).

Another consequence of the securitization of climate change that renders the German case different from other country cases is an at times "relatively idealistic and overly optimistic" (Umbach 2008) energy policy, that has during the first and especially the second wave of securitization been decisively influenced by climate security discourses. For example, the German Energy Turn, which aims at a mitigation of climate change, constitutes a radical shift that has to be completed concerning the national energy culture, the energy infrastructure as well as law- and policymaking. Despite the fact that the final decision for the nuclear phase out was motivated and pushed by the Fukushima nuclear incident, the ground for such a move was prepared by the anti-nuclear and sustainable energy discourse that is inherently entangled with the climate-security discourse. Seen this way, the German Energy Turn could have not been possible or legitimated without the securitization of climate change (Seils 2012: cp;

BMZ 2013a). Already the famous WBGU Report of 2007 called for an Energy Transition in order to avert the increasingly dangerous effects of climate change (Richert 2012).

7. Facilitating conditions and context for Securitization in Germany

In Germany, the pre-conditions for a successful securitization of climate change are compared to our other case studies relatively fortunate. Firstly, the analysis showed that the structure and the capabilities of actors, apart from the discursive environment that they encounter, is an important factor for the success of securitizing attempts, as has also been put forward by the Copenhagen School (Floyd 2007: 41; Buzan/Wæver 2003: 71).

Despite the fact that in terms of Securitization Theory, everyone could speak security on a certain topic, the fact that the securitizing actors in Germany are not necessarily elite actors (i.e. political elite or security experts) but also scientists, NGOs and environmental activists that are due to a distinct political culture still respected (unlike as in the US and Turkish case), is important. At least according to the conditions and circumstances of the society they act in, actors of climate change securitization in Germany are actors that are taken seriously and who can reach important and broad audiences.

Going back to the "limits of growth" debate, environmental- anti-nuclear and peace movements of the early 1970s, we should consider that many individuals of a generation of activists and demonstrators that were influenced by the "limits of growth" are now in important positions and have, as one journalist put it "their fingers in the pie" in Germany (Interview 2014h). The environmental movements and the subsequent German forerunner position in environmental policymaking demonstrate how a generation of ideas and discourses is decisively able to coin policymaking over longer periods of time.

The German case of climate change and securitization displayed a huge number of trustworthy, strong elite actors that undertook successful attempts of securitization nationally as well as internationally. Especially the closeness of NGOs and research institutions to governmental actors and organizations eased and shortened the passage for attempts of securitization. Research institutions and councils such as the Wuppertal Institute, the Potsdam Institute for Climate Impact Research and the German Advisory Council on Global Change

(WBGU) have been partly state-financed and had the task to inform policy- and decision makers on questions that were raised in scientific institutions and the international discourse first. Due to their relative autonomy and independence, however, regarding the topics of research and outcomes, similarly to the IPCC on the international level, they constitute reliable sources of information and therefore can be regarded as capable and elite actors of securitization.

A further facilitating condition in comparison to other cases is the deeply anchored environmental awareness in the German society, which means that the actors attempting to securitize climate change in Germany operate in a relatively friendly milieu (Kuckartz et al. 2007). However, this culture of environmental awareness itself could be regarded as a consequence of a successful securitization of environmental matters and climate change, as only according threat perceptions would urge people to perceive a need of "protection" of the environment. A look at a survey on climate change and Germany can confirm this thesis: in the study, almost every second German felt threatened by climate change personally. Another question that addressed the possible desire for an internationally pioneering role for Germany in matters of climate protection was answered with yes by 67 per cent of the interviewees (Kuckartz et al. 2007). The development of the strong environmental consciousness in the country can also be connected to other important discourses at different times. Particularly the "Anti-Nuclear" debate in Germany that was especially during the Cold War increasingly related to the peace movement (cp. Rucht 2008), later differentiated into a climate protection and finally climate security debate. Furthermore, especially in comparison to developing and emerging countries such as Turkey, another important facilitating condition for the politicization and securitization of climate change in Germany is the historical responsibility of the country as one of the main causes of the phenomenon. Finally, regarding the whole picture, one can assert that the non-militarising securitization of climate change fits well into the general picture of a rather precautious, diplomatic „soft power" German Foreign policy.

8. Conclusion

The analysis of the evolution of the climate change-security discourses, their conditions and characteristics according to our analytical framework and the dominant actors involved has especially in comparison with the other country cases of the project shed light on how specific discourses can lead to different policy approaches and the proposal of distinct and differing policy measures. The inclusion and clarification on which policies where possibly legitimized through successful securitizations in Germany added a new perspective to the understanding of climate change policy making in Germany. The analysis provided evidence that climate change has been added to Germany´s foreign policy agenda because of distinct threat and risk perceptions that have been articulated in different forms and over a longer period of time.

Regarding the preconditions for securitization, one can assert – when comparing countries the different country cases involved in the research project - that they play a role that is at least as important as the actors involved in the process of securitization. One of the most important conclusions that can be drawn from the analysis of the German case it that the securitization of an issue such as climate change does not necessarily lead to unwelcomed and dangerous policy regulations such as militarization, as was put forward by the Copenhagen School. To the contrary, they can also have positive effects on policies, as long as the threads are framed in a manner that does not activate human "reptile" reflexes, but rather motivates for further deliberate actions.

Literatur

adelphi 2012: Climate Diplomacy. Reducing Risks for Security, Berlin.

adelphi 2013: Climate Diplomacy. New approaches for foreign policy, Berlin.

AFP 2012: Weltbank warnt vor Erderwärmung um vier Grad bis 2060, in: http://www.afp.com/de/nachrichten/topstories/weltbank-warnt-vor-erderwarmung-um-vier-grad-bis-2060; 21.10.2013.

Ağcı, Serkan 2010: Die Geschichte der Grünen, in: http://www.bpb.de/politik/grundfragen/parteien-in-deutschland/42151/geschichte; 15.10.2013.

Altenhof, Ralf 2002: Die Enquete-Kommissionen des Deutschen Bundestages, Wiesbaden.

Arnold, Markus/Dressel, Gert/Viehöver, Willy 2012: Erzählungen im Öffentlichen. Über die Wirkung narrativer Diskurse, Wiesbaden.

Arrhenius, Svante 1896: On the Influence of Carbonic Acid in the Air upon the Temperature of the Ground, in: Philosophical Magazine and Journal of Science 5: 41, 237–276.

Auswärtiges Amt 2008: 17. Forum Globale Fragen am 13. und 14. Juni 2007 im Auswärtigen Amt. Sicherheitsrisiko Klimawandel, in: http://www.auswaertiges-amt.de/DE/Aussenpolitik/GlobaleFragen/ForumGF/17-GF/17GF_node.html; 05.9.2015.

Auswärtiges Amt 2014: Klima und Sicherheit, in: http://www.auswaertiges-amt.de/DE/Aussenpolitik/GlobaleFragen/Klima/KlimaUndSicherheit_node.html; 09.2.2015.

Bachmann, Hartmut 2007: Die Lüge der Klimakatastrophe. Das gigantischste Betrugswerk der Neuzeit ; manipulierte Angst als Mittel zur Macht, Berlin.

Bals, Christoph/Harmeling, Sven/Windfuhr, Michael 2007: Klimawandel und Ernaehrungssicherheit.

Balzacq, Thierry 2005: The Three Faces of Securitization: Political Agency, Audience and Context, in: European Journal of International Relations 11: 2, 171–201.

BAMF n.d.: Bundesamt für Migration und Flüchtlinge - Themendossiers - Migration und Klimawandel - Tagung zu Migration und Klimawandel, in: http://www.bamf.de/SharedDocs/Dossiers/DE/migration-und-klimawandel.html?docId=2050892&notFirst=true; 04.9.2015.

Baus, Ralf T.: Bündnis 90/Die Grünen im Fünfparteiensystem, in: , 162–189, in: http://www.kas.de/upload/dokumente/verlagspublikationen/Volksparteien/Volksparteien_baus.pdf.

Bayerisches Landesamt für Umwelt 2011: Klimaschutzpolitik in Deutschland und Bayern, in: http://www.lfu.bayern.de/umweltwissen/doc/uw_99_klimaschutzpolitik_deutschland_bayern.pdf; 15.10.2013.

Beck, Silke/Kuhlicke, Christian/Görg, Christoph 2009: Climate Policy Integration, Coherence, and Governance in Germany, in: http://www.ufz.de/export/data/1/26701_PEERdownload.pdf; 15.10.2013.

Becker, Markus 2004: "The Day After Tomorrow": Klimaforscher streiten über Emmerichs Eismaschine, in: Spiegel Online, 13.5.2004.

Berger, Thomas U. 2012a: War, guilt, and world politics after World War II, Cambridge.

Berger, Thomas U. 2012b: War, guilt, and world politics after World War II, Cambridge.

Bickerstaff, K./Lorenzoni, I./Pidgeon, N. F./Poortinga, W./Simmons, P. 2008: Reframing nuclear power in the UK energy debate. Nuclear power, climate change mitigation and radioactive waste, in: Public Understanding of Science 17: 2, 145–169.

BMU 2002: Climate Change and Conflict. Can climate change impact increase conflict potentials? What is the relevance of this issue for the international process on climate change? .

BMUB 2014: Selbstverpflichtungen Aktuell, in: http://www.bmub.bund.de/themen/wirtschaft-produkte-ressourcen/wirtschaft-und-%20umwelt/selbstverpflichtungen/selbstverpflichtungen-aktuell/; 07.1.2014.
BMUB 2015: German G7 presidency, in: http://www.bmub.bund.de/en/topics/europe-international/international-environmental-policy/g7g8-and-g20/german-g7-presidency/; 04.9.2015.
BMZ 2013a: Klimapolitik in Deutschland und in der Europäischen Union, in: http://www.bmz.de/de/was_wir_machen/themen/klimaschutz/klimapolitik/deutscher_beitrag/index.html; 18.11.2013.
BMZ 2011: Klimawandel und Entwicklung (BMZ Informationsbroschüre 1/2011), in: http://www.bmz.de/de/mediathek/publikationen/themen/klimaschutz/BMZ_Informationsbroschuere_01_2011.pdf; 09.2.2015.
Bodansky, Daniel 2001: The History of the Global Climate Change Regime, in: Luterbacher, Urs/Sprinz, Detlef F. (Hrsg.): International relations and global climate change, Cambridge, Mass.
Bojanowski, Axel 2013: Rangliste: Umweltschützer strafen Deutschlands Klimapolitik ab, in: Spiegel Online, 18.11.2013.
Brauch, Hans G. 2002: Klimawandel, Umweltstress und Konflikt (AFES-PRESS Studie für das Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit).
Brauch, Hans G./Scheffran, Jürgen 2012: Introduction: Climate Change, Human Security, and Violent Conflict in the Anthropocene, in: Scheffran, Jürgen/Brzoska, Michael/Brauch, Hans G./Link, Peter M./Schilling, Janpeter (Hrsg.): Climate Change, Human Security and Violent Conflict // Climate change, human security and violent conflict. Challenges for societal stability, Berlin, New York, 3–40.
Brot für die Welt 2010: "Klimaflüchtlinge" nach Kopenhagen. Rechtliches Konzept, politische Folgen, normative Überlegungen.
Brundtland Report 1987: Our Common Future: Report of the World Commission on Environment and Development, in: , in: http://www.un-documents.net/our-common-future.pdf; 04.9.2015.
Bruyn, Sander M. de 2000: Economic Growth and the Environment. An Empirical Analysis, Dordrecht.
Brzoska, Michael 2009: The Securitzation of Climate Change and the Power of Conceptions of Security, in: Sicherheit und Frieden 27: 3, 137–145, in: http://www.sicherheit-und-frieden.nomos.de/fileadmin/suf/doc/Aufsatz_SuF_09_03.pdf; 13.8.2012.
Bundesregierung 2009: G8 Gipfel 2007 Heiligendamm - Klimawandel bedroht Weltsicherheit, in: http://www.g-8.de/Content/DE/Artikel/2007/06/2007-06-06-klimawandel-wird-zum-sicherheitsrisiko.html; 28.8.2015.
Buzan, Barry/Wæver, Ole 2003: Regions and powers. The structure of international security (Cambridge studies in international relations, Band 91), Cambridge.
Buzan, Barry/Wæver, Ole/Wilde, Jaap de 1998: Security. A New Framework for Analysis, Boulder, Colo.
BÜNDNIS 90/DIE GRÜNEN Bundestagsfraktion 2013: CO2-Grenzwerte für Pkw: Merkel attackiert erfolgreich Klimaschutz, in: http://www.gruene-bundestag.de/themen/klimaschutz/merkel-attackiert-erfolgreich-klimaschutz_ID_4390270.html; 07.1.2014.
BÜNDNIS 90/DIE GRÜNEN Bundestagsfraktion 2014: Unsere Position: Außen- und Sicherheitspolitik, in: http://www.gruene-bundestag.de/themen/sicherheitspolitik_ID_207027.html; 01.9.2014.
Carius, Alexander/Lietzmann, Kurt M. 1998: Umwelt und Sicherheit. Herausforderungen für die internationale Politik, Berlin.

Cass, Loren 2008: The Failures of American and European Climate Policy. International Norms, Domestic Politics, and Unachievable Commitments - By Loren R. Cass, in: Review of Policy Research 25: 5, 491–492.
Clisap n.d.: Home - CliSAP, in: http://www.clisap.de/; 28.8.2015.
Crutzen, Paul J. 1996: Atmosphäre, Klima, Umwelt. [Beiträge aus Spektrum der Wissenschaft] (Verständliche Forschung), Heidelberg.
Damm, Winfried 1996: Energiekonzepte in Westdeutschland. Umsetzungsergebnisse und -bedingungen auf Bundes- Länder- und Kommunalebene. (Freie Universität Berlin: Dissertation), Berlin.
DAPD 2012: Meeresspiegel steigt weiter trotz Klimaschutzmaßnahmen, in: National Geographic, 28.6.2012.
Der Tagesspiegel 2015: Klimaforscher Hans Joachim Schellnhuber Der grüne Papstflüsterer, in: , 18.6.2015.
DER SPIEGEL 1986: Das Weltklima gerät aus den Fugen, in: DER SPIEGEL, 11.8.1986, 122–134.
DER SPIEGEL 2012: Klimawandel: Weltbank warnt vor Vier-Grad-Katastrophe, in: , 19.11.2012.
Detraz, Nicole/Betsill, Michele M. 2009: Climate Change and Environmental Security: For Whom the Discourse Shifts, in: International Studies Perspectives 10: 3, 303–320, in: http://onlinelibrary.wiley.com/doi/10.1111/j.1528-3585.2009.00378.x/pdf; 25.8.2012.
Deutscher Bundestag 1949: Deutscher Bundestag - Grundgesetz, in: https://www.bundestag.de/grundgesetz; 28.8.2015.
Deutscher Bundestag 1989: Erste Beschlussempfehlung und Bericht des Ausschusses für Umwelt, Naturschutz und Reaktorsicherheit (21. Ausschuss) zu dem Ersten Zwischenbericht der Enquete-Kommission „Vorsorge zum Schutz der Erdathmosphäre“. gemäß Beschluss des Deutschen Bundestages vom 16 Oktober und 27 November 1987, Drucksachen 11/533, 11/787, 11/971, 11/1351, 11/3246.
Deutscher Bundestag 1992: Erster Bericht der Enquete-Kommission „Schutz der Erdathmosphäre“ zum Thema „Klimaänderung gefährdet globale Entwicklung – Zukunft sichern – Jetzt handeln“. gemäß Beschluss des Deutschen Bundestages vom 25. April 1991, Drucksache 12/419.
Deutscher Bundestag 1994: Erster Bericht der Enquete-Kommission „Schutz der Erdathmosphäre“ zum Thema Mobilität und Klima – Wege zu einer klimaverträglichen Verkehrspolitik. Eingesetzt durch den Beschluss des Deutschen Bundestages vom 25. April 1991; Drucksache 12/419.
Deutscher Bundestag 1995: XX Bericht der Enquete-Kommission „Schutz der Erdathmosphäre“ zum Thema Mehr Zukunft für die Erde – Nachhaltige Energiepolitik für dauerhaften Klimaschutz.
Deutscher Bundestag 2008: Unterrichtung durch die Bundesregierung. Hauptgutachten 2007 des Wissenschaftlichen Beirats der Bundesregierung Globale Umweltveränderungen „Welt im Wandel – Sicherheitsrisiko Klimawandel“ und Stellungnahme der Bundesregierung (Drucksache 16/11600).
Deutschlandfunk 2012: Der Kampf gegen das Ozonloch, in: http://www.deutschlandfunk.de/der-kampf-gegen-das-ozonloch.724.de.html?dram:article_id=221233; 04.9.2015.
Diakonie/Brot für die Welt/Germanwatch 2011: Verschärft sich die Ernährungskrise? Klimawandel, Ernährungssicherheit und das Recht auf Nahrung (Studie Klimawandel und Ernährungssicherheit), Stuttgart.
Diakonisches Werk der EKD e.V./Germanwatch/Brot für die Welt 2008: Climate Change, Food Security and the Right to Adequate Food, in: , in: https://germanwatch.org/de/download/2798.pdf; 28.8.2015.

Die Bundesregierung 2008/2008: Deutsche Anpassungsstrategie an den Klimawandel. vom Bundeskabinett am 17. Dezember 2008 beschlossen.
Die Bundesregierung 2015: Kampf Gegen Erderwärmung : Klimaschutz hat Priorität, in: http://www.bundesregierung.de/Content/DE/Artikel/2015/02/2015-02-24-klima-sucht-schutz.html; 26.5.2015.
Die Welt 2007: "Klimakatastrophe" ist das Wort des Jahres, in: , 07.12.2007.
Die Welt 2010: Deutschland und Polen sind Wachstumsmotor der EU, in: http://www.welt.de/wirtschaft/article9602669/Deutschland-und-Polen-sind-Wachstumsmotor-der-EU.html; 04.9.2015.
Die Welt 2013: Die Propheten der Katastrophe machen gute Geschäfte. Der Rückversicherer Munich Re warnt seit Jahren vor den Folgen des Klimawandels – und verdient zugleich prächtig an der Furcht der Menschen vor Wetter- und Klimakatastrophen, in: http://www.welt.de/wirtschaft/article122034211/Propheten-der-Katastrophe-machen-gute-Geschaefte.html.
Die Weltwoche 2010: Klimawissenschaft : Vernebelungs-Aktion, in: , 11/2010.
Diez, Thomas/Grauvogel, Julia 2012: Securitising Climate Change, Framing Climate Change: Discursive Struggles and the Environment. Paper for Presentation at the BISA/ISA conference, Edinburgh, 20-22 June 2012.
Diez, Thomas/Lucke, Franziskus von/*Wellmann, Zehra* 2016: Securitisation of climate change. Actors, processes and consequences, [S.l.].
DKK 2013: Mitglieder des Deutschen Klima-Konsortiums, in: http://www.deutsches-klima-konsortium.de/de/mitglieder.html; 18.11.2013.
DKK 2015: Klimapolitik - Eine Chronologie, in: http://www.deutsches-klima-konsortium.de/de/klima-themen/klimapolitik.html; 25.11.2015.
DPG 1986: Warnung vor einer drohenden Klimakatastrophe. Pressekonferenz in Bonn.
Eastin, Josh/Grundmann, Reiner/Prakash, Aseem 2011: The two limits debates. "Limits to Growth" and climate change, in: Futures 43: 1, 16–26.
Eberwein, Wolf-Dieter/Chojnacki, Sven 2001: Stürmische Zeiten? Umwelt, Sicherheit und Konflikt, in: http://edoc.vifapol.de/opus/volltexte/2009/1927/pdf/p01_303.pdf.
ECC n.d.: Environment, Conflict and Cooperation, in: https://www.ecc-platform.org/; 05.9.2015.
Ederer, Markus 2007: Energie- und Klimasicherheit während der deutschen EU-Ratspräsidentschaft (Akademie für Politik und Zeitgeschehen der Hanns-Seidel Stiftung, 12.12.2007), Akademie für Politik und Zeitgeschehen der Hanns-Seidel Stiftung.
EED/Brot für die Welt 2009: Klimawandel – Eine Arbeitshilfe für die Gemeindearbeit zur Studie „Zukunftsfähiges Deutschland in einer globalisierten Welt".
Enkelmann, Dagmar 1995: Rede im Deutschen Bundestag. Drs. 13/33 (2529, Deutscher Bundestag, 26.4.1995), Deutscher Bundestag.
EUISS 2015: EUISS Yearbook of European Security 2015.
Federal Foreign Office 2015a: Climate Change - a foreign policy challenge, in: http://www.auswaertiges-amt.de/EN/Aussenpolitik/GlobaleFragen/Klima/Uebersicht_node.html; 27.11.2015.
Federal Foreign Office 2015b: Climate and Security, in: http://www.auswaertiges-amt.de/EN/Aussenpolitik/GlobaleFragen/Klima/KlimaUndSicherheit_node.html.
Feindt, Peter 2002: Gemeinsam gegen Niemanden. Nachhaltigkeitsdiskurs in Deutschland, in: Forschungsjournal Neue Soziale Bewegungen 15: 4, 20–29.
2012: Finanzierung der globalen Energiewende (Politikpapier, Band 7), Berlin.
Finnemore, Martha/Sikkink, Kathryn 1998: International Norm Dynamics and Political Change, in: International Organization 52: 4, 887–917, in: http://www.jstor.org/stable/2601361.

Fischer, Frank 2014: Climate Crisis and Ecological Democracy. Workshop "Environment, Energy, Climate", Freie Universität Berlin (07.6.2014).
Floyd, Rita 2007: Human Security and the Copenhagen School's Securitization Approach:. Conceptualizing Human Security as a Securitizing Move, in: Human Security Journal 5, 38–49.
Floyd, Rita 2008: The Environmental Security Debate and its Significance for Climate Change, in: The International Spectator 43: 3, 51–65.
Floyd, Rita 2010: Security and the environment. Securitisation theory and US environmental security policy, Cambridge.
Floyd, Rita/Matthew, Richard A. (Hrsg.) 2013: Environmental security. Approaches and issues, Abingdon, Oxon, New York, NY.
Focus Online 2013: Berlin verhindert CO2-Kompromiss: Die Auto-Kanzlerin tritt auf die Klimaschutz-Bremse, in: http://www.focus.de/politik/deutschland/berlin-verhindert-co2-kompromiss-die-auto-kanzlerin-tritt-auf-die-klimaschutz-bremse_aid_1028513.html; 07.1.2014.
Gardizi, Farid 2009: Eine kurze Geschichte der Nachhaltigkeit.
Geden, Oliver 2009: Klimasicherheit als Politikansatz der EU. SWP (Diskussionspapier).
Gemeinsame Informationsstelle der UN-Organisationen in Bonn 2013: Sekretariat des Rahmenübereinkommens der Vereinten Nationen über Klimänderungen, in: http://www.bonn.de/wirtschaft_wissenschaft_internationales/uno-stadt/02072/index.html?lang=de; 21.10.2013.
Germanwatch 2013a: Auf der Flucht vor dem Klima.
Germanwatch 2013b: Klimawandel als Sicherheitsrisiko: Germanwatch begrüßt morgige Debatte im UN-Sicherheitsrat auf Initiative von Pakistan und Großbritannien, Bonn.
Germanwatch 2014: Global Climate Risk Index 2014. Who suffers most from extreme weather events? Weather-related loss events in 2012 and 1993 to 2012, Bonn, Berlin.
Germanwatch 2015: The Climate Change Performance Index. Results 2015, Bonn.
Germanwatch/Amnesty International/Oxfam/Medico/ProAsyl 2013: Auf der Flucht vor dem Klima.
Gibbs, Walter/Lyall, Sarah 2007: Gore Shares Peace Prize for Climate Change Work, in: New York Times, 13.10.2007.
Greenpeace 2007: Klimaflüchtlinge. Die verleugnete Katastrophe (Greenpeace), Hamburg.
Greenpeace 2013: Point of no Return. The massive climate threats we must avoid, Amsterdam.
GTZ 2008a: Klimawandel und Sicherheit. Herausforderungen für die deutsche Entwicklungszusammenarbeit, Eschborn.
GTZ 2008b: Klimawandel und Sicherheit. Herausforderungen für die deutsche Entwicklungszusammenarbeit, Eschborn.
HannoverRE 2013: Climate Change.
Hayes, Jarrod/Knox-Hayes, Janelle 2014: Security in Climate Change Discourse. Analyzing the Divergence between US and EU Approaches to Policy, in: Global Environmental Politics 14: 2, 82–101.
Höppe, Peter 2008: Naturgefahren und Klimawandel. Die Rolle der Versicherungswirtschaft, in: Vierteljahrshefte zur Wirtschaftsforschung 77: 4, 110–115.
ICCG 2014: TTmap a worldwide observatory on climate think tanks, in: http://www.thinktankmap.org/default.aspx?; 04.9.2015.
Interview 2014a: Jürgen Maier. Klimawandel und Versicherheitlichung, Forum Umwelt und Entwicklung, Berlin.
Interview 2014b: Interview with an Environmental Activist, NGO representative and founding member of the Green Party, 25.04.2014, Berlin.
Interview 2014c: Jürgen Maier, Berlin.

Interview 2014d: Interview with an NGO expert on Climate Change, Security and Development Policies, 02.05.2014, Bonn.
Interview 2014e: Interview with an NGO representative, 05.05.2014, Berlin.
Interview 2014f: Interview with an NGO expert on climate change and security, 13.05.2014, Berlin.
Interview 2014g: Interview with a Climate Security Expert of the Federal Armed Forces and NGO representative, 25.06.2014.
Interview 2014h: Interview with a Journalist and Diplomatic Correspondent of "Die Zeit", 23.07.2014, Berlin.
Interview 2014i: Interview with a representative of a Humanitarian Aid Organisation, 23.07.2014.
Interview 2014j: Interview with an NGO representative , 23.07.2014, Berlin.
Interview 2014k: Interview with an IPCC representative, 31.07.2014, Bonn.
Interview 2014l: Interview with a scientist and expert on climate change and energy, 07.10.2014.
Interview 2014m: Interview on Climate Change and Security with NGO Experts in Germany, 12.11.2014, Berlin.
Interview 2014n: Interview with an NGO analyst in Berlin , 12.11.2014.
Interview 2014o: Interview with a climate research specialist in Berlin, 13.11.2014, Berlin.
Interview 2015a: Interview with a representative of the Federal Foreign Office in Berlin, 09.01.2015, Berlin.
Interview 2015b: Interview with an NGO representative in Bonn, 19.01.2015, Bonn.
Interview 2015c: Interview with an expert for Peace and Conflict Studies, 29.04.2015, Hamburg.
IPCC 2007: Climate Change 2007. Contributions of Working Groups I, II and III to the fourth assessment report of the Intergovernmental on Climate Change, Geneva.
Jäger, Siegfried (Hrsg.) 2010: Lexikon kritische Diskursanalyse. Eine Werkzeugkiste, Münster.
Jakobeit, Cord/Methmann, Chris 2007: Klimaflüchtlinge. Die verleugnete Katastrophe, Hamburg.
Jänicke, Martin 2009: Geschichte der deutschen Umweltpolitik, in: http://www.bpb.de/gesellschaft/umwelt/dossier-umwelt/61136/geschichte?p=all; 16.10.2013.
Jensen, Annette 2009: Umweltpolitik, in: www.bpb.de/gesellschaft/umwelt/dossier-umwelt/61177/umweltpolitik?p=all; 16.10.2013.
Kellerhoff, Sven F. 2010: Die Grünen waren schon 1990 die "Dagegen-Partei", in: Die Welt, 02.12.2010.
Kirstein, Werner 2013: Die Klimakatastrophe von 1986 und was daraus wurde Ein kritischer Rückblick zum Klimawandel, in: http://www.eike-klima-energie.eu/climategate-anzeige/die-klimakatastrophe-von-1986-und-was-daraus-wurde-ein-kritischer-rueckblick-zum-klimawandel/; 28.8.2015.
Krueck, Carsten/Borchers, Jutta/Weingart, Peter 1999: Climate Research and Climate Policy in Germany: Assets and Hazards of Consensus-Based Risk Management, in: Edwards, Paul/Miller, Clark (Hrsg.): Changing the Atmosphere, Boston.
Krück, Carsten/Borchers, Jutta/Weingart, Peter 1998: Climate Research and Climate Politics in Germany: Assets and Hazards of Consensus-Based Risk Management, in: ; 10.8.2015.
Kuckartz, Udo/Rheingans-Heintze, Anke/Rädiker, Stefan 2007: Umweltbewusstsein in Deutschland. Klimawandel aus der Sicht der deutschen Bevölkerung.
Leiserowitz, Anthony 2004: Surveying the Impact. The Day After Tomorrow, in: Environment 46: 9, 21–44.

Leung, G./Cherp, A./Jewell, J./Wei, Yi-Ming 2014: Securitization of energy supply chains in china.
Litfin, K. T. 1995: Framing Science : Precautionary Discourse and the Ozone Treaties, in: Millenium Journal of International Studies 24: 2, 251–277, in: http://faculty.washington.edu/litfin/research/framingscience.pdf; 28.8.2015.
Loske, Reinhard 1999: Rede im Deutschen Bundestag. Drs. 14/67 (6000, Deutscher Bundestag, 05.11.1999), Deutscher Bundestag.
Loster, Thomas 2005: Strategic Management of Climate Change: options for the insurance industry. Weather catastrophes and climate change - is there still hope for us? (pages 236-243) (GeoRisks Research).
Lucke, Franziskus von 2015: The Securitization of Climate Change in the United States:. The Integration of Climate Threats into the Security Sector (ClimaSec Working Paper #10 (June 2015)), Tübingen.
Lucke, Franziskus von/*Diez, Thomas/Wellmann, Zehra* 2013: What's at Stake in Securitising Climate Change? Towards a Differentiated Approach, Paper prepared for the 8th Pan – European Conference on International Relations, 18th – 21st September 2013, Warsaw, Poland.
Mauelshagen, Franz 2009: Die Klimakatastrophe. Szenen und Szenarien, in: Schenk, Gerrit J. (Hrsg.): Katastrophen. Vom Untergang Pompejis bis zum Klimawandel, Ostfildern, 205–223.
McDonald, Matt 2013: Discourses of climate security, in: Political Geography 33, 42–51.
Meadows, Dennis L./Meadows, Donella H. 1972: Die Grenzen des Wachstums. Bericht des Club of Rome zur Lage der Menschheit, Stuttgart.
Mederake, Linda/Duwe, Matthias 2014: Einfluss globaler Themen auf die deutsche Umweltpolitikforschung. Ecologic (Band 1).
Misereor 2008: Development and Climate Justice. Policy Paper.
MunichRe 2015/2015: Berlin, G7-Initiative: Klimarisikoversicherung als Beitrag zur Anpassung an den Klimawandel. So bewertet Munich Re die Zwischenschritte hin zu einem neuen Klimaabkommen.
MunichRe 2016: Klimawandel. Ein Thema, das uns alle betrifft, in: http://www.munichre.com/de/group/focus/climate-change.
MunichRe Foundation: Münchner Rück Stiftung. Über uns, in: http://www.munichre-foundation.org/de/home/About-us.html; 09.5.2016.
MunihRe 2015: Berlin, G7-Initiative:. Klimarisikoversicherung als Beitrag zur Anpassung an den Klimawandel (So bewertet Munich Re die Zwischenschritte hin zu einem neuen Klimaabkommen), in: http://www.munichre.com/de/group/focus/climate-change/viewpoints/road-to-paris/berlin/index.html.
Nicola, Stefan 2013: World Emissions May Peak Amid China Green Push, Germanwatch Says, in: BloombergBusinessweek, 18.11.2013.
Norck, Sebastian 2012: Der Klimawandel als medial konstruiertes Risiko - Untersucht am Beispiel der Berichterstattung des Nachrichtenmagazins Der Spiegel, in: entgrenzt - Studentische Zeitschrift für Geographisches, 2012, 20–31.
N-TV 2013: Je Grad Erwärmung steigt Meer um zwei Meter, in: http://www.n-tv.de/wissen/Je-Grad-Erwaermung-steigt-Meer-um-zwei-Meter-article10994126.html; 21.10.2013.
O'Brien, Karen 2006: Are we missing the point? Global environmental change as an issue of human security, in: Global Environmental Change 16: 1, 1–3.
OECD 1993: OECD Environmental Performance Review Germany.
PIK 2007: Der Klimawandel. Einblicke, Rückblicke und Ausblicke, in: , in: https://www.pik-potsdam.de/services/infothek/buecher_broschueren/.images/broschuere_cms_100.pdf; 04.9.2015.

PIK 2013: Climate scientist Schellnhuber to brief UN Security Council, in: https://www.pik-potsdam.de/news/press-releases/archive/2013/climate-scientist-schellnhuber-to-brief-un-security-council; 15.6.2015.
PIK 2015a: Biographie: Hans Joachim Schnellnhuber.
PIK 2015b: Organisation — PIK Research Portal, in: https://www.pik-potsdam.de/institut/organisation; 04.9.2015.
Pieper, Cornelia 2011: Eröffnungsrede von Staatsministerin Cornelia Pieper zur Konferenz "Climate Diplomacy in Perspective - From Early Warning to Early Action", Berlin.
Planungsamt der Bundeswehr 2012: Klimafolgen im Kontext: Implikationen für Sicherheit und Stabilität im Nahen Osten und Nordafrika. Streitkräfte, Fähigkeiten und Technologien im 21. Jahrhundert: Teilstudie 2.
Planungsamt der Bundeswehr 2014: Der Klimawandel in der Arktis – ein neues Sicherheitsproblem im 21. Jahrhundert?
Reusswig, Fritz 2010: Klimawandel und Gesellschaft. Vom Katastrophen- zum Gestaltungsdiskurs im Horizont der postkarbonen Gesellschaft, in: Voss, Martin (Hrsg.): Der Klimawandel, Wiesbaden, 75–97.
Richert, Jörn 2009: Klimawandel und Sicherheit in der Amerikanischen Politik (Diskussionspapier), Berlin.
Richert, Jörn 2012: Klimapolitik und Versicherheitlichung, in: Wissenschaft und Frieden: 3, 26–28.
Risk Management Monitor 2011: The 50 Largest Insurers, in: http://www.riskmanagementmonitor.com/the-50-largest-reinsurers/.
Roe, P. 2008: The 'value' of positive security, in: Review of International Studies 34: 4.
Rucht, Dieter 2008: Anti-Atomkraftbewegung, in: Roth, Roland/Rucht, Dieter (Hrsg.): Die sozialen Bewegungen in Deutschland seit 1945. Ein Handbuch, Frankfurt, New York, 245–267.
Schreurs, Miranda A. 2002: Environmental politics in Japan, Germany, and the United States, Cambridge, UK, New York.
Schwabe, Frank 2009: Rede im Deutschen Bundestag. Drs. 16/221 (24253, Deutscher Bundestag, 13.5.2009), Deutscher Bundestag.
Scott, Shirley V. 2012: The Securitization of Climate Change in World Politics: How Close have We Come and would Full Securitization Enhance the Efficacy of Global Climate Change Policy?, in: Review of European Community and International Environmental Law 21: 3, 220–230.
Seils, Christoph 2012: Angela Merkel, die Atompartei CDU und die Energiewende, in: DER TAGESSPIEGEL, 12.3.2012.
Statista 2015: Größte Rückversicherer weltweit nach verdienten Nettoprämien in den Jahren 2013 und 2014 (in Millionen US-Dollar), in: http://de.statista.com/statistik/daten/studie/188545/umfrage/groesste-rueckversicherer-weltweit-nach-nettopraemien/.
Stern, Nicholas 2006: Stern Review on the Economics of Climate Change, London.
SWP 2011: Klimawandel als Sicherheitsproblem, in: http://www.swp-berlin.org/de/swp-themendossiers/klimapolitik/klimawandel-als-sicherheitsproblem.html; 04.9.2015.
The Economist 2010: Europe's engine. Why Germany needs to change, both for its own sake and for others, in: http://www.economist.com/node/15663362; 04.9.2015.
Trombetta, Maria J. 2008: Environmental Security and Climate Change: Analysing the Discourse, in: Cambridge Review of International Affairs 21: 4, 585–602.
Trombetta, Maria J. 2011: Rethinking the Securitization of the Environment. Old Beliefs, New Insights, in: Balzacq, Thierry (Hrsg.): Securitization Theory. How Security Problems Emerge and Dissolve, London, 135–149.

Trombetta, Maria J. 2012: Climate Change and the Environmental Conflict Discourse, in: Scheffran, Jürgen/Brzoska, Michael/Brauch, Hans G./Link, Peter M./Schilling, Janpeter (Hrsg.): Climate Change, Human Security and Violent Conflict, Berlin, Heidelberg, 151–164.
UBA 2015: Regelungen zu ozonabbauenden Stoffen, in: http://www.umweltbundesamt.de/themen/wirtschaft-konsum/produkte/fluorierte-treibhausgase-fckw/rechtliche-regelungen/regelungen-zu-ozonabbauenden-stoffen; 04.9.2015.
Umbach, Frank 2008: German Vulnerabilities of its Energy Security (AICGS Advisor).
UNEP 2006: Environmental effects of ozone depletion and its interactions with climate change. 2006 assessment, Nairobi, Kenya.
UNEP 2011: The Montreal Protocol on Substances that deplete the Ozone Layer.
UNEP 2015: Treaties and Decisions | Ozone Secretariat, in: http://ozone.unep.org/en/treaties-and-decisions; 28.8.2015.
UNFCCC 2013c: Admitted IGO, in: http://maindb.unfccc.int/public/igo.pl?mode=wim; 21.10.2013.
UNFCCC 2013a: Bonn Climate Change Conference July 1997, in: http://unfccc.int/meetings/bonn_jul_1997/meeting/6380.php; 21.10.2013.
UNFCCC 2015: The international response to climate change. Climate Change Information Sheet 17, in: http://unfccc.int/essential_background/background_publications_htmlpdf/climate_change_information_kit/items/300.php; 28.8.2015.
UNU-EHS 2012/2012: United Nations University Press Release. Addressing loss and damage in the context of social vulnerability and resilience.
Vahrenholt, Fritz/Lüning, Sebastian 2012: Die kalte Sonne. Warum die Klimakatastrophe nicht stattfindet (Naturwissenschaft), Hamburg.
Vatican 2015: Conferenza Stampa per la presentazione della Lettera Enciclica «Laudato si'» del Santo Padre Francesco sulla cura della casa comune, 18.06.2015, in: https://press.vatican.va/content/salastampa/it/bollettino/pubblico/2015/06/18/0480/01050.html.
Velders, Guus J. M./Andersen, Stephen O./Daniel, John S./Fahey, David W./McFarland, Mack 2007: The importance of the Montreal Protocol in protecting climate, in: Proceedings of the National Academy of Sciences of the United States of America 104: 12, 4814–4819, in: http://www.pnas.org/content/104/12/4814.full.pdf; 04.9.2015.
WBGU 2007a: Welt im Wandel: Sicherheitsrisiko Klimawandel, Berlin.
WBGU 2007b: World in Transition Climate Change as a Security Risk. Summary for Policy-Makers.
WBGU 2014: WBGU: Auftrag, in: http://www.wbgu.de/ueber-uns/auftrag/; 28.8.2015.
Weber, Melanie 2008: Alltagsbilder des Klimawandels – Zum Klimabewusstsein in Deutschland, Wiesbaden.
Weidner, Helmut/Mez, Lutz 2008: German Climate Change Policy. A Success Story with some Flaws, in: The Journal of Environment & Development 17: 4, 356–378.
Weingart, Peter/Engels, Anita/Pansegrau, Petra 2000: Risks of communication: discourses on climate change in science, politics, and the mass media, in: Public Understanding of Science 9: 3, 261–283.
Weingart, Peter/Engels, Anita/Pansegrau, Petra (Hrsg.) 2002: Von der Hypothese zur Katastrophe. Der anthropogene Klimawandel im Diskurs zwischen Wissenschaft, Politik und Massenmedien, Opladen.
Weinlich, Silke 2011: Klimawandel im UN Sicherheitsrat - Kopf im Sand? Deutsches Institut für Entwicklungspolitik (Die aktuelle Kolumne).

Wellmann, Zehra 2014: ClimaSec Working Paper Series (WP 5): Germany and climate change: An ambivalent forerunner?, Tübingen.
Wellmann, Zehra 2015: ClimaSec Working Paper Series (WP 11): Turkey and climate change. The Securitization of Climate Change in Turkey: No Climate for Change?, Tübingen.
Werland, Stefan 2012: Debattenanalyse Rohstoffknappheit (PolRess Arbeitspapier AS), Berlin.
WMO 1989: Proceedings of the World Conference on the Changing Atmosphere: Implications for Global Security. WMO, Nr. 710, 1989.
Wuppertal Institut 2013: Die Geschichte des Wuppertal Instituts, in: http://wupperinst.org/das-wuppertal-institut/geschichte/; 09.12.2013.