

# A SLOW TRAIN COMING. GERMANY'S EMERGING ARCTIC POLICY

*Stefan Steinicke*

## Introduction

Whilst being an already established player in polar research, for a long time Germany has seen the Arctic primarily as a regional determining factor for global climate change developments. Germany's political engagement with the Arctic region, however, is a relatively new phenomenon. It was only in October 2013 that the government published its Arctic policy guidelines, thereby acknowledging the growing strategic relevance of the region for German interests.<sup>1</sup> The main driver for this more active engagement seems to be changing perceptions about the opportunities and challenges deriving from transformative developments underway in the Arctic that influence German strategic interests.

In the first part of the chapter an overview of different developments that led to the country's current policies is given. This includes a brief

---

<sup>1</sup> Auswärtiges Amt. "Leitlinien deutscher Arktispolitik. Verantwortung übernehmen, Chancen nutzen." <http://www.auswaertiges-amt.de/cae/servlet/contentblob/658714/publicationFile/185630/Arktisleitlinien.pdf> [accessed November 1, 2013].

overview of Germany's Arctic roots, namely its polar research activities. Then the link between polar research activities and the government's assumed environmental responsibilities will be analyzed, followed by an overview on the country's political engagement. The first part ends with an analysis of the government's increasing awareness of the Arctic's role as a threat multiplier in global security challenges.

The second part then analyzes in more detail the country's emerging geo-economic interests in the region, namely energy and mineral resource exploration, shipping routes as well as the development and supply of Arctic related technologies, knowledge and services.

## The development of Germany's Arctic policies

Germany's current Arctic policy is the result of different ministerial and agency-based initiatives. For most of the time the primary focus has been on polar research and environmental protection. More recently the political engagement has been stepped up, also because of an increasing awareness of the opportunities and challenges a changing Arctic presents, not only for Germany but the entire world.

### *A strong polar research tradition*

According to public statements and official documents Germany has an environmental interest in the Arctic because of immediate concerns about the region's role in global warming and potential future strategic consequences of this interdependence between regional and global environmental processes.<sup>2</sup> As one of the leading advocates in the fight

---

<sup>2</sup> Auswärtiges Amt. "Leitlinien deutscher Arktispolitik. Verantwortung übernehmen, Chancen nutzen." <http://www.auswaertiges-amt.de/cae/servlet/contentblob/658714/publicationFile/185630/Arktisleitlinien.pdf> [accessed November 1, 2013].; Auswärtiges Amt. "Deutsch-norwegische Zusammenarbeit in der Arktis." <http://www.auswaertiges-amt.de/DE/Aussenpolitik/InternatRecht/Einzelfragen/>

against global climate change, Germany is strongly interested in Arctic environmental affairs.<sup>3</sup> In order to better understand environmental change in the Arctic and its implications for global climate change Germany invests heavily in polar research.<sup>4</sup> According to the Federal Foreign Office only a solid scientific understanding of the transformational processes underway in the Arctic can form the basis of effective political action. It is against this background that Germany is interested in scientific exploration of the region.<sup>5</sup>

Guided by the Alfred-Wegener-Institut (AWI), Germany has a long polar research tradition and is today acknowledged as an 'Arctic player' in scientific research.<sup>6</sup> With its two research stations in Svalbard (German-French cooperation) and Samoilov (Russian-German cooperation) and its polar research vessel *Polarstern*, Germany possesses an important research infrastructure.<sup>7</sup> In 2012 AWI had a total budget of more than 100 million Euros for all its polar research activities.<sup>8</sup> Another important polar research player in Germany is the Federal Institute for Geosciences and Natural Resources (Bundesanstalt für Geowissenschaften und Rohstoffe). The institute investigates the geological composition of the

---

Arktis/130321-Arktiskonferenz.html. Accessed November 1, 2013.

<sup>3</sup> Haftendorn, Helga. "Zaungast in der Arktis." *Internationale Politik* (July/August 2011): 72.

<sup>4</sup> Alfred-Wegener-Institut. "The Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research." <http://www.awi.de/en/institute/>. Accessed January 10, 2014.

<sup>5</sup> Auswärtiges Amt. „Deutschland und der Arktische Rat.“ [http://www.auswaertiges-amt.de/sid\\_61B197A067BF05BE50A680C07E922B1C/DE/Europa/Reg-Nord/Arkt\\_Rat/Arkt\\_Rat\\_DE\\_node.html](http://www.auswaertiges-amt.de/sid_61B197A067BF05BE50A680C07E922B1C/DE/Europa/Reg-Nord/Arkt_Rat/Arkt_Rat_DE_node.html). Accessed December 27, 2013.

<sup>6</sup> Haftendorn, "Zaungast in der Arktis.": 72.

<sup>7</sup> Alfred-Wegener-Institut. "Ships, Research Stations, Data Bases, and more." <http://www.awi.de/en/infrastructure/>. [accessed October 30, 2013].

<sup>8</sup> Alfred-Wegener-Institut. "The Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research." <http://www.awi.de/en/institute/>. Accessed November 1, 2013.

Arctic and evaluates polar resources.<sup>9</sup> Several other federal and private funded research institutes play an important role in Germany's polar research and connected disciplines (e.g. climate system research or global climate change impact analysis)<sup>10</sup> offering fundamental insights into the complex interrelationships between the Arctic and global climatic and environmental processes.

Former minister of Foreign Affairs Guido Westerwelle highlighted the importance of polar research for the government during a conference organized by the Ministry of Foreign Affairs in 2011, titled *Arctic Science, International Law and Climate Change. Legal Aspects of Marine Science in the Arctic Ocean* in which he advocated for free and open research activities in the region, as "the challenges of climate change affect us all."<sup>11</sup> According to the Ministry for the Environment, Nature Conservation, and Nuclear Safety's Arctic strategy: "ensuring sustainable development requires comprehensive basic knowledge and a deep understanding of

---

<sup>9</sup> Federal Ministry of Education and Research. "Rapid Climate Change in the Arctic. Polar Research as a Global Responsibility." [http://www.bmbf.de/pub/polar\\_research.pdf](http://www.bmbf.de/pub/polar_research.pdf). Accessed November 1, 2013]: 14; Federal Institute for Geosciences and Natural Resources. "Tasks and Activities." [http://www.bgr.bund.de/EN/Gemeinsames/UeberUns/Aufgaben/aufgaben\\_node\\_en.html](http://www.bgr.bund.de/EN/Gemeinsames/UeberUns/Aufgaben/aufgaben_node_en.html). Accessed November 1, 2013].

<sup>10</sup> Federal Ministry for the Environment, Nature Conservation and Nuclear Safety. "Combating Climate Change. The German Adaption Strategy." [http://www.bmu.de/fileadmin/bmu-import/files/english/pdf/application/pdf/broschuere\\_dem\\_klimawandel\\_begegnen\\_en.pdf](http://www.bmu.de/fileadmin/bmu-import/files/english/pdf/application/pdf/broschuere_dem_klimawandel_begegnen_en.pdf). Accessed November 1, 2013]: 50; Potsdam Institute for Climate Impact Research. "Climate Impacts and Vulnerabilities. Research Domain II." <http://www.pik-potsdam.de/research/climate-impacts-and-vulnerabilities>. Accessed November 1, 2013].

<sup>11</sup> Auswärtiges Amt. "Zukunft der Arktis sichern." [http://auswaertiges-amt.de/DE/Aussenpolitik/GlobaleFragen/110317\\_arktiskonferenz.html](http://auswaertiges-amt.de/DE/Aussenpolitik/GlobaleFragen/110317_arktiskonferenz.html). Accessed October 30, 2013; Major, Claudia/Steinicke, Stefan. "EU Member States' Perceptions of the Security Relevance of the High North." [http://www.swp-berlin.org/fileadmin/contents/products/arbeitspapiere/wp\\_mjr\\_ste\\_Geonor\\_Oktober\\_2011.pdf](http://www.swp-berlin.org/fileadmin/contents/products/arbeitspapiere/wp_mjr_ste_Geonor_Oktober_2011.pdf). Accessed November 1, 2013: 11.

the key processes at work. This is critical since the risks for the Arctic ecosystem and society arising from climate change and commercial exploitation are largely unknown. The same applies to the feedback effects on the global climate."<sup>12</sup>

Besides scientific research activities Germany has various other interests in the Arctic, too. Broadly speaking these interests reside between the environmental protection of the pristine Arctic ecosystem on the one side and geo-economic opportunities on the other. This dualism of interests can be seen in the sub-title of Germany's Arctic policy guidelines: "assume responsibility, seize opportunities."<sup>13</sup>

### *Environmental responsibilities*

Even before the Arctic directly became a prominent topic on the German agenda, the fight against global climate change and its interrelationship with the region have been discussed in Germany. Closely linked to the government's prominent role in its fight against global climate change are concerns about possible negative security implications as a result of global warming. This nexus between climate change and security developments is linked to the Arctic, too.

The government anticipates global climate change and an increasing demand for natural resources, mainly the result of a global population increase coupled with ongoing economic growth in emerging countries, call for a transformation of the global economy towards a less carbon-intensive and resources efficient model.<sup>14</sup> According to government

---

<sup>12</sup> Federal Ministry of Education and Research. "Rapid Climate Change in the Arctic. Polar Research as a Global Responsibility." [http://www.bmbf.de/pub/polar\\_research.pdf](http://www.bmbf.de/pub/polar_research.pdf). Accessed November 1, 2013: 4.

<sup>13</sup> Federal Foreign Office. "Climate Change. A Foreign Policy Challenge." <http://www.auswaertiges-amt.de/EN/Aussenpolitik/GlobaleFragen/Klima/Aussenpolitische-Dimension-node.html>. Accessed November 1, 2013].

<sup>14</sup> Auswärtiges Amt. "Ressortbericht des Auswärtigen Amtes zur Vorlage im Staatssekretärausschuss für Nachhaltigkeit." [http://www.bundesregierung.de/Content/DE/\\_Anlagen/Nachhaltigkeit-wiederhergestellt/5-Berichte-Reden/2013-04-](http://www.bundesregierung.de/Content/DE/_Anlagen/Nachhaltigkeit-wiederhergestellt/5-Berichte-Reden/2013-04-)

sources global climate change is one of the biggest challenges of the 21st century and its consequences will be felt across the globe; also in Germany. One of the possible worst-case scenarios is a global sea-level rise, to a large degree the result of shrinking Arctic glaciers, that would also threaten German coastal regions in general and economic centers like the seaport in Hamburg in particular.<sup>15</sup> To slow down the pace of global climate change the government aims to move towards a globally binding convention on climate protection, aimed at limiting the rise of the global average temperature below 2°C of pre-industrialized levels.<sup>16</sup>

---

11-bericht-aa-nachhaltigkeit-leitmotiv-der-aussenpolitik.html. Accessed November 1, 2013: 2.

<sup>15</sup> Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit. “Deutsche Anpassungsstrategie an den Klimawandel” <http://www.bmu.de/service/publikationen/downloads/details/artikel/deutsche-anpassungsstrategie-an-den-klimawandel/>. Accessed November 1, 2013: 48; Haftendorn, “Zaungast in der Arktis.”: 73; Federal Ministry for the Environment, Nature Conservation and Nuclear Safety. “Combating Climate Change. The German Adaption Strategy.” [http://www.bmu.de/fileadmin/bmu-import/files/english/pdf/application/pdf/broschuere\\_dem\\_klimawandel\\_begegnen\\_en.pdf](http://www.bmu.de/fileadmin/bmu-import/files/english/pdf/application/pdf/broschuere_dem_klimawandel_begegnen_en.pdf). Accessed November 1, 2013: 13, 40.

<sup>16</sup> Auswärtiges Amt. “Der Klimawandel. Eine außenpolitische Herausforderung” [http://www.auswaertiges-amt.de/sid\\_E38B82560CB95A14627E73CA0CCB877A/DE/Aussenpolitik/GlobaleFragen/Klima/Aussenpolitische-Dimension-node.html](http://www.auswaertiges-amt.de/sid_E38B82560CB95A14627E73CA0CCB877A/DE/Aussenpolitik/GlobaleFragen/Klima/Aussenpolitische-Dimension-node.html) [accessed November 1, 2013]; Federal Foreign Office. [http://www.auswaertiges-amt.de/EN/Aussenpolitik/GlobaleFragen/Klima/Int\\_Klimaschutz\\_node.html](http://www.auswaertiges-amt.de/EN/Aussenpolitik/GlobaleFragen/Klima/Int_Klimaschutz_node.html). Accessed November 1, 2013.; Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit. “Weltweites Klimaschutzabkommen bleibt unser Ziel.” [http://www.bmu.de/service/publikationen/downloads/details/artikel/weltweites-klimaschutzabkommen-bleibt-unser-ziel/?tx\\_ttnews\[backPid\]=198&cHash=24dfdc450ac41f9035a9724b7a66fafd](http://www.bmu.de/service/publikationen/downloads/details/artikel/weltweites-klimaschutzabkommen-bleibt-unser-ziel/?tx_ttnews[backPid]=198&cHash=24dfdc450ac41f9035a9724b7a66fafd) [accessed November 1, 2013]; Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit. “Deutsche Anpassungsstrategie an den Klimawandel.” <http://www.bmu.de/service/publikationen/downloads/details/artikel/deutsche-anpassungsstrategie-an-den-klimawandel/>. Accessed November 1, 2013; Auswärtiges Amt. “Ressortbericht des Auswärtigen Amtes zur Vorlage im

Today government funded institutions like AWI acknowledge in their reports the link between changing climatic conditions in the Arctic and the feedback mechanisms of these developments for the rest of the globe.<sup>17</sup> The government’s Arctic policy guidelines underline the Arctic region’s role as the earth’s “early warning system” further note: “Already now, atmospheric circulation over the northern hemisphere is changing, and this is affecting the weather patterns of Northern Europe. Not only the shrinking sea ice in the Arctic Ocean but also the increased melting of the Greenland ice sheet and the thawing of the permafrost that covers a considerable area of the Arctic, have a global effect. This will also directly impact Germany.”<sup>18</sup>

It is against this background Germany initiated a number of national and international programs and initiatives aimed at fighting global climate change. In 2007 the government adopted the integrated climate and energy program, aimed at reducing consumption of conventional energy resources thereby protecting the environment and slowing down global warming.<sup>19</sup> In 2008 the government launched the national climate protection initiative and the international climate protection initiative. From 2008 to 2012 up to 12,300 projects have been funded in the framework of the national climate protection initiative. Figures

---

Staatssekretärausschuss für Nachhaltigkeit.” [http://www.bundesregierung.de/Content/DE/\\_Anlagen/Nachhaltigkeit-wiederhergestellt/5-Berichte-Reden/2013-04-11-bericht-aa-nachhaltigkeit-leitmotiv-der-aussenpolitik.html](http://www.bundesregierung.de/Content/DE/_Anlagen/Nachhaltigkeit-wiederhergestellt/5-Berichte-Reden/2013-04-11-bericht-aa-nachhaltigkeit-leitmotiv-der-aussenpolitik.html). Accessed November 1, 2013: 2.

<sup>17</sup> Alfred-Wegener-Institut. “Fakten zum 5. Weltklimabericht. Die wissenschaftlichen Grundlagen.” [http://www.awi.de/de/aktuelles\\_und\\_presse/hintergrund/5\\_weltklimabericht\\_die\\_wissenschaftlichen\\_grundlagen/](http://www.awi.de/de/aktuelles_und_presse/hintergrund/5_weltklimabericht_die_wissenschaftlichen_grundlagen/). Accessed November 1, 2013.

<sup>18</sup> Federal Foreign Office. “Arctic Policy Guidelines.”: 5.

<sup>19</sup> Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit. “Eckpunkte für ein integriertes Energie- und Klimaprogramm” <http://www.bmu.de/service/publikationen/downloads/details/artikel/eckpunkte-fuer-ein-integriertes-energie-und-klimaprogramm/>. Accessed November 1, 2013.

show 310 million Euro has already been provided and additional investments of 809 million Euro have been released within this initiative.<sup>20</sup> Also starting in 2008, the international climate protection initiative is a financial instrument fostering closer cooperation between the government and developing countries in areas of climate protection and climate change adaptation.<sup>21</sup> Since its inception, 365 projects have been funded with about 1.15 billion Euro.<sup>22</sup> In 2011 the Federal Foreign Office created a climate fund aimed at supporting more ambitious climate protection programs in the respective host countries. More than 100 projects have already been funded.<sup>23</sup> This two-pillar approach of climate protection and adaptation underlines the government's awareness of global climate change related challenges and the responsibility it takes to slow down these processes.<sup>24</sup>

---

<sup>20</sup> Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit. "Zahlen und Daten der Nationalen Klimaschutzinitiative." <http://www.klimaschutz.de/de/artikel/zahlen-und-daten-der-nationalen-klimaschutzinitiative/>. Accessed December 22, 2013.

<sup>21</sup> Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit. "Die Internationale Klimaschutzinitiative." <http://www.international-climate-initiative.com/de/ueber-die-iki/foerderinstrument-iki/>. Accessed November 1, 2013.

<sup>22</sup> Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit. "Internationale Klimaschutzinitiative. Monitoring und Evaluierung." <http://www.international-climate-initiative.com/de/ueber-die-iki/monitoring-evaluation/>. Accessed December 22, 2013.

<sup>23</sup> Auswärtiges Amt. „Ressortbericht des Auswärtigen Amtes zur Vorlage im Staatssekretärsausschuss für Nachhaltigkeit.“ [http://www.auswaertiges-amt.de/cae/servlet/contentblob/642182/publicationFile/178667/130409-Ressortbericht\\_Nachhaltigkeit.pdf](http://www.auswaertiges-amt.de/cae/servlet/contentblob/642182/publicationFile/178667/130409-Ressortbericht_Nachhaltigkeit.pdf). Accessed December 22, 2013: 5.

<sup>24</sup> Federal Ministry for the Environment, Nature Conservation and Nuclear Safety. "Combating Climate Change. The German Adaptation Strategy" [http://www.bmu.de/fileadmin/bmu-import/files/english/pdf/application/pdf/broschuere\\_dem\\_klimawandel\\_begegnen\\_en.pdf](http://www.bmu.de/fileadmin/bmu-import/files/english/pdf/application/pdf/broschuere_dem_klimawandel_begegnen_en.pdf). Accessed November 1, 2013: 7.

### *The political engagement*

Germany became a permanent observer in the Arctic Council (AC) in 1998.<sup>25</sup> However, its political engagement in the region is a rather new phenomenon. Against the background of stronger inter-dependencies between the Arctic and other world regions, however, it can be expected that German political engagement will increase, too. The German government supports peaceful development of the Arctic region and the rights of the indigenous population. Its political engagement is based amongst others on the following international treaties and declarations: United Nations Convention of the Law of the Sea (UNCLOS), International Convention for the Prevention of Marine Pollution from Ships (MARPOL), the Convention for the Protection of the Marine Environment and Biodiversity, and the Spitsbergen Treaty.<sup>26</sup>

In the coalition agreement of 2009 topics regarding the fight against global climate change, environmental protection and sustainable economic development are prominently placed not only in the preamble, but also in a separate chapter of the agreement.<sup>27</sup> However, the Arctic has not been mentioned directly. This has changed in the most recent coalition agreement of 2013. This document mentions the Arctic explicitly and calls for the establishment of environmental protection zones in both Antarctica and the Arctic.<sup>28</sup>

---

<sup>25</sup> Haftendorn Helga. „The Case for Arctic Governance. The Arctic Puzzle.“ <http://ams.hi.is/sites/ams.hi.is/files/thecaseforarcticgovernance.pdf>. Accessed December 23, 2013: 16.

<sup>26</sup> Auswärtiges Amt. „Deutschland und der Arktische Rat.“ [http://www.auswaertiges-amt.de/sid\\_61B197A067BF05BE50A680C07E922B1C/DE/Europa/Reg-Nord/Arkt\\_Rat/Arkt\\_Rat\\_DE\\_node.html](http://www.auswaertiges-amt.de/sid_61B197A067BF05BE50A680C07E922B1C/DE/Europa/Reg-Nord/Arkt_Rat/Arkt_Rat_DE_node.html). Accessed December 27, 2013.

<sup>27</sup> CDU/CSU/FDP. "Growth, Education, Unity. The Coalition Agreement." [http://www.fdp.de/files/565/2009-203\\_en\\_Koalitionsvertrag\\_2009.pdf](http://www.fdp.de/files/565/2009-203_en_Koalitionsvertrag_2009.pdf). Accessed October 30, 2013.

<sup>28</sup> CDU/CSU/SPD. „Koalitionsvertrag. Die Zukunft gestalten.“, [http://www.bundesregierung.de/Content/DE/\\_Anlagen/2013/2013-12-17-koalitionsvertrag.pdf?\\_\\_blob=publicationFile&v=2](http://www.bundesregierung.de/Content/DE/_Anlagen/2013/2013-12-17-koalitionsvertrag.pdf?__blob=publicationFile&v=2). Accessed December 27, 2013:120.

As the Arctic region changes, so does the AC. During its 2013 meeting in Kiruna six countries were granted observer status. Against the background of a changing political and institutional situation Germany intends to enhance its role as a permanent observer within the AC, too. Amongst others it pleads for enhanced speaking time and aims to ensure its permanent participation in AC working groups.<sup>29</sup> Based on its expert knowledge in research, technology, and environmental awareness the government intends to use this knowledge as a way of growing engagement within the AC and its member states.<sup>30</sup> So far, German delegates can only use informal contact during AC meetings to discuss Arctic issues with their counterparts of the AC member states.

Possible security implications in the region, as a result of global climate change, are taken seriously by the government (see chapter 2.4). Thus, since 2008 Germany participates on a regular basis in the U.S. EUCOM founded Arctic Security Forces Roundtable (ASFR). It is an informal meeting structure for senior officials of all AC member states (Canada, Denmark, Iceland, Finland, Norway, Russia, Sweden, and the United States) and interested non-Arctic countries like France, the Netherlands, the United Kingdom (UK) and Germany. It is an bi-annual meeting format where discussions so far have focused on Search and Rescue (SAR) and Maritime Domain Awareness (MDA) issues.<sup>31</sup> As security

---

<sup>29</sup> Auswärtiges Amt. „Deutschland und der Arktische Rat.“ [http://www.auswaertiges-amt.de/sid\\_61B197A067BF05BE50A680C07E922B1C/DE/Europa/Reg-Nord/Arkt\\_Rat/Arkt\\_Rat\\_DE\\_node.html](http://www.auswaertiges-amt.de/sid_61B197A067BF05BE50A680C07E922B1C/DE/Europa/Reg-Nord/Arkt_Rat/Arkt_Rat_DE_node.html). Accessed December 27, 2013.

<sup>30</sup> Auswärtiges Amt. „Deutschland und der Arktische Rat.“ [http://www.auswaertiges-amt.de/sid\\_61B197A067BF05BE50A680C07E922B1C/DE/Europa/Reg-Nord/Arkt\\_Rat/Arkt\\_Rat\\_DE\\_node.html](http://www.auswaertiges-amt.de/sid_61B197A067BF05BE50A680C07E922B1C/DE/Europa/Reg-Nord/Arkt_Rat/Arkt_Rat_DE_node.html). Accessed December 27, 2013.

<sup>31</sup> United States European Command. „Arctic Security Forces Roundtable. A new Way to Live by an old Code.“ <http://www.eucom.mil/blog-post/25348/arctic-security-forces-round-table-a-new-way-to-live-by-an-old-code>. Accessed December 27, 2013; United States European Command. „Arctic Nations meet to Discuss Communication, Maritime Domain Awareness Strategy.“ <http://www.eucom.mil/blog-post/24109/arctic-nations-meet-to-discuss-communi>

related topics are explicitly excluded from AC discussions the ASFR, so far, is one of the most prominent settings to discuss Arctic security affairs. It remains to be seen whether it will develop into a more concrete governance mechanism related to regional security issues.

In addition, Germany actively supports the European Union's (EU) Arctic engagement and supports the EU's application to become a permanent observer in the AC.<sup>32</sup> As the Arctic forms a central element in the global environmental system, the government also sees a link between the Arctic's environmental transformation, its role in global warming and possible global security challenges resulting from this interplay, as the following chapter shows.

### *Global security challenges*

The government acknowledges that transformation of the global environmental system might result in geopolitical turbulence.<sup>33</sup> This nexus between climate change and security was first recognized in a 2007 report of the German Advisory Council on Global Change titled *World in Transition: Climate Change as a Security Risk*.<sup>34</sup> Whilst not agreeing with every aspect of the report the government supports many of the main findings.<sup>35</sup>

---

ation-maritime-domain-awareness-strategy. Accessed December 27, 2013.

<sup>32</sup> Auswärtiges Amt. „Leitlinien deutscher Arktispolitik.“ <http://www.auswaertiges-amt.de/cae/servlet/contentblob/658714/publicationFile/185889/Arktisleitlinien.pdf>. Accessed December 27, 2013: 22.

<sup>33</sup> Auswärtiges Amt. „Ressortbericht des Auswärtigen Amtes zur Vorlage im Staatssekretärausschuss für Nachhaltigkeit“ [http://www.bundesregierung.de/Content/DE/\\_Anlagen/Nachhaltigkeit-wiederhergestellt/5-Berichte-Reden/2013-04-11-bericht-aa-nachhaltigkeit-leitmotiv-der-aussenpolitik.html](http://www.bundesregierung.de/Content/DE/_Anlagen/Nachhaltigkeit-wiederhergestellt/5-Berichte-Reden/2013-04-11-bericht-aa-nachhaltigkeit-leitmotiv-der-aussenpolitik.html). Accessed November 1, 2013: 2.

<sup>34</sup> German Advisory Council on Global Change. „World in Transition. Climate Change as a Security Risk.“ <http://www.wbgu.de/en/flagship-reports/fr-2007-security/>. Accessed October 31, 2013.

<sup>35</sup> Deutscher Bundestag. „Unterrichtung durch die Bundesregierung.“ <http://dip21.bundestag.de/dip21/btd/16/116/1611600.pdf>. Accessed November 1, 2013; Die

The government recognizes the effects of global climate change aggravates conflict and competition for natural resources like water and food. More extreme weather patterns may dry up entire regions, and rising sea levels may force people to leave their homes.<sup>36</sup> All these developments could further destabilize conflict ridden and unstable countries and entire regions.

Based on the report's findings, Germany under its chairmanship of the United Nations Security Council (UNSC) in July 2011 successfully set the agenda and lobbied for global acknowledgment of the close connection between global climate change and possible negative implications for peace and stability worldwide.<sup>37</sup> In its statement during the Security Council's session United Nations Environment Programme (UNEP) then chief Achim Steiner underlined the strong connection between climate change and geopolitical risks: "There can be little doubt today that climate change has potentially far-reaching implications for global stability and security in economic, social and environmental terms which will increasingly transcend the capacity of individual nation states to manage."<sup>38</sup>

According to the government, "a stable climate is indispensable for global prosperity, for food, water and energy security as well as for an

---

Bundesregierung. "Klimawandel bedroht Weltsicherheit" <http://archiv.bundesregierung.de/Content/DE/Archiv16/Artikel/2007/06/2007-06-06-klimawandel-wird-zum-sicherheitsrisiko.html>. Accessed November 1, 2013.

<sup>36</sup> Federal Ministry for the Environment, Nature Conservation and Nuclear Safety. "Combating Climate Change. The German Adaption Strategy." [http://www.bmu.de/fileadmin/bmu-import/files/english/pdf/application/pdf/broschuere\\_dem\\_klimawandel\\_begegnen\\_en.pdf](http://www.bmu.de/fileadmin/bmu-import/files/english/pdf/application/pdf/broschuere_dem_klimawandel_begegnen_en.pdf). Accessed November 1, 2013: 58.

<sup>37</sup> Auswärtiges Amt. "Klima und Sicherheit." [http://www.auswaertiges-amt.de/DE/Aussenpolitik/GlobaleFragen/Klima/KlimaUndSicherheit\\_node.html](http://www.auswaertiges-amt.de/DE/Aussenpolitik/GlobaleFragen/Klima/KlimaUndSicherheit_node.html). Accessed October 30, 2013; MacFarquhar, Neil. "U.N. Deadlock on Assessing Climate Shift." *New York Times*. July 20, 2011, <http://www.nytimes.com/2011/07/21/world/21nations.html>. Accessed October 30, 2013.

<sup>38</sup> Steiner, Achim. "UNEP Chief Addresses UN Security Council Debate on Climate Change and Security." <http://www.unep.org/newscentre/default.aspx?DocumentID=2646&ArticleID=8817>. Accessed November 1, 2013.

open world economy, cross-border cooperation and the rule of law. To tackle man-made global warming on a long-term basis, it is crucial to achieve "stabilization of greenhouse gases in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system".<sup>39</sup> Otherwise global climate change can have disruptive consequences for millions of people, for example with regard to access to food and water or the flooding of huge areas.<sup>40</sup> This, in turn, can also have an impact on German and European security interests thereby negatively affecting European stability.<sup>41</sup> It is also against this background that Germany has strong and multiple scientific research interests in the Arctic region as new findings may help to better understand the complex interdependence between the Arctic and the global ecosystem and its possible implications for peace and stability across the globe.

### *The public discourse*

As the Arctic gets larger international attention, non-governmental organizations (NGO's) like Greenpeace and the World Wildlife Fund

---

<sup>39</sup> Federal Foreign Office. "Combating Climate Change Internationally." [http://www.auswaertiges-amt.de/EN/Aussenpolitik/GlobaleFragen/Klima/Int\\_Klimaschutz\\_node.html](http://www.auswaertiges-amt.de/EN/Aussenpolitik/GlobaleFragen/Klima/Int_Klimaschutz_node.html). Accessed November 1, 2013.

<sup>40</sup> Federal Foreign Office. "Climate and Security." [http://www.auswaertiges-amt.de/EN/Aussenpolitik/GlobaleFragen/Klima/KlimaUndSicherheit\\_node.html](http://www.auswaertiges-amt.de/EN/Aussenpolitik/GlobaleFragen/Klima/KlimaUndSicherheit_node.html). Accessed November 1, 2013.

<sup>41</sup> Die Bundesregierung. "Antwort der Bundesregierung auf die Kleine Anfrage der Abgeordneten Alexander Ulrich, Monika Knoche, Dr. Lothar Bisky, weiterer Abgeordneter und der Fraktion Die Linke - Drucksache 16/8804-, Klimawandel und Sicherheit, Deutscher Bundestag, 16. Wahlperiode, Drucksache 16/9136." <http://dip21.bundestag.de/dip21/btd/16/091/1609136.pdf>. Accessed January 10, 2014: 1. Die Bundesregierung. "Antwort der Bundesregierung auf die Kleine Anfrage der Abgeordneten Alexander Ulrich, Monika Knoche, Dr. Lothar Bisky, weiterer Abgeordneter und der Fraktion Die Linke - Drucksache 16/8804-, Klimawandel und Sicherheit, Deutscher Bundestag, 16. Wahlperiode, Drucksache 16/9136." Accessed January 10, 2014: 2.

(WWF) started national and international campaigns to save the Arctic. Whilst international activities like Greenpeace's *save the Arctic* campaign have generated a certain amount of media coverage in Germany, the country's public discourse remains limited. In April 2013 Greenpeace activists demonstrated during the evangelical church congress in Hamburg for the protection of the Arctic environment.<sup>42</sup> During summer, Greenpeace activists launched public awareness campaigns at Shell gasoline stations to inform consumers about the company's activities in the Arctic.<sup>43</sup> In autumn, several rallies in Berlin, Hamburg, Leipzig and Munich were organized by Greenpeace to protest for the immediate release of 30 activists, the so-called Arctic-30, held in a Russian prison after they attempted to board the Russian oil platform Prirazlomnaya.<sup>44</sup> Besides Greenpeace's activities however, a discourse between the public and the government about the changing Arctic and its consequences for Germany, has not started yet.

## Geo-economic opportunities

Germany sees growing geo-economic opportunities arising in the Arctic. As a high-technology producing and export oriented country, Germany is extremely dependent on a secure supply of natural resources as well-as-free and functioning Sea Lanes of Communication (SLOCs).<sup>45</sup>

---

<sup>42</sup> Greenpeace. „Jahresrückblick.“ [http://www.3d-zeitschrift.de/p/MbhZmPMji-4i3R/Jahresrueckblick\\_2013.html](http://www.3d-zeitschrift.de/p/MbhZmPMji-4i3R/Jahresrueckblick_2013.html). Accessed December 27, 2013): 29.

<sup>43</sup> Greenpeace. „Jahresrückblick.“ [http://www.3d-zeitschrift.de/p/MbhZmPMji-4i3R/Jahresrueckblick\\_2013.html](http://www.3d-zeitschrift.de/p/MbhZmPMji-4i3R/Jahresrueckblick_2013.html). Accessed December 27, 2013): 31.

<sup>44</sup> Greenpeace. „Publikationen zum Thema Öl.“, <http://www.greenpeace.de/themen/oel/publikationen/>. Accessed January 10, 2014.

<sup>45</sup> German Ministry of Defence. “Defence Policy Guidelines.” [http://www.nato.diplo.de/contentblob/3150944/Daten/1318881/VM\\_deMaiziere\\_180511\\_eng\\_DLD.pdf](http://www.nato.diplo.de/contentblob/3150944/Daten/1318881/VM_deMaiziere_180511_eng_DLD.pdf). Accessed January 10, 2014.

Against the background of an increasing global demand for natural resources and a shift of the world's economic centre of gravity from West to East the government sees an increasing interdependence between Arctic development and the country's economic direction. Based on long-standing and close bilateral relationships with Norway and Russia, Germany's economy is already interlinked with Arctic developments. There are signs that point to even closer future cooperation.

New economic opportunities do not only include the consumption of Arctic natural resources and the use of Arctic maritime transit routes towards Asia but also the supply of high-technology products, services and knowledge needed for sustainable development of the region.

## *German interests in energy and mineral resources*

Germany is Europe's biggest exporter, the EU's largest economy, and has the largest population within the EU.<sup>46</sup> Its economy is extremely dependent on imports of energy resources, minerals and raw materials. In 2011 Germany imported natural resources (energy resources, metals, and minerals) amounting to 137.6 billion Euro. This is an increase of 24.8 percent compared to 2010.<sup>47</sup> In the coming years Germany and EU member states will become even more dependent on energy imports, thus affecting their security of supply. The EU's import dependency on energy resources is expected to increase from 50 percent today to 65 percent in 2030.<sup>48</sup> One of the main reasons is the decreasing reservoir

---

<sup>46</sup> Rühl, Lothar, “Russland als strategischer Partner oder als strategische Herausforderung. Europa und die Energiegroßmacht im Osten.” In *Energieversorgung als Sicherheitspolitische Herausforderung*, edited by Reinhard C. Meier-Walser, 119. München: Hanns Seidel Stiftung, 2007.

<sup>47</sup> Deutsche Rohstoffagentur. “Deutschland. Rohstoffsituation 2011.” [http://www.bgr.bund.de/DE/Gemeinsames/Produkte/Downloads/DERA\\_Rohstoffinformationen/rohstoffinformationen-13.pdf;jsessionid=2078BF7EE30B749E27B5CC3BE20E648C.1\\_cid289?\\_\\_blob=publicationFile&v=3](http://www.bgr.bund.de/DE/Gemeinsames/Produkte/Downloads/DERA_Rohstoffinformationen/rohstoffinformationen-13.pdf;jsessionid=2078BF7EE30B749E27B5CC3BE20E648C.1_cid289?__blob=publicationFile&v=3) [accessed December 22, 2013]: 22.

<sup>48</sup> Kreft, Heinrich. “Die geopolitische Dimension der Energiesicherheit aus deutscher und europäischer Sicht.” In: *Energieversorgung als Sicherheitspolitische*

of European energy resources in the North Sea.<sup>49</sup> Germany's import dependency of natural resources (oil, gas and raw materials) is increasing, too. On a value basis oil and gas imports formed 10.7 percent of total German imports in 2012.<sup>50</sup> Since 2001 (6.1 percent), this amount has almost doubled.<sup>51</sup> Imports of fossil sources of energy are expected to rise to 85 percent of Germany's overall energy requirements by 2030.<sup>52</sup> Already today two Arctic coastal states, Russia (44 billion Euro) and Norway (14.5 billion Euro), are by value the most important energy suppliers.<sup>53</sup> As both countries move their production capacities further north, the countries' share of Arctic resources in their total energy exports will increase.<sup>54</sup> As Berlin intends to continue or even to strengthen its

---

Herausforderung, edited by Reinhard C. Meier-Walser, 32. München: Hanns Seidel Stiftung, 2007.

<sup>49</sup> Kreft, Heinrich. "Die geopolitische Dimension der Energiesicherheit aus deutscher und europäischer Sicht." In: *Energieversorgung als Sicherheitspolitische Herausforderung*, edited by Reinhard C. Meier-Walser, 39. München: Hanns Seidel Stiftung, 2007.

<sup>50</sup> Statistisches Bundesamt der Bundesrepublik Deutschland. „Einfuhr nach Güterabteilungen des Güterverzeichnisses für Produktionsstatistiken.“ In: *Statistisches Jahrbuch 2013*, 411, 2013.

<sup>51</sup> Statistisches Bundesamt der Bundesrepublik Deutschland. "Einfuhr nach Güterabteilungen des Güterverzeichnisses für Produktionsstatistiken." In: *Statistisches Jahrbuch 2002*, 277, 2002.

<sup>52</sup> Kreft, Heinrich. "Geopolitics of Energy. A German and European View." <http://www.worldsecuritynetwork.com/Other/Kreft-Heinrich/Geopolitics-of-Energy-A-German-and-European-View>. Accessed December 22, 2013.

<sup>53</sup> Deutsche Rohstoffagentur. "Deutschland. Rohstoffsituation 2011." [http://www.bgr.bund.de/DE/Gemeinsames/Produkte/Downloads/DERA\\_Rohstoffinformationen/rohstoffinformationen-13.pdf;jsessionid=2078BF7EE30B749E27B5CC3BE20E648C.1\\_cid289?\\_\\_blob=publicationFile&v=3](http://www.bgr.bund.de/DE/Gemeinsames/Produkte/Downloads/DERA_Rohstoffinformationen/rohstoffinformationen-13.pdf;jsessionid=2078BF7EE30B749E27B5CC3BE20E648C.1_cid289?__blob=publicationFile&v=3). Accessed January 10, 2014: 25.

<sup>54</sup> Norwegian Ministry of Foreign Affairs. "White Paper on the High North. Vision and Policy Instruments." [http://www.regjeringen.no/upload/UD/Vedlegg/Nordomr%C3%A5dene/UD\\_nordomrodene\\_innmat\\_EN\\_web.pdf](http://www.regjeringen.no/upload/UD/Vedlegg/Nordomr%C3%A5dene/UD_nordomrodene_innmat_EN_web.pdf). Accessed Janu-

energy cooperation with both countries, German energy imports from the Arctic can be expected to increase in coming years, too.

Russia is a key partner in terms of security of supply of these resources.<sup>55</sup> In 2006 Germany already imported 37 percent of its oil and 34 – 41 percent of its gas resources from Russia.<sup>56</sup> From 1997 to 2008 Russian energy exports (oil and gas) to Germany have increased from 26.9 percent to 32.5 percent.<sup>57</sup> In 2011 Russia and Norway supplied about 40 percent and 34 percent respectively of Germany's imported gas consumption.<sup>58</sup> In 2011 Russia supplied 31 percent of Germany's imported oil

---

ary 10, 2014; Norwegian Ministry of Foreign Affairs. The Norwegian's Government Strategy for the High North." <http://www.regjeringen.no/upload/UD/Vedlegg/strategien.pdf>. Accessed January 10, 2014; Melvin, Neil/Klimenko, Ekaterian. "Russia's Arctic Strategy in the Context of its Eurasian Policies, Paper presented at the ISA Annual Convention 2012; Zysk, Katarzyna. "Russia's Arctic Strategy. Ambitions and Restraints." [http://www.geopoliticsnorth.org/index.php?option=com\\_content&view=article&id=84&limitstart=2](http://www.geopoliticsnorth.org/index.php?option=com_content&view=article&id=84&limitstart=2) [accessed January 10, 2014].

<sup>55</sup> Rühl, Lothar. "Russland als strategischer Partner oder als strategische Herausforderung. Europa und die Energiegroßmacht im Osten." In: *Energieversorgung als Sicherheitspolitische Herausforderung*, edited by Reinhard C. Meier-Walser, 119. München: Hanns Seidel Stiftung, 2007.

<sup>56</sup> Rühl, Lothar. "Russland als strategischer Partner oder als strategische Herausforderung. Europa und die Energiegroßmacht im Osten." In: *Energieversorgung als Sicherheitspolitische Herausforderung*, edited by Reinhard C. Meier-Walser, 109-110. München: Hanns Seidel Stiftung, 2007.

<sup>57</sup> Statistisches Bundesamt der Bundesrepublik Deutschland. „Wichtigste Bezugsländer für Erdöl und Erdgas.“ In: *Export, Import, Globalisierung. Deutscher Außenhandel und Welthandel 1990-2008*, [https://www.destatis.de/DE/Publikationen/Thematisch/Aussenhandel/Gesamtentwicklung/AussenhandelWelthandel1510006099004.pdf?\\_\\_blob=publicationFile](https://www.destatis.de/DE/Publikationen/Thematisch/Aussenhandel/Gesamtentwicklung/AussenhandelWelthandel1510006099004.pdf?__blob=publicationFile). Accessed January 10, 2014: 25.

<sup>58</sup> Deutsche Rohstoffagentur. "Deutschland. Rohstoffsituation 2011." [http://www.bgr.bund.de/DE/Gemeinsames/Produkte/Downloads/DERA\\_Rohstoffinformationen/rohstoffinformationen-13.pdf;jsessionid=2078BF7EE30B749E27B5CC3BE20E648C.1\\_cid289?\\_\\_blob=publicationFile&v=3](http://www.bgr.bund.de/DE/Gemeinsames/Produkte/Downloads/DERA_Rohstoffinformationen/rohstoffinformationen-13.pdf;jsessionid=2078BF7EE30B749E27B5CC3BE20E648C.1_cid289?__blob=publicationFile&v=3). Accessed January 10, 2014: 36.

consumption.<sup>59</sup> By 2030 German gas imports from Russia could further increase to more than 60 percent of its overall demand.<sup>60</sup> This dependency will make Germany vulnerable and could have negative political consequences.<sup>61</sup> Already today the Russian part of the Arctic accounts for 11 percent of the countries GNP and 22 percent of its total volume of exports. About 80 percent of its natural gas and 70 percent of its oil reserves are expected to lie within its Arctic territories.<sup>62</sup> Therefore the share of Arctic oil and gas resources in Russia's total amount of energy exports is expected to increase significantly in coming decades. As long as Germany sees Russia as a key partner for energy imports, Germany's dependence on Arctic energy resources from Russia will remain high.

Germany also has a close bilateral energy relationship with Norway. In 2008 Norway's share of German energy imports (oil and gas) accounted for 21.9 percent.<sup>63</sup> In February 2013 German chancellor Merkel, during a visit in Oslo, underlined the importance of the German-Norwegian energy partnership and hinted to a possible intensification of bilateral en-

---

<sup>59</sup> Germany Trade & Invest/Botschaft der Bundesrepublik Deutschland Moskau/Deutsch-Russische Außenhandelskammer. "Russland in Zahlen. Aktuelle Wirtschaftsdaten für die Russische Föderation." <http://www.germania.diplo.de/content/blob/4018698/Daten/3600141/2013sommer.pdf>. Accessed January 10, 2014: 18.

<sup>60</sup> Kreft, Heinrich. "Die geopolitische Dimension der Energiesicherheit aus deutscher und europäischer Sicht,," In: *Energieversorgung als Sicherheitspolitische Herausforderung*, edited by Reinhard C. Meier-Walser, 33. München: Hanns Seidel Stiftung, 2007.

<sup>61</sup> Hubel, Helmut. "Energie-Interdependenz mit Russland. Deutschland zwischen bilateraler Sonderbeziehung und Solidarität mit seinen EU- und NATO-Partnern." In: *Energieversorgung als Sicherheitspolitische Herausforderung*, edited by Reinhard C. Meier-Walser, 125. München: Hanns Seidel Stiftung, 2007.

<sup>62</sup> Melvin, Neil/Klimenko, Ekaterian. "Russia's Arctic Strategy in the Context of its Eurasian Policies." Paper presented at the ISA Annual Convention 2012: 8-9.

<sup>63</sup> Auswärtiges Amt. "Die Deutsch-Norwegische Energie-Partnerschaft." [http://www.auswaertiges-amt.de/DE/Aussenpolitik/GlobaleFragen/Energie/Norwegen-energiepartnerschaft\\_node.html](http://www.auswaertiges-amt.de/DE/Aussenpolitik/GlobaleFragen/Energie/Norwegen-energiepartnerschaft_node.html). Accessed January 10, 2014.

ergy cooperation.<sup>64</sup> In March 2013, Germany and Norway held their first workshop in Berlin on closer cooperation in the Arctic. This workshop was the result of a decision taken by both countries' foreign ministers in August 2012 as political decision-makers in both countries seemed to see an increasing relevance of bilateral cooperation in the Arctic. Thus due to the large share of German energy imports from Norway and Russia, the country's energy security is influenced by developments in the Arctic region.<sup>65</sup>

Besides oil and gas, Germany's economy is also highly dependent on imports of minerals.<sup>66</sup> In 2011 Germany imported raw materials amounting to 109.3 billion Euro.<sup>67</sup> Among others, rare earth minerals are needed for the development of "green technologies" (e.g. the production of wind turbines).<sup>68</sup> As a "high tech" producing nation Germany is extremely dependent on a sufficient supply of raw materials.

---

<sup>64</sup> Trude, Pettersen. Barents Observer, February 20, 2013, "Norway and Germany talk Energy." <http://barentsobserver.com/en/energy/2013/02/norway-and-germany-talk-energy-20-02>. Accessed November 1, 2013; Die Bundesregierung. "Stipvisite bei guten Freunden." <http://www.bundesregierung.de/ContentArchiv/DE/Archiv17/Reiseberichte/2013-02-20-oslo.html>. Accessed January 10, 2014.

<sup>65</sup> Rieke, Henning. "Die Arktis lockt. Deutsche Interessen im Hohen Norden." In: "Die Arktis. Ressourcen, Interessen und Probleme", edited by Bernd Rill, 99. München: Hanns Seidel Stiftung, 2010; Haftendorn, Helga, "Zaungast in der Arktis. Deutschlands Interessen an Rohstoffen und Umweltschutz." *Internationale Politik* (July-August 2011): 72-79.

<sup>66</sup> Deutsche Rohstoffagentur. "Das mineralische Rohstoffpotenzial Grönlands." [http://www.deutsche-rohstoffagentur.de/DE/Gemeinsames/Produkte/Downloads/DERA\\_Rohstoffinformationen/rohstoffinformationen-01.pdf?\\_\\_blob=publicationFile&v=6](http://www.deutsche-rohstoffagentur.de/DE/Gemeinsames/Produkte/Downloads/DERA_Rohstoffinformationen/rohstoffinformationen-01.pdf?__blob=publicationFile&v=6). Accessed January 10, 2014.

<sup>67</sup> Heitzer, Bernhard. „Im Interesse einer sicheren Versorgung mit Rohstoffen. Die Umsetzung der deutschen Rohstoffstrategie.“ *Zeitschrift für Außen- und Sicherheitspolitik* 5 (January 2012): 42

<sup>68</sup> Haftendorn, Helga. "Der Traum vom Ressourcenreichtum der Arktis." *Zeitschrift für Außen- und Sicherheitspolitik* 5 (January 2012): 455.

However, due to economic development of emerging countries, the government sees an increasing shortage of resources in the markets and a growing global competition for natural resources.<sup>69</sup> According to the German Resource Agency, in the Arctic region lie important mineral resources, amongst others proven Greenlandic rare earth mineral deposits could supply the current global demand for these minerals for the next 150 years.<sup>70</sup> As traditional mineral markets have crashed, rare earth and other raw materials located in Arctic territories could become more important for the German economy. In order to better coordinate its import capacity of these and other mineral resources the German government in 2007 initiated a dialogue between economic interests and political representatives. The aim was to develop elements of a resource strategy. In addition, an inter-ministerial committee for resources has been founded.<sup>71</sup> This is led by the Federal Ministry of Economics and Technology which has the leading political competence for the security of supply of natural resources. It is coordinating its activities with the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, the Federal Ministry

---

<sup>69</sup> Bundesministerium für Wirtschaft und Technologie. "Rohstoffstrategie der Bundesregierung. Sicherung einer nachhaltigen Rohstoffversorgung Deutschlands mit nicht-energetischen mineralischen Rohstoffen." <http://www.bmwi.de/Dateien/BMWi/PDF/rohstoffstrategie-der-bundesregierung>. Accessed November 1, 2013:19-21.

<sup>70</sup> Deutsche Rohstoffagentur. "Grönlands Seltene Erden decken Weltbedarf für 150 Jahre." [http://www.bgr.bund.de/DE/Gemeinsames/Oeffentlichkeitsarbeit/Pressemitteilungen/BGR/DERA/dera-bgr-121002\\_groenland\\_seltene\\_erden.html](http://www.bgr.bund.de/DE/Gemeinsames/Oeffentlichkeitsarbeit/Pressemitteilungen/BGR/DERA/dera-bgr-121002_groenland_seltene_erden.html). Accessed December 23, 2013; Deutsche Rohstoffagentur. "Das mineralische Rohstoffpotenzial Grönlands." [http://www.bgr.bund.de/DERA/DE/Rohstoffinformationen/Schriftenreihe/schriftenreihe\\_node.html##arktis](http://www.bgr.bund.de/DERA/DE/Rohstoffinformationen/Schriftenreihe/schriftenreihe_node.html##arktis). Accessed November 1, 2013.

<sup>71</sup> Bundesministerium für Wirtschaft und Technologie. "Rohstoffstrategie der Bundesregierung." <http://www.bmwi.de/Dateien/BMWi/PDF/rohstoffstrategie-der-bundesregierung>. Accessed November 1, 2013: 6.

for Economic Cooperation and Development and the Federal Foreign Office.<sup>72</sup>

In 2010 Germany adopted its national resource strategy and launched the German Resource Agency (Deutsche Rohstoffagentur, DERA).<sup>73</sup> The Resource Agency is affiliated with the Federal Agency for Geosciences and Natural Resources. The aim of the strategy is to offer a regulative framework as well as scientific support (via the Federal Agency for Geosciences and Resources) for the German economy.<sup>74</sup> Based on the gained scientific knowledge the government is able to participate in the development of international legal rules concerning the resource exploitation in frontier areas like the circumpolar shelf areas.<sup>75</sup>

### *German shipping interests*

Being the world's third largest shipping nation in terms of the owner's nationality, the world's largest shipping nation in terms of container ships and their commercialization, and one of the major export oriented economies, Germany's economic development is to a large extent dependent on the maritime domain and maritime trade routes.<sup>76</sup> About 60 percent

---

<sup>72</sup> Haftendorn, Helga. "Der Traum vom Ressourcenreichtum der Arktis." *Zeitschrift für Außen- und Sicherheitspolitik* 5 (January 2012): 456.

<sup>73</sup> Bundesministerium für Wirtschaft und Technologie. "Rohstoffstrategie der Bundesregierung." <http://www.bmwi.de/Dateien/BMWi/PDF/rohstoffstrategie-der-bundesregierung>. Accessed November 1, 2013.

<sup>74</sup> Bundesministerium für Wirtschaft und Technologie. "Rohstoffstrategie der Bundesregierung." <http://www.bmwi.de/Dateien/BMWi/PDF/rohstoffstrategie-der-bundesregierung>. Accessed November 1, 2013: 8, 10.

<sup>75</sup> Bundesministerium für Wirtschaft und Technologie, 2010, Rohstoffstrategie der Bundesregierung, <http://www.bmwi.de/Dateien/BMWi/PDF/rohstoffstrategie-der-bundesregierung>. Accessed November 1, 2013, 10-11.

<sup>76</sup> Flottenkommando. „Kennzahlen zur maritimen Abhängigkeit der Bundesrepublik Deutschland.“ [http://www.marine.de/portal/a/marine/tut/p/c4/04\\_SB8K8xLLM9MSSzPy8xBz9CP3I5EyrpHK93MQivdzSnJLM3NSUZES9IPzy-vJz8xJRivbTE7JLUPP2CbEdFAIz5uRY/](http://www.marine.de/portal/a/marine/tut/p/c4/04_SB8K8xLLM9MSSzPy8xBz9CP3I5EyrpHK93MQivdzSnJLM3NSUZES9IPzy-vJz8xJRivbTE7JLUPP2CbEdFAIz5uRY/) [accessed December 28, 2013].

of Germany's traded goods (imports and exports) are transported via sea. The GDP share of these goods is 70 percent.<sup>77</sup> Altogether 400,000 people work in the maritime industry, which generates around 50 billion Euro per year.<sup>78</sup> Against this background the Arctic might become even more important for Germany in coming years within the realm of global shipping routes for transport of goods and natural resources.<sup>79</sup>

When regular traffic along the Northern Sea Route (NSR) becomes possible, Germany may be interested to use the NSR to connect with the fast-growing Asian economies as its growing trade with East-Asia could significantly profit from shorter transit times. In 2012 non-European trade counted for about 30 percent of Germany's imports and exports.<sup>80</sup> The trade with Asia accounts already for 16.3 percent of exports and 18.3 percent of imports, contrasted with 11.7 and 8.8 percents respectively for trade with the American continent.<sup>81</sup> From 2009 to mid-2010

---

<sup>77</sup> Hefe, Peter. „Fragile Wertschöpfungsketten. Zur Notwendigkeit eines deutschen maritimen Engagements“ <http://www.kas.de/wf/de/33.34915/>. Accessed December 28, 2013: 3.

<sup>78</sup> Feldt, Lutz / Masala, Carlo / Stricker, Hans-Joachim / Tsetsos, Konstantinos. „Kein Land in Sicht?“ *Frankfurter Allgemeine Zeitung* April 1, 2013, <http://www.faz.net/aktuell/politik/die-gegenwart/sicherheitspolitik-kein-land-in-sicht-12133854.html> [accessed January 10, 2014]; Flottenkommando. „Kennzahlen zur maritimen Abhängigkeit der Bundesrepublik Deutschland.“ [http://www.marine.de/portal/a/marine!/ut/p/c4/04\\_SB8K8xLLM9MSSzPy8xBz9CP3I5EyrpHK93MQivdzSnJLM3NSUzES9IPzyvJz8xJRivbTE7JLUPP2CbEdFAIz5uRY!/](http://www.marine.de/portal/a/marine!/ut/p/c4/04_SB8K8xLLM9MSSzPy8xBz9CP3I5EyrpHK93MQivdzSnJLM3NSUzES9IPzyvJz8xJRivbTE7JLUPP2CbEdFAIz5uRY!/). Accessed December 28, 2013.

<sup>79</sup> Feldt, Lutz / Masala, Carlo / Stricker, Hans-Joachim / Tsetsos, Konstantinos. „Kein Land in Sicht?“ *Frankfurter Allgemeine Zeitung* April 1, 2013, <http://www.faz.net/aktuell/politik/die-gegenwart/sicherheitspolitik-kein-land-in-sicht-12133854.html>. Accessed January 10, 2014.

<sup>80</sup> Bundesministerium für Wirtschaft und Technologie. „Fakten zum deutschen Außenhandel 2012.“ <http://www.bmwi.de/BMWi/Redaktion/PDF/F/fakten-zum-deutschen-aussenhandel-2011>. Accessed January 10, 2014: 1.

<sup>81</sup> Bundesministerium für Wirtschaft und Technologie. „Fakten zum deutschen

German exports to China grew by more than 70 percent.<sup>82</sup> In 2012 already 6.1 percent of its global exports went to China. Likewise 8.5 percent of Germany's global imports came from China.<sup>83</sup> As 50 percent of Germany's GDP and two-thirds of its GDP growth are provided by exports, the possibility of open and shorter Arctic sea routes towards Asian boom regions could be of particular importance for Germany.<sup>84</sup> Stronger integration with this region could offer new economic dynamics for Germany and Europe.<sup>85</sup> Against this background it comes as no surprise that two German vessels (*MV Beluga Foresight* and *MV Beluga Fraternity*) were the first non-Russian ships allowed and able to navigate the NSR in August and September 2009, transporting heavy plant modules from South Korea to Arkhangelsk (Russia) and then further on to Rotterdam. The new passage shortened the distance for 3,000 nautical miles and reduced fuel consumption by 200 tons per vessel, resulting in savings of 600,000 US dollars.<sup>86</sup>

---

Außenhandel 2012.“ <http://www.bmwi.de/BMWi/Redaktion/PDF/F/fakten-zum-deutschen-aussenhandel-2011>. Accessed January 10, 2014: 8.

<sup>82</sup> Kundnani, Hans. “Germany as a Geo-Economic Power.” *The Washington Quarterly* 4 (June 2011): 36.

<sup>83</sup> Bundesministerium für Wirtschaft und Technologie. „Fakten zum deutschen Außenhandel 2012.“ <http://www.bmwi.de/BMWi/Redaktion/PDF/F/fakten-zum-deutschen-aussenhandel-2011>. Accessed January 10, 2014: 1.

<sup>84</sup> Kundnani, Hans. “Germany as a Geo-Economic Power.” *The Washington Quarterly* (June 2011): 41.

<sup>85</sup> Blunden, Margaret. “Geopolitics on the Northern Sea Route.” *International Affairs* 88 (January 2012): 115-129; Major, Claudia/Steinicke, Stefan. “EU Member States' Perceptions of the Security Relevance of the High North.” [http://www.swp-berlin.org/fileadmin/contents/products/arbeitspapiere/wp\\_mjr\\_ste\\_Geonor\\_Oktober\\_2011.pdf](http://www.swp-berlin.org/fileadmin/contents/products/arbeitspapiere/wp_mjr_ste_Geonor_Oktober_2011.pdf). Accessed November 1, 2013: 8-9; Kreft, Heinrich. “Ostasien und Deutschland. Der Aufstieg Ostasiens als strategische Herausforderung und Chance.” *Zeitschrift für Außen- und Sicherheitspolitik* 4 (July 2011): 375-385.

<sup>86</sup> Norton, Jerry. „German Ships successfully make „Arctic Passage“.“ <http://>

The nexus of maritime trade and security of SLOCs has become more important in the German security and defense discourse in recent years. The White Paper on Defense, published in 2006, stated the importance of free and secure maritime trading routes for the country's economic security. This acknowledgment was underlined again in 2010 by former defense minister zu Guttenberg, who stated: "The protection of trade routes and the energy infrastructure need to be seen from a military and global strategic viewpoint".<sup>87</sup> This position has been reiterated in the country's latest Defence Policy Guidelines (DPG) published in May 2011. Due to the country's heavy reliance on free and secure trade routes for the import of raw materials and export of commodities, transport and energy security related questions will play a much bigger role in German security policy in coming years.<sup>88</sup>

#### *The role and interests of the German industry in the Arctic*

Besides shipping and natural resource interests, it is also the government's aim that German industry becomes a more important supplier of high-technology products, services and knowledge needed in the Arctic to ensure the highest environmental protection standards for sustainable economic development of the region. The government anticipates the maritime economy to become one of the country's future high-technology industries. Therefore in July 2011 the government

---

[www.reuters.com/article/2009/09/12/us-climate-shipping-arctic-idUSTRE58B01K20090912](http://www.reuters.com/article/2009/09/12/us-climate-shipping-arctic-idUSTRE58B01K20090912) [accessed January 10, 2014]; Guschin, Arthur. „Understanding China's Arctic Policies.“ <http://thediplomat.com/2013/11/understanding-chinas-arctic-policies/>. Accessed January 10, 2014.

<sup>87</sup> Kohler, Berthold. "Guttenberg hat Recht." *Frankfurter Allgemeine Zeitung*, 09.11.2010, <http://www.faz.net/aktuell/politik/sicherheitspolitik-guttenberg-hat-recht-11066744.html>. Accessed January 10, 2014.

<sup>88</sup> German Ministry of Defence. "Defence Policy Guidelines." [http://www.nato.diplo.de/contentblob/3150944/Daten/1318881/VM\\_deMaiziere\\_180511\\_eng\\_DLD.pdf](http://www.nato.diplo.de/contentblob/3150944/Daten/1318881/VM_deMaiziere_180511_eng_DLD.pdf). Accessed January 10, 2014: 3.

published its National Masterplan Maritime Technologies (NMMT).<sup>89</sup> Among the 10 identified areas of application are fields of ice and polar technology, deep sea energy resources exploration technology, underwater technology, and marine mineral resource exploration technology.<sup>90</sup> In its Arctic Policy Guidelines the government expresses hope that "there is great potential for German maritime technologies, due to the increasing importance of the sea in the development of raw materials. The NMMT aims to help unlock the full potential of these technologies. By driving forward these cutting-edge maritime technologies that meet high environmental standards, high-quality jobs are being created and secured in a key future market that is of great strategic importance".<sup>91</sup>

Today the German industry is already quite active in the region with regard to supplying technology and infrastructure components needed for energy exploration and exploitation. In addition German shipping companies are among the world's leading producers for ice-breaking ships. German company Linde was crucial in supplying state of the art technology for the construction of the development of the Snohvit field, the Arctic's first Liquefied Natural Gas (LNG) offshore production facility, located in the Barents Sea.<sup>92</sup> In addition, Germany's biggest oil and

---

<sup>89</sup> Bundesministerium für Wirtschaft und Technologie. "Nationaler Masterplan Maritime Technologien." <http://www.bmwi.de/DE/Mediathek/publikationen,did=431034.html>. Accessed January 10, 2013.

<sup>90</sup> Bundesministerium für Wirtschaft und Technologie. "Nationaler Masterplan Maritime Technologien." <http://www.bmwi.de/DE/Mediathek/publikationen,did=431034.html>. Accessed January 10, 2013.

<sup>91</sup> Federal Foreign Office. "Arctic Policy Guidelines.": 6.

<sup>92</sup> Norwegian State Secretary Larsen during his Opening Address at the German-Norwegian Workshop on closer Cooperation in the Arctic, March 2013, Berlin. For further information about the workshop: <http://www.auswaertiges-amt.de/DE/Aussenpolitik/InternatRecht/Einzelfragen/Arktis/130321-Arktiskonferenz.html>. Accessed January 10, 2014; Linde AG. "Weltweite Baseload LNG Produktion." [http://www.linde-engineering.de/de/process\\_plants/liquefied\\_natural\\_gas/world\\_scale\\_base-load\\_lng\\_production/index.html](http://www.linde-engineering.de/de/process_plants/liquefied_natural_gas/world_scale_base-load_lng_production/index.html) [accesses November 1, 2013]; Statoil. "Sno-

gas producing company Wintershall cooperates closely with the Norwegian energy company Statoil in the Arctic. Already today half of Wintershall's overall exploration budget is linked to activities in Norway.<sup>93</sup>

Wintershall also cooperates with Russian energy giant Gazprom in the exploration of several gas fields in the region and E.ON Ruhrgas, another major German energy company, is strongly engaged in the gas field Yuzhno-Russkoye, located in the Krasnoselkupsky District of the Yamal-Nenets Autonomous Okrug.<sup>94</sup>

The Wismar-based company Nordic Yards offers a large portfolio of ice-breaking vessels for year-round operations in the Arctic.<sup>95</sup> In recent years Nordic Yards developed several Arctic vessels for Russian mining giant Norilsk Nickel and the Russian Ministry of Transport.<sup>96</sup> Financially supported by the Federal Ministry of Education and Research Nordic Yards and 14 other German companies created the Production, Operation and Living in Arctic Regions (POLAR) alliance. The aim is to develop system-based solutions to economic activities in harsh Arctic climatic conditions.<sup>97</sup>

---

hvit." <http://www.statoil.com/EN/OUOPERATIONS/EXPLORATIONPROD/NCS/SNOEHVIT/Pages/default.aspx> [accessed November 1, 2013].

<sup>93</sup> Wintershall. "Wintershall in Norway." <http://www.wintershall.com/en/worldwide/norway.html>. Accessed January 10, 2014.

<sup>94</sup> E.ON. "Development & Production in Russia. Yuzhno-Russkoye Gas Field." <http://www.eon.com/en/business-areas/exploration-and-production/development-and-production/russia.html>. Accessed November 1, 2013; Gazprom, "Yuzhno-Russkoye,." <http://www.gazprom.com/about/production/projects/deposits/yrm/>. Accessed November 1, 2013.

<sup>95</sup> Nordic Yards. "Nordic Arctic. High-Tech Lösungen für extreme Aufgaben." [http://www.nordicyards.com/nordic\\_yards\\_portfolio.html](http://www.nordicyards.com/nordic_yards_portfolio.html). Accessed November 1, 2013.

<sup>96</sup> Nordic Yards. „Presemitteilungen.“ [http://www.nordicyards.com/nordic\\_yards\\_news\\_presse.html#pressemeldungen](http://www.nordicyards.com/nordic_yards_news_presse.html#pressemeldungen). Accessed 10.01.2014.

<sup>97</sup> Bundesministerium für Bildung und Forschung. „POLAR. Production, Operation and Living in Arctic Regions – Rostock (2010-2013).“ <http://www.unternehmen-region.de/de/5390.php>. Accessed January 10, 2014.

## Conclusion

With the opening of the Arctic, Germany intends to become more engaged in the region. The publication of Germany's Arctic policy guidelines is only the latest indicator of the country's aim to expand its Arctic engagement. Polar research will likely continue to form the base of its engagement. Against the background of the country's efforts to fight global warming, research findings are then used to guide policies aimed not only at fighting climate change on a global level, but also at mitigating changes in the fragile Arctic eco-system.

The realization of growing geo-economic opportunities in terms of resource extraction or shipping routes, is a more recent development that drives the government northwards. As economic activities in the region have to be as environmentally sensitive as possible the government also sees the potential to combine its environmental protection efforts with its export oriented economy. Therefore, one of the country's main efforts might be the export of German technology, knowledge and services into the region, aimed to not only develop new markets for German products but also ensure the environment's protection. To sum up, the government's policies will continue to aim at finding a balance between environmental responsibility and geo-economic opportunities.