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Christian Achrainer and Helge Arends (eds.)

14th International Summer School"A Climate of Conflict or Cooperation?Security Implications of Global Warming"

Berlin, July 13-24, 2010

International Forum on Strategic Thinking

German Council on Foreign Relations

Berlin 2011

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Robert Bosch Stiftung



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Last but not least, a special thanks goes to all DGAP staff for their unconditional help and support, without which this International Summer School would not have been possible.



Otto Wolff-Director Prof. Eberhard Sandschneider

Foreword

Climate Change is one of the most important challenges the world is facing today. Accordingly, more and more scientists have been analyzing the social implications of climate change, primarily from a human security perspective. Today it is hardly contested that global warming already has and will increasingly have a significant impact on how securely human beings can pursue their everyday life. Especially poor regions such as Sub-Saharan Africa, South-Asia and the Middle East will suffer from a rising number of floods, droughts and natural disasters. In recent years, several authors have also stressed the implications of climate change from a conventional security perspective. The most popular argument goes that global warming will lead to resource scarcity, especially with respect to land and water. These authors argue that climate change will trigger violent intra- and interstate conflicts or, put more bluntly, climate wars. Yet, there is by far no consensus regarding this assessment. Some scholars even deny any linkage between climate change and conflict. They stress that it is rather our distorted security perception which deviates from the threat itself that is dominating the debate. Therefore, several issues are at stake. In how far will climate change have an impact on human security? What are the interlinkages between climate change and conflict? In how far are the armed forces as well as the development community perceiving and preparing for the future? Are there certain regions particularly affected by climate and precipitation changes? What can we do to prevent further global warming but also to adapt to climate change?

There is not doubt that climate change is a transnational challenge. This necessitates engaging in a strategic dialogue to ultimately find common solutions. Therefore, the German Council on Foreign Relations invited a group of 28 outstanding students and young professionals from Europe, North America, North Africa and the Middle East to participate in the 14th International Summer School. In July 2010 participants attended an intensive eleven day program in Berlin, which was devoted to an analysis of the impacts of climate change, environmental degradation and resource scarcity on societies in the wider Euro-Mediterranean region, with a special emphasis on security-related issues.

The Summer School is a substantial part of DGAP's long-standing effort to actively expand our network of young high-potentials in international relations. Many of our programs focus on attracting future decision-makers, while they are still in their formative years at university or in the early stages of their career. Our International Forum on Strategic Thinking organizes some of the most success-

ful programs in that respect. Based on our annual Summer Schools and New Faces Conferences, the Forum established a network of well over 750 people from all over Europe, the Middle East, Africa, Asia, and North America.

The experiences participants make during the Summer School in Berlin will not only help to improve their and also our own understanding of different perspectives on international problems, but also contribute to promoting a better understanding of German foreign policy. Assuming that members of this network will belong to future decision-makers in their respective countries, we expect that they will introduce these experiences into their working environment.

The feedback so far gives us strong support that our activities do contribute to enhancing regional and global networks dealing with political, economic and security challenges ahead. This gives us strong impetus to continue enlarging and deepening our work and bringing together international elites of tomorrow.

Prof. Dr. Eberhard Sandschneider

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Otto Wolff-Director of the Research Institute

German Council on Foreign Relations (DGAP)

The German Council on Foreign Relations (DGAP) is the national network for German foreign policy. As an independent, non-partisan and non-profit organization, it actively takes part in the political decision-making process and promotes understanding of German foreign policy and international relations. More than 2500 members—among them renowned representatives from politics, business, academia, and the media—as well as more than 70 companies and foundations support the work of the DGAP. The DGAP comprises the research institute, the journal IP and its Global Edition, the library and documentation center, the platform Young DGAP and the web portal <www.aussenpolitik.net>.

- The DGAP's research institute works at the junction between politics, the
 economy and academia. It works interdisciplinary, policy-oriented and in all
 areas of German foreign policy, which are anything but static in a globalizing world: security and supply risks, international competition, integration
 and network issues.
- IP Global Edition is the bimonthly English-language magazine of the German Council on Foreign Relations. It brings the missing European voice on global issues to readers across the world and is essential reading for everyone who is working in the field of politics and global economic issues.
- The DGAP Library and Documentation Center (BiDok) is one of the oldest and most significant specialized libraries in Germany open to the public. It holds substantial collections on German foreign and security policy.
- The Young DGAP is a new initiative for members of the DGAP under the age of 35. The Young DGAP aims at encouraging more young people to take an active interest in foreign and security policy through innovative events such as controversial debates and discussions with decision-makers in a relatively private setting.
- The web page <www.aussenpolitik.net> is DGAP's thematic web-portal. It provides well-grounded background information and analyses about the research institute's current focuses of work. Hence, it contributes to the professional and public debates about international politics.

International Forum on Strategic Thinking

The International Forum on Strategic Thinking is DGAP's main instrument for supporting young professionals and scholars in the area of foreign and security policy. It encourages international and multilateral cooperation, the exchange of ideas on global challenges, and cross-cultural dialogue. The forum's network currently comprises over 750 alumni and experts from partner organizations worldwide.

The Forum holds three major events per year: the International Summer School and two New Faces Conferences. In addition, an Alumni conference is held regularly, next time in fall 2012. By implementing this approach, the Forum brings together new leaders from regions such as Europe, the Middle East and North America in different stages of their careers.

The International Forum on Strategic Thinking is proud to have the Robert Bosch Stiftung as its main patron.

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The DGAP International Summer School

The DGAP's annual International Summer School targets highly qualified students and recent graduates between 22 and 28 years of age. By inviting participants from all over Europe, the Middle East and North America, the International Forum on Strategic Thinking promotes the exchange of ideas between young people with various national, religious, ethnic, cultural, political and educational backgrounds. DGAP's Summer Schools address a series of contemporary issues in global affairs and seek to highlight their relevance to current foreign and security policy and strategic investments in the future. The two-week program included lectures and panel debates by internationally renowned experts and professionals as well as visits to political institutions and to politically significant sites of German history.

The 14th DGAP International Summer School "A Climate of Conflict or Cooperation? Security Implications of Global Warming" took place in Berlin from July 13–24, 2010. It was devoted to an analysis of the impacts of climate change, environmental degradation and resource scarcity on societies in the Euro-Mediterranean region, with a special emphasis on security-related issues. In addition to analyzing patterns and processes of climatic and environmental change, and discussing the effectiveness of strategies and measures for mitigation and adaptation by various actors, the Summer School aimed at paying particular respect to possible linkages between climate change, environmental degradation, development and conflict.

The International Summer School is not just another set of university-style lectures. Throughout the eleven days, participants convened in working groups to prepare interviews with regional experts and to work on controversial questions related to the overall topic of the Summer School. The working groups were then tasked to conduct interviews with some of the invited experts and to prepare them for publication. The interviews are available on www.aussenpolitik.net and in this report. The findings of the second assignment were presented in the form of Oxford-style debates, which were held on the final day of the Summer School.

It is a central aim of the Summer Schools to familiarize students with different perspectives on policy issues, multiple forms of acquiring knowledge and offering them a possibility to creating networks of like-minded peers.

Agenda

Tuesday, 13 July	Opening Day
13:00–14:00	Lunch at DGAP
14:00–14:30	Opening of the 14th International Summer School Prof. Dr. Eberhard Sandschneider, Otto Wolff-Director of the Research Institute, German Council on Foreign Relations (DGAP)
14:30–16:00	Keynote Speech Studying the Links between Climate Change and Violent Conflict Prof. Dr. Nils Petter Gleditsch, Research Professor, International Peace Research Institute of Oslo (PRIO), Norway
16:30–19:30	"Scavenger Hunt" through Berlin
19:30	Dinner at DGAP



Otto Wolff-Director Prof. Dr. Eberhard Sandschneider and Prof. Dr. Nils Petter Gleditsch

Wednesday, 14 July	Climate Change: Analytical Approaches	
09:00–10:30	Climate Change and its Mid- and Long-Term Impacts on Europe, the Middle East and North Africa Dr. Dim Coumou, Researcher, Potsdam Institute for Climate Impact Research (PIK), Germany	
11:00–12:30	Changing Concepts of Security and the Securitization of Climate Change Dr. Rita Floyd, Fellow, Institute for Environmental Security (IES), The Hague, Netherlands and British Academy Post-Doctoral Fellow, University of Warwick, United Kingdom	
12:30–13:30	Lunch at DGAP	
13:30–16:30	Presentation of Scavenger Hunt Results	
16:30–17:00	Instructions to the Working Groups "Interview" David Bosold, Head of Program, International Forum on Strategic Thinking, DGAP	
17:00–18:00	Working Group Sessions "Interview"	
18:00–19:00	Getting to Know DGAP—The Role of A German Think Tank Prof. Dr. Eberhard Sandschneider, Director of the Research Institute, DGAP, and Staff Members of DGAP's Research Institute	
19:00	Dinner and Reception with DGAP Experts	

Thursday, 15 July Policy Dimension

Policy Dimensions: The German Case

9:30-11:30

Visit to the Federal Ministry of Defense

The Comprehensive Approach: Germany's Security Policy and the Future of the Armed Forces

Colonel Jobst Schönfeld, Deputy Assistant Chief of Armed Forces Staff Politico-Military Affairs and Arms Control, Armed Forces Staff III, German Ministry of Defense, Berlin, Germany

Climate Change as a Security Threat: Challenges for the Armed Forces

Lieutenant Colonel Helmut Fritsch, Assistant Branch Chief, Armed Forces Staff III 2, Principles of Military Strategy, German Ministry of Defense, Berlin, Germany

11:30-13:00

Reception & Lunch at the Ministry

14:30-18:00

Skills Training I: Interviews

Dr. Sylke Tempel, Chief Editor, Internationale Politik (IP)



Dr. Sylke Tempel conducting the Interview-Workshop

Friday, 16 July	Policy Dimensions: The German Case	
9:30-11:00	Visit to the Federal Ministry of Economic Cooperation and Development	
	Addressing Climate Change as an Integral Part of Conflict Prevention Policy Eckhard Volkmann, Federal Ministry of Economic Cooperation and Development, Berlin, Germany	
11:15–13:00	Visit to the Topography of Terror Documentation Centre	
13:30–14:30	Lunch at DGAP	
14:30–15:30	Presentation of Interview Structures and Feedback Dr. Sylke Tempel, Chief Editor, Internationale Politik (IP)	
15:30–18:00	Working Group Sessions "Interview"	
18:00	Dinner at DGAP	



One working group preparing its interview

Saturday, 17 July	Berlin Discovery Day
13:30–15:00	Visit to the Reichstag, Seat of the German Parliament
15:00–17:15	Free Time
17:15–19:00	Boat Trip on the Spree-River



The group in front of the Reichstag, the seat of the German parliament

Monday, 19 July	Climate Change and Energy Security	
10:00–10:15	Welcoming Addresses Dr. Joachim Lang, Head of E.ON Representative Office, Berlin Dr. Steffen Bruendel, Vice President, Science Support/ International Programmes, E.ON Ruhrgas, Essen	
10:15–12:00	Energy Politics and Stakeholder Dialogue Dr. Joachim Lang, Head of E.ON Representative Office, Berlin	
	Energy Foreign Policy Alexander Schönfelder, International Energy Policy, Federal Foreign Office, Berlin	
12:00–13:30	Lunch	
13:30–16:30	Climate Change in Action I: Possible Roles of Nuclear Energy and Natural Gas	
	The Prospects of Natural Gas in the Future Energy System 2050 DrIng. Alexander Vogel, Head of Research and Devel-	
	opment, E.ON Ruhrgas, Essen	
	Nuclear Energy in Tomorrow's Sustainable Energy Mix Christian Wößner, Head of Press/Politics, E.ON Kernkraft, Hannover	
	Which "Bridge" to Take? Comparing Nuclear Energy and Natural Gas Marcel Viëtor, Program Officer, Alfred von Oppenheim Center for European Policy Studies, DGAP	

17:00-18:30

Climate Change in Action II: The Case of the Middle East and North Africa: A Green Revolution in the Gulf States?

Prof. Dr. Danyel Reiche, Assistant Professor for Comparative Politics, American University of Beirut (AUB), and Wuppertal Institute for Climate, Environment and Energy, Germany

19:00

Dinner at Deponie 3, Georgenstrasse 5, 10117 Berlin-Mitte, <www.deponie3.de>



A group of students discussing at the E.ON Representative Office

Tuesday, 20 July	Climate Change and Conflict—Case Studies I
9:00-9:30	Instructions to the Working Groups "Debate" Christian Achrainer, Program Officer, International Forum on Strategic Thinking, DGAP
9:30–11:00	Climate Change and Adaptation Strategies: A View from Sudan Dr. Sumaya Ahmed Zakieldeen, Institute of Environmental Studies, Khartoum University, Sudan
11:00–11:45	Interview & Working Group Sessions "Debate"
12:00–13:30	The Effects of Climate Change on Security in the Sahel Region and North Africa Philipp Heinrigs, Programme Officer, Climate Change/ Security, SWAC Secretariat, OECD, Paris, France
13:30–14:30	Lunch at DGAP
14:30–18:00	Interview & Working Group Sessions "Debate"
18:00–19:00	Dinner at DGAP
19:00–20:30	Climate Change as a Challenge for the Corporate Sector Christian Dumas, Head of Environmental Affairs and Vice President Sustainable Development and Eco-efficiency, Airbus, Toulouse, France

Wednesday, 21 July	Climate Change and Conflict—Case Studies II	
9:00–10:30	The Jordan River: Climate Change and Water Scarcity Baha Nader Afaneh, Friends of the Earth Middle East (FoEME), Amman, Jordan	
10:30–11:15	Interview & Working Group Sessions "Debate"	
12:00–13:30	The Arctic: Climate Impacts on the Livelihood of Indigenous Populations Mika Flöjt, Researcher, Northern Institute for Environmental and Minority Law / Arctic Center, University of Lapland, Finland	
13:30–14:30	Lunch at DGAP	
14:30–18:00	Interview & Working Group Sessions "Interview"	
18:00–18:30	Plenary Session "Interview"	
18:30	Dinner at DGAP	



The participants discuss with Baha Nader Afaneh about water scarcity in the Jordan River region

Thursday, 22 July	Preparation of Debates	
9:00–10:30	Climate Change as an Aspect of Turkey's "Zero Problem" Foreign Policy Prof. Dr. Hüseyin Bağcı, Middle East Technical University, Ankara, Turkey	
11:00–13:00	Skills Training II: Debating David Bosold, Head of Program, International Forum on Strategic Thinking, DGAP Christian Achrainer, Program Officer, International Forum on Strategic Thinking, DGAP	
13:00–14:00	Lunch at DGAP	
14:00–18:00	Working Group Sessions "Debate"	
18:00	Dinner at DGAP	
19:30-21:00	Film Screening	



Yonas from Switzerland posing a question

Friday, 23 July	Debating Day
9:30–11:00	Working Group Sessions "Debate"
11:30–12:30	Debate I: Climate change will re-shape the geopolitical order
12:30–13:30	Lunch at DGAP
13:30–14:30	Debate II: No foreseeable political solution will enable us to avert climate change
14:30–15:30	Debate III: MENA countries have to contribute to climate protection as much as Western states Winner Debate I vs. Winner Debate II
16:00–17:30	Closing Session, Certificates
20:00	Barbecue & Farewell Party Mauersegler Restaurant, Bernauer Str. 63, 10435 Berlin- Prenzlauer Berg, <www.mauersegler-berlin.de></www.mauersegler-berlin.de>



Hana from Croatia arguing passionately during the Oxford Debate

Lectures, Panels and Presentations

The following paragraphs provide a brief summary of each speaker's contribution in the order of their appearance at DGAP's International Summer School. Summaries of presentations held during visits to political institutions can be found in the following chapter.

Prof. Dr. Nils Petter Gleditsch

Nils Petter Gleditsch from the Peace Research Institute Oslo (PRIO) opened the 14th International Summer School with a keynote-speech in which he highlighted potential linkages between climate change and violent conflict. He argued that there is a general disconnect between the perception of politicians and NGOs on the one hand and peer-reviewed research on the other hand. According to Gleditsch, the first group tends to emphasize the drastic challenges that humankind will face due to climate change by regarding climate change as a threat multiplier. In fact, as Gleditsch showed, there is a lack of peer-reviewed research on the links between climate change and conflict. He also stressed that the existing scientific evidence was not sufficient to prove the inescapability of global warming and conflict proneness. Climate change is a major challenge and a security issue. However, "it seems unlikely that climate change can reverse the trend towards a more peaceful world although there may be a shift in the lieux where violence occurs." The speaker concluded that more interdisciplinary research is needed to provide the necessary evidence for the supposed causal relationship between conflict and climate change.

Dr. Dim Coumou

Dim Coumou from the Potsdam Institute for Climate Impact Research (PIK) provided an overview of the scientific state of the art concerning the expected implications of climate change. He pointed out that global warming is ultimately linked to carbon emissions and, hence, not a natural but an anthropogenic phenomenon. In his lecture, Coumou focused on three main implications of global warming, namely sea level rise, extreme weather events (like heat waves) and changes in precipitation patterns. Generally, low-lying coastal areas such as the Netherlands, Bangladesh and river deltas like the Nile delta will be severely affected by sea level rise. Extreme weather events are expected in Northern Europe, where more rain and increased storm activity are likely. Coumou pointed out that North Africa and the Mediterranean region in general are expected to face an increasing number of heat waves and severe droughts. The possible greening of the Sahel zone due to intensified monsoon is but one example for changes in the

precipitation patterns. Coumou emphasized that those severe climatic changes would pose a serious challenge to human life and the need for adaptation is expected to be huge. Yet, he also mentioned opportunities such as the large-scale multinational renewable energy project Desertec.

Dr. Rita Floyd

Dr. Rita Floyd from the University of Warwick focused on the securitization of climate change. She highlighted that the understanding of security has changed since the end of the Cold War by widening and deepening the focus of the former national security approach. New issues such as the environment or identity as sources of conflict were included. In addition, the concept of human security emerged. Pointing to the Copenhagen School's Securitization Theory, she made clear that generally every topic may become a security issue as long as this perception is shared intersubjectively. However, Floyd pointed out that it is questionable whether the idea of climate change as a security issue was beneficial to come up with a political solution to stop or reduce carbon emissions. Some examples, such as the greening of the US military in the mid-1990s, demonstrated that environmental security was not necessarily a positive concept, since efforts were made in sectors that were largely irrelevant to climate protection. The same applies to climate security, Floyd pointed out. Therefore, alternative political responses to climate change were needed.



Dr. Rita Floyd elaborates on the securitization of climate change

Dr. Joachim Lang

Dr. Joachim Lang, Vice President of E.ON's Representative office, gave a brief overview of the company's activities and presented the diverse array of energy sources E.ON relies on in serving its customers. Lang emphasized that E.ON was not only aware of climate change, but that the company was already reacting by curbing its greenhouse gas emissions. He pointed out that E.ON currently spends half of its investments in projects related to renewable energy sources. In its division of renewables, E.ON mainly concentrates on wind energy—although the company tries to adjust sources and technologies to local conditions. In the case of wind energy, for instance, E.ON has to choose between turbines that are build on-shore and those erected off-shore. Since off-shore wind power production is technically more challenging but simultaneously results in higher amounts of power generation, E.ON faces difficult strategic decisions, explained Lang. Therefore, E.ON's main objective was to produce power economically but in a reasonable and sustainable manner.

Alexander Schönfelder

Alexander Schönfelder from the Federal Foreign Office spoke about Germany's energy policy. He emphasized the country's need to diversify its imports in two ways: First, by considering its energy mix in focusing on the use of several sources of energy (wind and solar energy, nucelar, natural gas etc.). Secondly, by reducing Germany's dependence on countries which provide the major share of



Alexander Schönfelder getting involved in a discussion with a student

the country's carbon imports. Schönfelder also highlighted that the state should only set the broader political framework since the energy sector was part of a free market that could deliver more efficient results. Subsequently, Schönfelder pointed out that the key topic for the future would be energy efficiency, not only on a national but also the interstate level. Therefore, projects like Nord Stream or Nabucco would be of a great importance for Germany.

Dr.-Ing. Alexander Vogel

Alexander Vogel from the Research and Development Division at E.ON Ruhrgas, E.ON's gas branch, highlighted the role of natural gas in a future energy system. He explained that renewable energy sources could theoretically cover 100 per cent of the energy supply. However, wind and solar power were subject to fluctuations and given that no storage capacities are currently in place, power supply could not solely be guaranteed by renewable energy sources. Gas might therefore become the "backbone of a renewable energy system" because it was cheap and effective and might bridge periods of peaks in demand. As key challenges for the future, Vogel named the increase of energy efficiency in the usage of natural gas as an energy source (an increase from 60 to 90 per cent is possible) and the storage of energy from volatile renewable sources such as wind and solar energy. Today, Vogel stated, storing wind or solar energy was not possible, but recent research in the field of converting energy from volatile sources into hydrogen or methane give reason for hope. However, he also made clear that this process would take time and needed new storage technology. Against this backdrop, natural gas was to remain a central part in the German energy system of 2050 and "an ideal partner for the introduction of renewables."

Christian Wößner

Christian Wößner, Head of Press/Politics at E.ON Kernkraft, E.ON's nuclear energy branch, highlighted the advantages of nuclear energy compared to other energy sources. He explained that nuclear energy represented an almost carbonneutral electricity source. Even if the whole life cycle reaching from the mining of uranium over the production of electricity in the power plant to waste disposal was considered, nuclear energy would range on the same level with wind and hydro energy as the energy source with the lowest CO₂ emissions. Therefore, Wößner argued, nuclear energy is playing and should play a very important role when it comes to climate protection. Concerning the disposal of nuclear waste and possible dangers of accidents in power plants, he assured that E.ON Kernkraft was very concerned about this issue and took all measures to make nuclear energy an absolutely safe option. The final disposal was safe and technically feasible and only a political question, Wößner stated. Moreover, nuclear energy would be an efficient form of energy generation from an economic perspective.

Marcel Viëtor

Subsequently, Marcel Viëtor from the Alfred von Oppenheim Center for European Policy Studies at DGAP highlighted the importance of energy sources which could serve as interim or "bridging" solutions on the way towards an energy system of low or zero carbon emissions. He compared the advantages and disadvantages of nuclear energy and natural gas, which are regularly presented as possible "bridging" solutions while, however, the arguments for or against one or the other are all too often shaped by partisan interests. In his comprehensive analysis of both options, considering various factors ranging from economic and safety aspects to the questions of security of supply and societal acceptance, he came to the conclusion that there was no easy and clear-cut answer to this question from a purely scientific point of view. Societies and political leaders need to weigh the energy sources' opportunities and drawbacks and to critically compare the respective countries' starting points in order to achieve societal consensus through an open and public debate.

Prof. Dr. Danyel Reiche

Prof. Danyel Reiche from the American University of Beirut and the Wuppertal Institute for Climate, Environment and Energy gave a lecture on the development of green technologies and energy sources in the Gulf region. He presented his findings on the latest series of projects in the gas and oil exporting member states of the Gulf Cooperation Council (GCC). His observation was that since gas and oil reserves were decreasing in the region, a change towards renew-



Prof. Danyel Reiche engaging in discussion with some students

able energy might become a reality in the near future. There were examples that pointed into such a direction, e.g. projects such as Masdar City in Abu Dhabi or the King Abdullah University of Science and Technology (KAUST) in Saudi-Arabia. According to Reiche, it is yet hard to say whether these projects will be real successes in introducing a new energy era. Until today, it seems that green projects like Masdar City were popular in the GCC countries, Reiche pointed out. However, it was likely that the projects remained elite-driven with low political costs and no major structural changes in the years and decades to come.

Dr. Sumaya Ahmed Zakieldeen

Sumaya Zakieldeen, program coordinator at the Sudanese Environment Conservation Society and professor at Khartoum University, talked about the situation in Sudan and stressed that the consequences of climate change were already noticeable in developing countries like Sudan. Even if a successful follow-up agreement of Kyoto and a maximum temperature rise of 2°C were achieved, Sudan would face an increase of severe, intensified and less predictable natural disasters and extreme weather events. This would be hard for the country since more than 70 per cent of the population were directly dependent on climate-sensitive resources for their livelihoods, e.g. reliance on rainfall-sensitive crops for agricultural production. Zakieldeen presented the measures taken in Sudan for coping with the challenges and concluded, based on her experiences, that the analysis of vulnerabilities represented a central means for setting priorities and choosing appropriate adaptation measures in general. However, she claimed that despite the proactiveness of developing countries additional support from the international level was still heavily needed.

Philipp Heinrigs

Philipp Heinrigs, program officer at the Sahel and West Africa Club within the OECD framework, presented the recent projections for the effects of climate change in the Sahel region and in North Africa in the coming decades. He stated that scientific models were not projecting similar but diverging trends—either a desertification or a greening of the Sahel region—the reason being high variabilities in weather patterns which were hard to relate exclusively to climate change. However, he highlighted that scientific knowledge was becoming better in the field of climate change as such. Yet, this would not necessarily be the case regarding the interlinkages of climate change and violent conflicts, Heinrigs stated. Therefore, he recommended dissociating the climate debate from the security debate by focusing on a broad and integrated development policy approach in order to reduce vulnerabilities, manage livelihoods and provide for food security. Moreover, he proposed to improve the management of uncertainties by enhancing the capacities of intraseasonal and long-term forecasting systems.

Christian Dumas

Interesting insights from the industrial and economic perspective concerning the debate on climate change were provided by Christian Dumas from Airbus. Dumas mainly addressed the challenge to achieve the socially and economically desired growth of aviation in a sustainable and climate friendly way. Although the aviation sector would be responsible for only 2 per cent of total CO₂ emissions worldwide, Airbus was working hard to increase fuel efficiency, using bio fuels and realizing greener company sites. Furthermore, Dumas pointed out that Airbus had developed its own strategy to go green. This strategy included clear targets to which the company had committed itself. According to the so-called "Vision 2020", Airbus intends to reduce its CO₂ emissions and water consumption by 50 per cent and its total energy consumption by 30 per cent until 2020. Moreover, Dumas explained that Airbus was working on an enhancement of the eco-efficiency for the whole life-cycle of its products.

Baha Nader Afaneh

Baha Nader Afaneh from Friends of the Earth Middle East in Jordan presented his findings on water scarcity in the Jordan River region. Based on one of the organization's recent studies, 98 per cent of the river water was currently diverted by Israel, Jordan and Syria. The river, which is the only water supplier of the Dead Sea, would be severely threatened to dry out soon, explained Afaneh. Additionally, saline water, raw sewage and polluted fishpond water were currently



Christian Dumas illustrates the sustainability strategy of Airbus

discharged into the river reducing the level of biodiversity in the river's ecosystem at an alarming pace. Afaneh emphasized that if the Jordan River was to be prevented from drying up in 2011, all relevant parties would need to make further efforts in order to prevent a foreseeable ecological catastrophe.

Mika Flöjt

Mika Flöjt from the Arctic Center at the University of Lapland outlined the diverse challenges and difficulties that indigenous people in the Arctic face due to climate change. According to Flöjt, their closeness to nature is likewise boon and bane of the Arctic people. On the one hand, indigenous groups experience changes in the ecosystem particularly strongly due to their lifestyle which is highly interrelated with nature (e.g. subsistence farming). On the other hand, their knowledge and nature-related culture provides them with an exceptional capability to adapt to short-term changes. Still, Flöjt pointed out, it is important to integrate the indigenous groups into the climate discourse. Although indigenous attempts to gain political influence by joining forces on the regional level have occurred, indigenous claims have not been acknowledged by the UNFCCC process due to political sensitivities.

Prof. Dr. Hüseyin Bağcı

Hüseyin Bağcı from the Middle East Technical University in Ankara delivered a speech on "Climate Change as an Aspect of Turkey's 'Zero Problem' Foreign Policy". In his presentation, Bağcı emphasized the outstanding strategic role Turkey holds: One the one hand, Turkey acted as a mediator in the Middle East. On the other hand, Turkey was an important transit country for oil and gas—mainly coming from Russia and Iran. Water shortage in the Middle East, partially induced by climate change, was likely to even strengthen Turkey's strategic role. This is because Turkey is expected to become a major water exporter in the future. According to Bağcı, these developments were in line with Turkey's role as a soft power within the region. Yet, although many international actors expect stronger engagement by Turkey in international affairs, Turkish foreign policy was still characterized by a large amount of caution and restraint—one feature Turkey and Germany had in common, as Prof. Bağcı pointed out. Regarding climate change, Bağcı acknowledged the responsibility of the international community to reduce greenhouse gas emissions. As a continuously growing economy, Turkey had a special responsibility to integrate emissions-reducing measures into its development path.

Social Activities and Visits to German Institutions

The 14th International Summer School's program included a number of social activities and events as well as visits to various political institutions in Berlin. By organizing social activities, the Summer School aims at building a strong bond between the participants, who will stay in touch well beyond the actual event itself, making it a unique and sustainable cross-cultural experience for all participants.

On the first day of the program, following the official opening and the keynote speech, the participants embarked on a scavenger hunt through Berlin. In four teams they explored four different neighborhoods and the city's history, culture, its people and culinary delicacies. The evening was rounded off with a dinner on DGAP's terrace where the participants had the chance to share their experiences and to get to know each other in a relaxed atmosphere.

The afternoon as well as the evening part of the next day was reserved for getting to know DGAP. After two lectures in the morning, the participants presented their results of the scavenger hunt with theatre plays, video sequences, songs and mascots. In the evening, Otto Wolff-Director Prof. Eberhard Sandschneider held a lecture on the history and role of the DGAP in German foreign policy making. Furthermore, he introduced DGAP staff members to the participants who then exchanged their working experiences over dinner.

On Thursday, the group visited the Ministry of Defense situated in the famous Bendler Block. Colonel Jobst Schönfeld gave a short introduction to German security policy. He highlighted the distinguishing features of the German case, namely the security policy's multilateral orientation, its requirement for parliamentary approval in case of troop deployments and Germany's favorable geopolitical position at the heart of NATO and EU territory. He also touched upon the "comprehensive approach"—an approach that is advocated by the German government in the context of military operations and that attempts to integrate various policy areas essential to the needs of the host country's population.

Subsequently, the nexus between the armed forces and threats in the context of climate change were elaborated on by Lieutenant Colonel Helmut Fritsch. He acknowledged that—until now—there were only few in-depth strategy papers on the table formulating action plans. However, there were several high-level declarations and statements launched by key representatives of EU and NATO stress-

ing the importance of and the need for an adequate response to these emerging challenges. Mirroring the concepts of mitigation and adaptation on the specific situation of the military, Fritsch emphasized that the German Bundeswehr as the biggest public polluter needed to reduce its own CO₂ emissions by applying "green military technology" and adapting to climate change by becoming more flexible in addressing threats.

The visit ended with a reception and a formal lunch where the participants had the chance to pose further questions to Colonel Schönfeld and Lieutenant Colonel Fritsch while enjoying the exquisite in-house restaurant. On the way out, the group passed the memorial of the murdered resistance fighters, the most prominent of whom was Claus Schenk Graf von Stauffenberg, who unsuccessfully tried to assassinate Hitler in July 1944.

On Friday, the participants visited the Ministry of Economic Cooperation and Development (BMZ). There, the German position on climate change was further elaborated. Christina Toetzke, Head of the Ministry's Division Peace-Building and Crisis Prevention, welcomed the group and gave a first overview of Germany's development policy priorities. She pointed out that she preferred a stronger focus on security-related issues within the framework of development cooperation. This also included a clear reference to conflict issues in the context



During the scavenger hunt, one group dressed up like supporters of the football club Hertha BSC

of ensuring environmental sustainability as codified in the 7th Millennium Development Goal.

Eckhard Volkmann, responsible for climate change related security issues within the division, further elaborated on the role of the BMZ. He concluded that it was rather the political realm and not technical aspects that needed to be further developed in order to contribute to reducing climate-related risks. Moreover, he emphasized that it was not the Ministry's primary task to make other countries mitigate their CO₂ emissions. He also confirmed what already became visible during the visit at the Ministry of Defense: There is no concrete national framework on how to deal with foreseeable security threats caused by climate change.

After a lively discussion, the group moved on to the Topography of Terror Documentation Centre where the students learned more about Germany during the period of the Third Reich.

The weekend was rung in with a night out at a typical Berlin beach club next to the Spree-river where participants relaxed on the sand recapitulating the first week. The Saturday started with a visit to the Reichstag, the seat of the German parliament. During the guided tour, the students were introduced to the German political system, to the history of the building as well as to the various modern



Students during the tour in the Reichstag

art projects in the Reichstag. After the tour, the participants made their way up to the famous glass dome and enjoyed the magnificent view over the city.

During the lunch break participants visited the Brandenburg gate, the Holocaust memorial and Potsdamer Platz. The last official part on the weekend's "Berlin Discovery" agenda was a boat trip on the Spree-river, during which students saw many of Berlin's main sights. The Sunday featured a visit to the popular flea market at the Mauerpark in Prenzlauer Berg and karaoke-watching in the Mauerpark's amphitheatre.

During the second week, preparations within the working groups were of key concern for the participants. On Thursday a film screening took place at DGAP.



There was plenty of time to further get to know each other during the boat trip

Working Groups, Interviews and Debates

Divided into four working groups, the participants met consistently throughout the Summer School to discuss and prepare interviews with regional experts as well as debates on key questions regarding the overall topic of the Summer School.

Interviews

According to their personal scientific interests participants were assigned to four working groups dealing with a specific region which is particularly affected by climate change. During the first week of the Summer School, each group had to pursue research on the respective topic in order to develop well-grounded questions. The interviews were finally conducted with experts who were invited during the second week of the Summer School. At the end of the first week, the participants also took part in an introductory skills training in interviewing techniques provided by Dr Sylke Tempel, Chief Editor of the journal Internationale Politik. As a follow-up, participants had the chance to discuss their problems with respect to the interview preparation during a feedback round with Dr Tempel. Moreover, they attended an active training session in which the interviews were simulated.



The working groups were an essential part of the Summer School

On Tuesday and Wednesday of the second week, the regional experts delivered their lectures at DGAP. After each of these presentations, the respective group conducted its interview. It was recorded and afterwards transcribed by the group. The case of Sudan was presented by Dr. Sumaya Ahmed Zakieldeen, program coordinator at the Sudanese Environment Conservation Society. The situation in the Sahel region was covered by Philipp Heinrigs, program officer at Sahel and West Africa Club (OECD). Issues regarding the Jordan River were introduced by Baha Nader Afaneh from Friends of the Earth Middle East, Jordan, and the impacts of climate change on the indigenious polpulation in the Arctic was elaborated on by Mika Flöjt from the Arctic Center at University of Lapland. The interviews were also published on DGAP's web-portal <www.aussenpolitik.net>.



The participants interview Philipp Heinrigs on climate change in the Sahel region



Dr. Sumaya Ahmed Zakieldeen

Climate Change in Sudan—Interference of Politics has made the Adaptation Process fragile

Interview with Dr. Sumaya Ahmed Zakieldeen from Khartoum University's Institute of Environmental Studies

Sudan is one of the most affected countries with respect to climate change. Already today the impacts of global warming can be observed in Sudan, like desertification or an increase in the number and severity of droughts and floods. Hence, the need for adaptation in Sudan is very urgent. By interviewing Dr. Sumaya Ahmed Zakieldeen, a researcher from Khartoum University's Institute of Environmental Studies, one group of students tried to find out more about Sudanese adaptation strategies. The interviewee, Dr. Zakieldeen, has been very engaged in climate change negotiations as part of the Sudanese delegation since 2005 and is also involved in Sudanese NGO activities.

Q: Dr. Zakieldeen, how is climate change currently affecting every-day life in Sudan?

A: During the preparation of the Sudanese National Adaptation Program of Action (NAPA), we questioned the locals about the vulnerabilities they are currently experiencing. The main trends include an increased number and also more severe droughts and floods. The impact, however, differed according to the region. For instance, farmers in West Kordofan expressed concerns that the land was less fertile due to reduced rainfall and changed rain patterns, which then caused difficulties in land cultivation. In addition, an increase of temperatures during the winter was witnessed, which had a strong impact on winter crops.

Q: In your opinion, which adaptation strategy would be more effective for Sudan? The bottom-up or the top-down approach?

A: A combination of both is needed to develop an accurate NAPA. Top-down approaches take a holistic view and use tools of comparison to map different regional vulnerabilities in light of the distribution of income, resources and population. On the other hand, also bottom-up approaches are needed to gather on-the-ground data which reveal different adaptation options. We are looking for as much information as possible, which includes questions related to the traditions of the people, and matters concerning diseases and climatic factors. Such a methodology ensures validation of information and an assessment of possible interest-conflicts at the local level, as well as stakeholder involvement.

Q: Which Community Based Initiatives (CBIs) exist in Sudan today, working in the field of adaption?

A: One of our projects implemented in the Western Sudan is an example of a

CBI that aims at raising the awareness of the people, improving their adaptation capacity, and teaching them how to help themselves. As a result, they are now able to apply for loans and address health issues independently.

Q: The Sudanese Representative leading negotiations in Copenhagen for the G77 referred to the final agreement as the "worst in history." Do you agree? And what can we expect from the continuing process of negotiations?

A: I agree, because we were expecting further commitments in the framework of the Convention. Instead we killed the Kyoto protocol, since it is not even mentioned in the final Copenhagen agreement. Many things are mentioned in the final text on finance and transfer of technology, but the key issue of mitigation, which is essential to climate protection, has not been addressed as it should have been. Countries required to reduce their emissions in the framework of Kyoto had to set new targets, which led to a waste of time and effort that had been exerted. Although a few countries were involved in the final agreement, they were trying to impose it on others, while in the UNFCCC a consensus is required. The fact is, a lot of time has been wasted during the two years since Bali, but hopefully we will be able to reach a reasonable agreement in Mexico this year.

Q: What do you think of the adaptation measures that have been negotiated in the Copenhagen agreement, such as the financial commitment?

A: The Copenhagen agreement is vague and ambiguous especially concerning financial aspects. No details are provided regarding the contribution of the different countries to the fund. There has been a lot of debate on defining the sources of finance, because private initiatives are not effective in Africa. The region is not an attractive market for investment. Developing countries, therefore, prefer public financial commitments which are a better guarantee. Moreover, in the final agreement, figures are expressed in absolute terms whereas developing countries would benefit more if they were expressed as percentage of GDP, since the real cost of adaptation is unknown.

Q: If you had a message to deliver to the international community on this issue, what would it be?

A: The problem is clear and the solutions are clear! But when you include financial aspects into the equation, politics intervenes. I personally think that prior to the intervention of politicians, technicians were doing a good job. But the interference of politics has made the process fragile. This matter does not only concern us, but the coming generations as well!

Q: Dr. Zakieldeen, thank you very much for the interview!



Phillip Heinrigs

Climate Change will hardly lead to Violent Conflicts in the Sahel Region

Interview with Philipp Heinrigs from the Climate and Security Section of OECD's Sahel and West Africa Club Secretariat

Climatic conditions are highly affecting the Sahel region: Droughts are causing famines and desertification processes are threatening the population's livelihoods. At the same time, the region is mostly prone to violent conflicts which are commonly associated with climate-related factors. In how far climate change is a threat to the human security in the region and if it even has an impact on conflicts was subject of an interview with Philipp Heinrigs, Program Officer of the cimate and security section within OECD's Sahel and West Africa Club Secretariat.

Q: Mr. Heinrigs, many academics argue that the Sahel region is more vulnerable to climate change than any other region in the world. Would you agree?

A: The definition of vulnerability is composed of three components: exposure, sensitivity and adaptation capacity. Most people say that the Sahel is one of the most vulnerable areas because of its low adaptive capacity. Indeed the Sahel region is vulnerable; however, adaptive capacities are largely underestimated.

Q: Is your argument therefore, that the problems in the Sahel region are not mainly related to adaptation but to exposure to climate change?

A: First of all, I would not talk about climate change but rather about climate variability. So far we do not know for sure if we witnessed processes related to climate change or driven by natural fluctuations. People have lived in the Sahel region for so many years and the climate has always been characterized by high inter-seasonal and decadal variations. For instance nomadic pastoralism is a traditional way of adapting and so is migration from the interior to the coastal areas or from drier to more fertile areas.

Q: You see migration as a form of adaptation but can it also lead to violent conflict?

A: Migration has always accompanied demographic transition and it is a very useful process. Hence, call it rural-urban or call it from a rural area to an economically active area, this is normal and positive. Furthermore, in West Africa 70 percent of all migration is within the region. On the other hand, you have sporadic events like Côte d'Ivoire or Nigeria, where people were expulsed at times. The potential for conflict is existing but it is how you manage it that makes the difference. You should not try to stop migration or influence its direction but rather accompany

migration in the sense that it creates less problems. If you develop areas that are underdeveloped or build infrastructure in secondary cities which attract people this will facilitate absorption and reduce flows into the big coastal megapols. This can decrease the potential for tensions.

Q: What about other places? Cases like Darfur or the Tuareg rebellion in Mali are often presented as conflicts linked to climatic or environmental factors. Do you think that climate variability is a decisive variable?

A: I would not call Darfur an environmental conflict. There are too many other factors which play a more important role and hence, environmental variables can not explain what happened. For the Mali Tuareg rebellion the processes are also much more complicated than often assumed. This again relates more to adaptation and livelihoods. We are talking about herders who go up north during the rainy season and return to the south during the dry period. Problems emerge between agricultural producers and herders when these processes and livelihoods are disturbed by some factor. For instance, agricultural production is becoming more intense and population density is increasing. This creates fewer possibilities for the migrating tribes to access water without seriously damaging farms. Moreover, government policies, like land rights and agricultural policies influence livelihoods. In the case of Mali such policies explain much more of the tensions witnessed than environmental factors.

Q: Is modernization a solution to this problem?

A: Economic development is always accompanied by changes of livelihoods and transformations of economic activities. Economically speaking, transhumant pastoralism does not make much sense. It carries too much risk. And things are changing: Now we have formerly nomadic pastoralists that acquire land in more southern areas to raise their herds and engage in other agricultural activities. And these are the things we need to facilitate and integrate in development planning. However, such development processes or evolutions should not forget the existing things that were functioning. For instance, as concerns the settlement of tensions. Traditional systems of conflict settlement at the local level proved very effective in the past and should be included in security strategies.

Q: In your opinion, why are European governments increasingly interested in assessing the link between climate change and security?

A: Over recent years, the Sahel has attracted ever more attention from security, energy and broader geopolitical interests. As for the reason of the securitization of the climate change debate many possible explanations exist. For one, climate change is a key concern for policy makers and people feel the need for strong ac-

tion in fighting further anthropogenic climate change. An often expressed concern in this regard is also the potential of environmental migrants. The absence so far of strong multilateral mechanisms of dealing with climate change also adds an element of uncertainty. However, for us the securitization of the debate is counter-productive. First, no empirical evidence supports the notion of security impacts related to climate change, no generalizable link exists and case studies highlight the importance of political and socio-economic factors in explaining conflict dynamics. Second, securitization reduces the scope for open and constructive dialogue between OECD countries and countries in the region. And yet, this dialogue is crucial for the emergence of effective multilateralism for dealing with climate change and climate change impacts.

Q: Are there any frameworks in the region that could enable climate-related cooperation between states?

A: Yes. You have the regional economic communities that also deal with security and environmental issues. In addition, there are several international organizations on shared river basins that foster cooperation on some vital resources. These regional organizations should play a key role in developing regional strategies in climate change adaptation and climate proofing.

Q: Thus, can we conclude that in your opinion climate variability is exacerbating problems that already existed in the Sahel but that this variability alone is not a reason for conflict or security threat in this region?

A: Yes, climate alone can not explain conflicts. But this is not to say that there are no relations or that environmental factors do not impact on human security. However dealing with these issues requires broad development policies and should not be dealt with from a purely security-centered perspective.

Q: Mr. Heinrigs, thank you very much for the interview!

Water Management at the Jordan River—War and Conflict should not stop us from talking to Each Other

Interview with Baha Nader Afaneh from the Friends of the Earth Middle East (FoEME)

The Jordan River used to be a torrential river, playing a central role as water source and sanctuary. Now, the river is about to fall dry as the bordering countries continuously channel off most of the water before it reaches the Dead Sea. Climatic changes worsening the situation. One group of students interviewed Baha' Nader Afaneh from the Friends of the Earth Middle East (FoEME) to find out more about this development. Mr. Afaneh is manager of the Jordan River project at FoEME and is an expert on water management.



Baha Nader Afaneh

Q: Mr. Afaneh, what do you consider as the main barrier for cooperation on water resources in the Middle East?

A: The largest barrier is the mentality of the people due to the Israeli occupation of Palestinian territory—some will not talk to the Israelis because they are considered "the enemy." Everyone has lost a relative in the conflict, which of course is a sensitive issue. Surprisingly, Palestinians are generally more open to talk to Israelis than the Jordanians. The reason might be that Jordanians have alternative ways to deal with Israelis, while Palestinians are forced to sit down with them and talk. Our work is dependent on trust. I consider myself an open minded Arab, being partly Palestinian, Jordanian and Finnish, and I have learnt that war and conflicts should not stop us from talking to each other.

Q: In how far can FoEME influence the water management at the Jordan River?

A: FoEME has offices in Bethlehem, Tel Aviv and Amman. The office in Tel Aviv is active and has achieved the involvement of the Israeli Ministry of Environment on the Jordan River water issue and also stopped the construction of the border-fence in the area for environmental reasons. Those are great achievements, but when addressing the Jordanian side one has to translate the message so it cannot be seen as trying to copy successes of the Israeli government or do "what Israelis did." This comes down to communication and moderation, which, of course, is challenging for our organization.

We also try to use the international media to pressure the respective governments to cooperate and to make the Jordan River a top priority in the Middle East. Hopefully, the international attention will increase. Moreover, we cooperate with international NGOs, like Greenpeace and 350.org, which we consider as important sources of support from the global environmental community.

Q: You mentioned that your work is dependent on trust. How do you promote long-term trust between the parties?

A: The promotion of trust can always be undermined. The work of FoEME is strongly affected by public opinion and certain incidents, like the Gaza flotilla. This was a difficult time for us since we work with all conflict parties, but we were pointed out by the media as "collaborators" with Israel. The flotilla was a political issue. We are dealing with environmental issues. We try to differentiate between those two topics and to concentrate on solving the environmental problems.

Besides, we have learned that working with children and youngsters has an astonishing effect because environmentally conscious children influence their parents. Among other projects, FoEME arranges environmental camps for Jordanian and Palestinian students in Israel to provide educational as well as social experiences.

Q: Your organization promotes cooperation between non-state actors in Palestine, Jordan and Israel. What are the benefits of this community based approach?

A: FoEME is the only organization in Jordan currently working on trans-boundary environmental projects on water issues. We work with government officials in Israel, Jordan and Palestine, as well as with the local communities that live close to the Jordan River, promoting awareness campaigns in all three countries at the same time. Our approach mainly deals with people from the grassroots level but also with decision-makers. We raise awareness but at the same time we also bring people together. By discussing mutual problems among people of all ages, we focus on peaceful solutions, thus reducing hatred.

Q: What lessons can be learned from your experience that might be helpful for other similar situations of trans-boundary water conflicts?

A: There are many trans-boundary issues in the world and many people have the same problem as we have in the Jordan River region. There may be different regulations and a differing usage of water in countries sharing a common water source. However, the quality and continued existence of the water source affects everyone in the end and cooperation is needed.

Q: How do you see the prospects for the near future?

A: We must not lose hope. The Jordan River will most likely dry out by 2011. Having this in mind, FoEME does believe that in the coming years we will have more tolerance from the governments; that all three will sit together and talk openly. We hope that there will be more understanding and tolerance, resulting in

more trust. Once trust prevails, I think we can negotiate anything, accepting that we are neighbors with a common problem that we have to deal with.

Q: Mr. Afaneh, thank you very much for the interview!



Mika Flöjt

We need to give the Indigenous Population in the Arctic more Control over their Land

Interview with Mika Flöjt from the University of Lapland's Arctic Centre

The Arctic is experiencing shorter and warmer winters, decreases in snow and ice cover, increasingly unpredictable weather conditions and drastic changes in ecosystems. Amongst other impacts, these climatic changes have affected the livelihoods of the Arctic's indigenous population. In order to find out more about the current situation, one group of students interviewed Mika Flöjt, a researcher and policy analyst at the University of Lapland's Arctic Centre. Mr. Flöjt grew up just north of the Arctic Circle in Finland and has experienced the most recent of these changes.

Q: Mr. Flöjt, in how far are the physical impacts of climate change influencing the livelihoods of the indigenous population in the Arctic?

A: Thinner ice and increased snow have the largest impact on livelihoods. This especially affects traveling routes, as movement becomes difficult for vehicles and people. The melting of the permafrost is also worrying for some areas. Yet, this is not relevant for Scandinavia as it does not have permafrost. However, Alaska and the Russian arctic are regions with permafrost year round and they face problems of infrastructure degradation. Roads, for example, are frequently damaged due to ground melt. In some cases whole forests are sinking, along with roads, buildings, and pipelines. Although, these problems were there before, they now occur more often. Yet, the changes in the Arctic climate will not be uniform: some areas will experience warming while others will experience extremely cold winters more frequently.

Q: How do the indigenous peoples in the Arctic adapt to changed environmental conditions?

A: The people use many small practical solutions. In Canada you used to be able to cross lakes and rivers by foot: now you use a boat, or, as in Scandinavia, even a small plane. Other adaptation strategies include better reindeer herding. This is necessary because rain starts to fall also in winter time, leaving the ground with a layer of ice. And therefore the reindeers cannot access their food. By herding and feeding the reindeer in the winter, the indigenous peoples can protect their food supply. Nomadic tribes have also changed their migrating times due to earlier winters and later springs. Moreover, people have become more aware of climate change due to information from the media. As a reaction, they have created workshops on climate change and on how to change their behavior in order to adapt.

Q: State and federal law in Alaska prohibits indigenous people to sell caribou meat which they hunt. That makes it difficult for them to earn an income. This is an example of how regulations that attempt to protect wildlife can be a hurdle for adaptation. How can you balance the indigenous population's adaptation to climate change and at the same time protect wildlife?

A: In Alaska, adaptation includes moving to larger cities in order to make money. Laws that were originally intended to limit British recreational hunters from depleting the wildlife are preventing indigenous peoples from selling their meat, ultimately causing many indigenous people to leave their homes. In Finland, there is a sustainable management system in place that regulates the sharing of meat, creates hunting quotas, and allows the indigenous population to sell surplus meat. Thus, they can maintain their indigenous livelihoods.

Q: How well were the indigenous peoples represented during COP 15 in Copenhagen?

A: Indigenous peoples have a lack of funding and human resource capacity. Thus, they are not appropriately represented in the UNFCCC process as well as in Arctic governance. However, during COP 15 various NGOs and the Arctic Council had their own side events outside the actual conference.

Q: What are your recommendations for improving the livelihoods of indigenous peoples in the Arctic?

A: There is a contradiction in the Arctic, because the Arctic is rich in natural resources, yet the people are very poor. We therefore need to give indigenous people more control over their land, so that they can gain wealth from their resources. Material wealth will increase their bargaining power, and they will hence be able to deal more effectively with big business, avoiding situations where external companies infringe on the rights of the local population. This will help to preserve the Arctic environment and reduce poverty. Moreover, education should also be improved.

The Arctic will be affected by climate change, but it has certain advantages over other parts of the world. For example, it is a vast region with few people who are used to adaptation and who can move when resources are depleted in one area. On the other hand, people in southerly located countries, with large populations living in small territories will have a harder time adapting and will be more affected by climate change. In the context of general adaptation, I am more optimistic in the Arctic than what is the case in central latitudes of the earth.

Q: Mr. Flöjt, thank you very much for the interview!

Debates

During the Summer School's second week, the participants again convened in four working groups—but in a different composition. These groups had the task to prepare Oxford-style debates on key questions regarding the overall topic of the Summer School. Motivated by engaging in and eventually winning a debate, the working groups met repeatedly to prepare their argumentation and position for the debates. The working groups were deliberately composed of participants from diverse backgrounds and regions in order to stimulate controversies, and to provide the working groups with first-hand knowledge and insights from the respective regions.

The debates were held on the last day of the Summer School. Oxford-style debates are rule-based discussions with two groups (one "opposition group" and one "proposition group") confronting each other while adhering to a specific set of norms and rules. In the case of the Summer School, each group was comprised of seven members. The first group spoke in favor of the motion, the second group opposed it. The speaking time of each participant was restricted and the audience—which had the opportunity to pose questions and comments—consisted of the two working groups not directly involved in the debate.



Getting ready for the showdown

Three topics were debated. In the "semi-finals"—the winners of those debates finally participated in the final debate—the motions "Climate change will reshape the geo-political order" and "No foreseeable political solution will enable us to avert climate change" were discussed. The final debate dealt with the motion "MENA countries have to contribute to climate protection as much as Western states." Since each group had the chance to reach the final, everyone had to be prepared for two debates.

In the first semi-final the opposing group succeeded in convincing the audience of their position that there will be successful international negotiations on reducing emissions in the future. The second semi-final was again dominated by the opposition group, convincingly rejecting the thesis that climate change will reshape the geopolitical order. The passionately held final debate on "MENA countries have to contribute to climate protection as much as Western states" culminated in a neck-to-neck race which eventually saw the victory of the opposition group.



The winning group enjoys its victory

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