

“Climate Change, Conflicts and Cooperation in the Arctic”

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The International Foundation for the Law of the Sea (IFLOS) held its sixth annual Symposium on the premises of the International Tribunal for the Law of the Sea (ITLOS) in Hamburg on 27 September 2008. The range of topics discussed included the impact of climate change on the arctic environment, the identification of possible international disputes and cooperation opportunities in the region. Due to the global impact of changes in the arctic ecosystem and the growing need for the exploration of new fossil fuel deposits, these interdisciplinary questions touching on natural science, political science and law will gain in importance during the next few years and attracted an audience of 122 scholars and practitioners from almost 40 countries to the Symposium. The keen interest in this annual conference indicates that the Foundation has successfully established an interdisciplinary forum for international academic exchange. The Symposium was held in cooperation with the Bucerius Law School, the Law of the Sea and Maritime Law Institute of the University of Hamburg and the Federal Maritime and Hydrographic Agency. The Edmund Siemers Foundation and the German Shipowners' Association supported the event generously.

Background Information:

The growing global demand for energy is accompanied by the foreseeable exhaustion of the finite number of fossil fuel deposits. The current increase of commodity prices arouses stakeholders' interest in renewable energy sources¹ and enhances the cost-effectiveness of the exploitation of remote offshore deposits. It was the United States Geological Survey (USGS) which focused general public interest on the resource potential of the arctic region for the first time, when it published its often-cited study in 2000. This study locates 25 percent of the world's undiscovered petroleum in the arctic.²

¹ The opportunities and drawbacks of Offshore Wind Energy were discussed during the fifth annual IFLOS Maritime Talks on 14 March 2008. The conference report is available at: <www.iflos.org/en/events.aspx>.

² This percentage was based on an ambiguous definition of the term arctic. If the USGS would have defined the arctic as the area above the arctic circle, the number in question would have been 14

One year later Russia became the first State to propose outer limits of its continental shelf in the arctic ocean to the Commission for the Limits of the Outer Continental Shelf (CLCS) on 20 December 2001.³ Media attention did not reach its peak until 2 August 2007, when a Russian expedition planted the Russian flag beneath the North Pole.

By now all coastal States surrounding the Arctic Ocean have carried out scientific expeditions to determine the seaward limit of their continental shelves⁴ in order to prepare their submissions to the CLCS.⁵ But due to the harsh climate in the arctic region, the acquisition of geomorphologic data is very difficult, time-consuming and expensive. Their efforts, if successful, could lead to the functional nationalization of most of the Arctic Ocean seabed excluding all other interested States from the exploitation of the unexplored resources.⁶

In the meantime, the USGS had to adjust its forecast downwards.⁷ But due to the favorable market forecast and technological innovations, the question is not *if* there will be offshore oil drilling in the Arctic, but *when*. Notwithstanding the excessive claims of the Arctic States and future recommendations of the CLCS, this region will not experience a “*New Gold Rush*,”⁸ a “*Race for the North Pole*”⁹ or an “*Ice Cold War*”¹⁰, as forecasted by the media. An extensive international legal framework applies to the Arctic. The International Law of the Sea, especially the United Nations

percent. For a short and comprehensive review of the different definitions of the term ‘*arctic*’ comp. *van der Essen*, The Arctic and Antarctic Regions, in: Dupuy / Vignes (Hrsg.), A Handbook on the New Law of the Sea, Bd. 1, Dordrecht 1991, 525 (529ff.).

³ For an short analysis of the Russian submission comp. *Rüdiger Wolfrum*, Das Rechtsregime der Arktis, at 5ff., available at <http://www.mpil.de/shared/data/pdf/wolfrum_auswaertiges_amt_arktis.pdf>.

⁴ For an overview of the Danish continental shelf project see <<http://a76.dk/>>.

⁵ Norway submitted its claim to the CLCS on 27 November 2006. The deadlines for the other arctic States expire in 2013 (Denmark) and 2014 (Canada). The time limit for the USA will be set as soon it becomes a state party to UNCLOS.

⁶ According to *Macnab*'s often-cited study most of the arctic seabed floor will be subject to coastal State claims. See *Ron Macnab* [et al.], Cooperative Preparations for Determining the Outer Limit of the Juridical Continental Shelf in the Arctic Ocean, in: IBRU Boundary and Security Bulletin 2001, 86 (95), fig. 10. For an in-depth analysis of this study and a different view on the interpretation of art. 76 para. 6 UNCLOS see *Alexander Proelß / Till Müller*, The Legal Regime of the Arctic Ocean, in: Zeitschrift für ausländisches öffentliches Recht und Völkerrecht 68 (2008), 1-36 (forthcoming).

⁷ According to an USGS press release on 23 July 2008 the arctic oil resources only account for 13 percent of the undiscovered, technically recoverable resources in the world. The press release is available at <http://www.usgs.gov/newsroom/article.asp?ID=1980&from=rss_home>.

⁸ *Alex Duval-Smith*, „Arctic booms as climate change melts polar ice cap“, The Observer, 27 November 2005, available at <<http://www.guardian.co.uk/environment/2005/nov/27/oilandpetrol.theobserver>>.

⁹ Der Spiegel, „Canada Takes on Russia in Race for North-Pole, 10 August 2007, available at <<http://www.spiegel.de/international/world/0,1518,499287,00.html>>.

¹⁰ *Scott Borgerson*, “An Ice Cold War”, New York Times, 8 August 2007, available at <<http://www.nytimes.com/2007/08/08/opinion/08borgerson.html>>.

Convention for the Law of the Sea (UNCLOS), does not only entitle the Arctic States to explore the resources in the region, but also provides important obligations concerning inter alia protection of the marine environment, the delineation of the outer limits of the continental shelf and the orderly settlement of disputes. By adopting the Ilulissat Declaration on 28 May 2008, the Arctic States have committed themselves to this legal framework.¹¹ It remains to be seen if the established legal framework suffices to protect the sensitive arctic environment against the consequences of oil production, mineral extraction and increased shipping in the region, or if there is a need for a new separate comprehensive international regime for the Arctic.¹²

The welcome addresses were given by *Prof. Dr. Rüdiger Wolfrum* (Judge of ITLOS) and *Prof. Dr. Doris König* (Chair of the IFLOS' Board of Directors). Since the consequences of climate change shed new light on the reading of several aspects of UNCLOS, *Wolfrum* focused the attention of the audience on the importance of the academic exchange between the attending scientists and judges. Subsequently, *König* reminded the audience that due to the growing media coverage of the topic, the debate is no longer limited to expert and diplomatic circles. Both the Russians planting their flag at the North Pole as well as the Ilulissat Declaration have triggered critical public discussions.

The Effects of Climate Change in the Arctic

The first speaker of the morning session, *Dr. Volker Rachold* (International Arctic Science Committee, Stockholm, Sweden), gave an overview of the changing Arctic cryosphere¹³ and its consequences for the environment. Using different models based on up-to-the-minute data Rachold visualized the rapid reduction of Arctic sea ice and the Greenland ice sheet since 2000. He pointed out that the all-time low of September 2007 with its minimal sea ice extent of 4.1 million square kilometers¹⁴ even outranged all prior forecasts. This led to the first opening of the northwest

¹¹ The wording of the declaration is available at <<http://www.um.dk/NR/rdonlyres/BE00B850-D278-4489-A6BE-6AE230415546/0/ArcticOceanConference.pdf>>. For a short analysis of the declaration see *Ingo Winkelmann*, Feste Spielregeln für die Aufteilung des Arktischen Ozeans, SWP Aktuell 53, available at <http://www.swp-berlin.org/common/get_document.php?asset_id=5051>.

¹² See e.g. *Olav Schramm Stokke*, A Legal Regime for the Arctic? Interplay with the Law of the Sea Convention, in: *Marine Policy* 31 (2007), 402-408.

¹³ The cryosphere describes the portions of the Earth's surface where water is in solid form, including sea ice, lake ice, river ice, snow cover, glaciers, ice caps, ice sheets and frozen ground.

¹⁴ The slightly recovering sea ice during the summer of 2008 should not be interpreted as a turnaround. Due to the different factors it depends on, the process of sea ice reduction follows an abnormal pattern.

passage in human memory.¹⁵ In the following, *Rachold* lowered expectations on the opening of new year-round navigational passages in the Arctic by emphasizing that the annual wintry sea ice extent has remained constant in the last few years. *Rachold* concluded by predicting a strong increase in seasonal arctic shipping and the extension of shelf limits in the Arctic Ocean. At the same time, the reduction of sea ice will have a strong negative impact on the complex arctic food chain and the indigenous population, whose traditional way of life highly depends on the presence of pack ice.

Prof. Dr. Diethard Mager (German Federal Ministry for Economics and Technology, Berlin, Germany) expounded on *Racholds* presentation and raised the question, whether or not climate change will enable easier access to arctic hydrocarbons and mineral resources. He started his presentation with a short cause analysis of the high commodity prices on world markets since 2003. According to *Mager*, the price increase is not caused by the finite nature of raw materials,¹⁶ but rather by the limited capacities for extraction, processing and transport as well as the growing demand of emerging economies like China and India. Thereafter, *Mager* outlined the present and future raw material potential of the Arctic as well as the involvement of German energy companies in the exploration and exploitation of resources in the Arctic. He placed emphasis on the challenges and problems companies are facing in this region. *Mager* identified inter alia the long distances between production sites and industry customers, the lack of infrastructure, the changes of permafrost conditions and the uncertainties on territorial claims as the main challenges. He concluded by pointing out that notwithstanding that it is not possible to predict easier access to the raw material deposits of the Arctic, economical developments and technological innovations will open up new resources.

Increased Maritime Transportation and Marine Environmental Protection

Dr. Aldo Chircop (Marine & Environmental Law Institute, Dalhousie Law School, Halifax, Canada) gave an overview of the legal issues of maritime transportation in the Arctic. *Chircop* pointed out that there is a growing interest in potential new

¹⁵ Press release of the European Space Agency on 14 September 2007. Available at <http://www.esa.int/esaCP/SEMYTC13J6F_index_0.html>.

¹⁶ An exception is the petroleum, which midterm depletion point will be reached within the next 20 years.

commercial navigation routes through the Arctic. The reason for this is simply that a voyage from Asia to Northern Europe through the Canadian Northwest Passage or the Russian Northern Sea Route¹⁷ would be some thousand miles shorter than the Suez Canal Route or the Panama Canal Route. Additionally, *Chircop* predicted increasing seasonal domestic shipping, tourism and fishing activities in the Arctic Ocean, endangering the subsistence of the indigenous population. Subsequently, *Chircop* focused on the obstacles to arctic navigation. Commercial navigation in the Arctic will be limited to a short season of only a few weeks or months. But due to poor weather, reduced visibility and ice movement, it will remain hazardous especially for non-polar class vessels crewed with seafarers without ice-navigation experience even in the summertime. At the same time, the coastal States, Canada and Russia, need time to develop the necessary infrastructure, such as ports, navigation aids, search and rescue, salvage and places of refuge. Furthermore, *Chircop* argued that the international legal framework is insufficient to protect the fragile coastal and marine environment. Whereas the non-mandatory Guidelines for Ships Operating in Arctic Ice-Covered Waters, developed by the International Maritime Organization (IMO), do not apply to the full range of vessels navigating the Arctic Ocean, other important rules and standards, like the Collision Avoidance Regulations (COLREGS), are fitted to ice-free waters. Even though Canada and Russia do have longtime experience in the unilateral regulation of arctic shipping, *Chircop* considers the further development of the legal regime not only the responsibility of the arctic States, but of the international community. Since the arctic coastal States unanimously object to the idea of a new regional treaty for the Arctic, the answer for future governance of shipping in the Arctic could be a convergence of IMO standards, Arctic Council-facilitated bilateral and multilateral arrangements and national regulatory regimes under art. 234 UNCLOS.

Dr. Agustín Blanco-Bazán (Legal Affairs, IMO, London, Great Britain) picked up where *Chircop* left off and focused his speech on the work of IMO as the sole specialized agency of the United Nations with an exclusive mandate to adopt

¹⁷ For a review of the legal status of the Passages see *Donat Pharand*, *The Arctic Waters and the Northwest Passage: A Final Revisit*, in: *Ocean Development & International Law* 38 (2007), 3-69 and *Leonid Tymchenko*, *The Northern Sea Route: Russian Management and Jurisdiction over Navigation in Arctic Seas*, in: *Oude Elferink [et al.]*, *The Law of the Sea and Polar Maritime Delimitation and Jurisdiction*, The Hague 2001, 269-291.

international rules on safety of navigation and prevention of marine pollution. He emphasized that the mandatory and recommendatory rules of the two main IMO safety and antipollution treaties, i.e. the International Convention for the Safety of Life at Sea (SOLAS) and the International Convention for the Prevention of Pollution from Ships (MARPOL), do not meet the special requirements of arctic shipping. Bearing in mind the unique risks implied in arctic navigation, the IMO adopted the Guidelines for Ships Operating in Arctic Ice-Covered Waters (IMO-Guidelines)¹⁸ to amend the customary legal framework.¹⁹ *Blanco-Bazán* went on to argue that even art. 234 UNCLOS, which authorizes coastal States to adopt and enforce non-discriminatory laws and regulations for ice-covered areas, does not explicitly describe the need for coastal State legislation to conform to international shipping rules adopted by IMO, it has to be read together with other provisions of UNCLOS. Therefore, they should neither contradict nor overlap the shipping rules and standards contained in SOLAS and MARPOL. He concluded by expressing his hope that the cooperation of the arctic States could lead to the establishment of a Special Area in the Arctic in accordance with Annex I, II and V of MARPOL or to designate the region as a Particularly Sensitive Sea Area (PSSA).²⁰

During the following discussion *Daniel Hosseus* (German Shipowners' Association) criticized current forecasts on the future use of the Northwest Passage and the Northern Sea Route simply based on geographic distances. *Hosseus* argued that the shorter voyage would not result in savings of costs and time, because other geographic and economic factors have to be taken into account. In shallow and dangerous waters, vessels can only drive at slow speed and there are also no important harbors along the Passages. Furthermore, the transit through the Northern Sea Route is, depending on the type of the vessel used, up to USD 600.000 more expensive than the transit through the Suez Canal because of the Russian fee structure. In addition, he voiced his concern that the harbor of Yokohama, which is

¹⁸ The provisions recommended in the IMO-Guidelines (classification of ships in polar classes, rules on the equipment of ships and crew training) address the pack ice as the main hazard to arctic navigation.

¹⁹ The IMO-Guidelines are recommendatory in nature. However, States can incorporate them into their national laws, thus making their application compulsory in the ice waters under their jurisdiction.

²⁰ When an area is approved as a Particularly Sensitive Sea Area, specific measures can be used to control the maritime activities in that area, such as routing measures or mandatory pilot services.

always used in these simulations, is less important than the harbors of Hong Kong or Singapore.²¹

Continental Shelf Claims in the Arctic

In the beginning of the afternoon session, *Dr. Christian Reichert* (Federal Institute for Geosciences and Natural Resources, Hannover, Germany) gave a lecture on the determination of the outer limits of the continental shelf and the role of the CLCS. He outlined those bodies established within the scope of UNCLOS, which are relevant for seabed mining (i.e. ITLOS, CLCS and the International Seabed Authority) and the coastal States rights to maritime zones. Thereafter, *Reichert* reviewed the coastal States rights to claim an extended continental shelf seaward of 200 nautical miles from the shore according to art. 76 UNCLOS. He emphasized the difficulties for the applicant originating from the fact that the relevant rules of UNCLOS are based on an idealized and simplified morphology of the seabed. In addition, the States' burden of proof is further complicated by the complex terminology and the different methods of delimitation. Therefore, the CLCS has to provide scientific and technical advice if requested by the coastal State during the preparation of its submission.²² *Reichert* went on by examining the Russian submission to the CLCS, which is not without controversy. It is the crucial question of this discussion, whether the submarine features included in the submission, in particular the Lomonossov-Ridge and the Alpha-Mendelejew-Ridge, are submarine ridges and part of the seabed floor or submarine elevations that are natural components of the continental margin.²³ He presented different analyses which indicate that these features are neither part of the North-American nor the Eurasian continental shelf. But at the same time, *Reichert* pointed out that the acquisition of reliable data is very difficult and expensive in the arctic region and that the CLCS during their examination of the comparable Australian submission decided in favor of the applicant.

The next speaker, *Dr. Vladimir Golitsyn* (Judge of ITLOS), gave a legal comment on *Reichert's* presentation. *Golitsyn* emphasized that from his point of view, it is incorrect to use the term claim with regard to the continental shelf. In his opinion, States have

²¹ Comp. *Franklin Griffiths*, *New Illusions of a Northwest Passage*, in: Myron H. Nordquist [et. al.], *International Energy Policy, the Arctic and the Law of the Sea*, Leiden 2005, 303, (309 ff.).

²² Comp. Art. 3 Annex II SRÜ.

²³ The names of the features do not have a legal meaning. Those were named before UNCLOS came into force.

an inherent right to an extended continental shelf as the natural continuation of their territory. In fact the only requisite is for the coastal States to establish the outer limit of the continental shelf. No legal process has to be undertaken, no legal acts to be performed. He went on by exposing some of the shortcomings of UNCLOS on the basis of the disputed legal status of the submarine features in the Arctic Ocean. There are no regulations triggered in the case that coastal States acquire new scientific data backing up their submission after the CLCS has given a negative recommendation. Similarly, it is still unsettled what shall happen if the CLCS treats the same submarine feature unequally with respect to the submission of two adjacent States. Finally, *Golitsyn* examined the mandate of the CLCS. He took the position that it should be the Committee's only task to verify the forwarded submissions, while the competence to judge upon complex legal issue is restricted to the States' parties and competent international courts like the ITLOS.

Dr. Dolliver Nelson (Judge of ITLOS) examined the settlement of disputes arising from conflicting outer continental shelf claims. He pointed out that the establishment of the outer limits of the continental shelf has high potential for conflicts, because most shelf areas form the natural prolongation of more than one State. *Nelson* underlined the mechanisms counteracting international disputes in regard to the delimitation of the outer continental shelf. Actions of the CLCS shall not prejudice matters relating to the delimitation of boundaries between States with opposite or adjacent coasts (comp. Annex II Art. 9 UNCLOS). Only the States' parties are authorized to negotiate boundaries in question with each other. Furthermore, State parties to UNCLOS are entitled to submit a joint submission to the CLCS,²⁴ an instrument with the potential to encourage the scientific dialogue and common understanding. At the same time, this option helps the Commission to reduce its amount of work. *Nelson* emphasized the problems originating from the unsettled relationship between the CLCS and the dispute settlement mechanisms. If a coastal State establishes the outer limits of its continental shelf on the basis of the recommendations of the CLCS, those limits shall be final and binding (comp. art. 76 para. 8 s. 3 UNCLOS). It remains unanswered up to now which legal consequences a State would face if it establishes outer limits of its continental shelf contrary to the recommendations in the cases where no other State is directly affected. Because the

²⁴ The first joint submission was submitted by France, Ireland, Spain and Great Britain in 2006.

CLCS is not entitled to submit disputes to an international court, *Nelson* recommends authorizing third party States to protect the area as the common heritage of mankind. But at present the preservation of the Area does not constitute an obligation *erga omnes*, compliance of which could be demanded by the international community.

Martin Pratt (International Boundary Research Unit, Durham University, Great Britain) presented the map on maritime jurisdiction and boundaries in the arctic region, which was published by his institution and attracted a lot of media attention.²⁵ Using a simplified description of present and potential maritime borders in the region, *Pratt* wanted to create a scientifically substantiated alternative to the news coverage of the last few months, which presented a wrong picture of the legal positions. In addition, *Pratt* presented a new map of the Arctic, which combines the current maritime zones of the arctic States with the data published by the USGS. This map infers that nearly all of the expected raw material deposits in the Arctic lie within zones of coastal States' jurisdiction putting the predicted race to the North Pole in a different perspective.

Regional Cooperation

Dr. Oran R. Young (Donald Bren School of Environmental Science and Management, University of California, Santa Barbara, USA) gave an overview of the challenges to governance in a rapidly changing Arctic. *Young* argued that two equitable paradigms are suitable to frame the issues of governance in the region, each leading to a different battery of questions. In addition to the geopolitical approach which focuses on jurisdiction, competition for resources and conflicts, he highlighted the Ecosystem-based Management (EBM) approach. The EBM is an environmental management approach that looks at all the links among living and nonliving resources within an ecosystem, rather than considering single issues in isolation. *Young* went on to identify the legitimate stakeholders regarding issues of arctic governance. He described the historical development from the original five entitled arctic States,²⁶ to the enlistment of Sweden, Iceland and Finland in the late 1980s and the present role of non-arctic States (e.g. China and Japan) and NGOs (within the Arctic Council). In the face of development to a global civil society, a key factor in regard to arctic governance will be the future participation of new and different players like

²⁵ The map is available at: <http://www.dur.ac.uk/ibru/resources/arctic/>.

²⁶ Norway, Denmark, Canada, USA and Russia.

environmental NGOs, business and sub national governments. He went on by examining the need for a legally binding treaty for the Arctic Ocean. *Young* emphasized the advantages of informal agreements over legally binding instruments (i.e. quicker agreement, greater adaptability and the ease of folding in non-state actors) and underlined that the most pressing challenges are driven by external factors (Persistent Organic Pollutants, Ozone Depleting Substances and Greenhouse Gases), which could not be met with a regional legal framework.²⁷ He concluded by putting emphasis on the challenge of the Arctic Council to promote arctic issues within global decision processes.

Dr. Alf Håkon Hoel (University of Tromsø, Norway) also addressed the question, whether the international community of States should adopt a new legal regime for the Arctic to counter threats to the ecosystem and potential conflicts between the adjacent States. *Hoel* opposes the idea of an analogy to the Antarctic treaty system, because the Antarctic is an unsettled ocean-bound continent where no sovereignty is recognized. In contrast the Arctic is centered by an ocean surrounded by land where the sovereignty issues are resolved and a comprehensive legal system based on UNCLOS, as well as regional and international treaties dealing with resource management, (marine) environmental protection (Kyoto-Protocol, Arctic Climate Impact Assessment) and economic activities (OSPAR, Draft Arctic Offshore Oil and Gas Guidelines) does exist. Therefore, *Hoel* raised the question if it is not possible to resolve the problems within the context of existing treaties and arrangements. From his point of view, the effective implementation of existing legal instruments on the international and the regional level as well as the further development of existing treaties (e.g. post-Kyoto treaty) are the key factors for a successful confrontation of climate change and the sustainable use of natural resources. *Hoel* considers it the Arctic Council's responsibility to promote the development of strategic plans and guidelines and to build a common understanding among the stakeholders. He concluded his speech by giving a provoking answer to the question why the international community tends to react to every problem with the negotiation of a new treaty: It is much more interesting to travel around the world negotiating a new treaty than doing the hard work of implementing international commitments at home.

²⁷ For a review of the opportunities and drawbacks of an Arctic environmental protection treaty see *Linda Nowlan*, Arctic Legal Regime for Environmental Protection, IUCN Environmental Policy and Law Paper No. 44, at 58-60, available at: <<http://www.ppl.nl/ebooks/files/EPLP44EN.pdf>>.