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Looking Beyond the International Polar Year: Emerging and Re-emerging Issues in International Law and Policy in the Polar Regions



This report was written and edited by David Leary and draws upon edited material by symposium Rapporteurs Antje Neumann, Alena Ingvarsdóttir, Kári á Rógvi MP and Elisa Burchert.

Acknowledgments

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á Akureyri**

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UNU-IAS Report

Looking Beyond the International Polar Year: Emerging and Re-emerging Issues in International Law and Policy in the Polar Regions

Report and Recommendations from an International Experts Symposium held at the University of Akureyri Iceland, 7-10 September 2008

David Leary

Co-organisers: United Nations University Institute of Advanced Studies, Japan and the University of Akureyri, Iceland

With the involvement of Tilburg University, The Netherlands, and the Northern Institute for Environmental and Minority Law, Arctic Centre, University of Lapland, Finland

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Foreword

As we look beyond the current International Polar Year (IPY), and reflect upon the body of scientific research and data that has been generated, it is important to think about the legal and policy decisions which will have to be made regarding the many challenges facing the Polar Regions in light of this new scientific data. These challenges are many and varied. The recommendations of the group of experts in international law and policy who met in Akureyri, Iceland in September 2008 contained in this report are a first step in identifying and then responding to these challenges.

This Symposium and the recommendations contained in this report are yet another example of the work of the United Nations University Institute of Advanced Studies (UNU-IAS) in advancing studies on emerging issues of importance to the international community. As a United Nations organisation, UNU-IAS is mandated to find 'workable solutions' to the challenges of sustainable development. Identifying and developing policy relevant recommendations in relation to emerging issues in international law and policy, not just in the Polar Regions but also globally, is directly relevant to this mandate.

In collaboration with our co-organiser of the Symposium, the University of Akureyri (Iceland), and with the involvement of Tilburg University (the Netherlands), and the Northern Institute for Environmental and Minority Law, Arctic Centre, University of Lapland (Finland), the recommendations presented in this report are a good example of how partners can join forces to address emerging topics of global importance.

UNU-IAS, which acts as a strategic think tank of the United Nations, is an active partner in efforts to address such emerging issues; the Symposium and this report complement UNU-IAS' other work during the IPY. This work has included contribution of an update on bioprospecting in Antarctica to the 30th Antarctic Treaty Meeting in New Delhi and the development of a web based bioprospecting database tool on bioprospecting in the Arctic and Antarctica.

Last but not least, I would like to take this opportunity to place on record my appreciation to the members of the organising committee of the Symposium: Dr. David Leary, UNU-IAS; Professor Gudmundur Alfredsson and Agust Thor Arnason, University of Akureyri; Professor Timo Koivurova, University of Lapland; and Dr. Kees Bastmeijer, Tilburg University.

It is our hope that the Polar Law Symposium and the recommendations contained in this report will trigger further constructive debate on these issues and some of the possible ways forward.



A.H. Zakri
Director, UNU-IAS
October 2008

Executive Summary

The International Symposium, 'Looking Beyond the International Polar Year: Emerging and Re-emerging Issues in International Law and Policy in the Polar Regions' was held on 7-10 September 2008 at the University of Akureyri, Akureyri, Iceland. The Symposium was timed to coincide with the launch of the new postgraduate program in Polar Law offered by the University of Akureyri.

The purpose of the Symposium was to examine, in detail, the implications of the challenges faced by the Polar Regions for international law and policy as part of the legacy of the current International Polar Year and to make recommendations on appropriate actions by States, policy makers and other international actors to respond to these emerging and re-emerging challenges.

The Symposium brought together 67 internationally renowned experts on international law and policy and the Polar Regions from more than 20 countries, including academics, politicians, diplomats, representatives of intergovernmental organisations and processes, and civil society and students.

Six key questions were posed for the symposium participants: (1) What are the main emerging and re-emerging issues in international law and policy relating to the Polar Regions warranting international action? (2) Are the current international legal and policy systems able to address these issues? (3) What issues require immediate action by the international community? (4) What issues will require action by the international community in the longer term? (5) What steps should countries take to address these issues? (6) Which of these issues warrant further detailed research by legal scholars and other disciplines?

Recommendations contained in this report address the following key issues: climate change; human rights challenges; challenges of new commercial activities in the Polar Regions (such as the exploitation of offshore oil, gas and other minerals, shipping, fishing, bioprospecting and tourism); challenges posed by shipping and newly opening sea lanes; threats to specific species and assemblages of species; environmental governance in the Polar Regions; and the inadequate implementation of existing international law and domestic laws.

The report also contains a series of recommendations on further legal, scientific and other studies that should be undertaken in the immediate and near term future to better equip governments and policy makers to respond to these emerging issues.

1. Introduction

1.1 Background

The International Symposium, 'Looking Beyond the International Polar Year: Emerging and Re-emerging Issues in International Law and Policy in the Polar Regions' (the Symposium) was held on 7-10 September 2008 at the University of Akureyri, Akureyri, Iceland. The Symposium was timed to coincide with the launch of the new postgraduate programme in Polar Law offered by the University of Akureyri.

The purpose of the Symposium was to examine, in detail, the implications of the challenges faced by the Polar Regions for international law and policy as part of the legacy of the current International Polar Year (IPY) and to make recommendations on appropriate actions by States, policy makers and other international actors to respond to these emerging and re-emerging challenges.

The Symposium brought together 67 internationally renowned experts on international law and policy and the Polar Regions from more than 20 countries, including academics, politicians, diplomats, representatives of intergovernmental organizations and processes, civil society and students.

The Symposium was organized by Dr. David Leary, UNU-IAS; Professor Gudmundur Alfredsson, and Agust Thor Arnason, University of Akureyri; Professor Timo Koivurova, University of Lapland and Dr. Kees Bastmeijer, Tilburg University. The Symposium was generously sponsored by the United Nations University Institute of Advanced Studies (UNU-IAS); the Prince Albert II of Monaco Foundation; The Monaco Permanent Representation to Scientific, Environmental and Humanitarian International Bodies; The United Nations Environment Programme (UNEP); The Dutch International Polar Year Committee; The University of Akureyri, and The Town of Akureyri.

1.2 The context for the Symposium

The 1st of March 2007 marked the beginning of the IPY. Lasting until March 2009 to enable research to be spread equally over two full annual cycles, the IPY has involved a large international collaborative scientific research programme focused on both the Arctic and Antarctica. The IPY has been jointly sponsored by the International Council for Science (ICSU) and the World Meteorological Organization (WMO) and has involved over 200 scientific research projects, with thousands of scientists from over 60 nations examining a wide range of physical, biological and social topics. A particularly significant focus of this research has been on the impact of climate change on the Arctic and Antarctica and linkages with the rest of the world. This is the fourth polar year, following those in 1882-3, 1932-3, and the International Geophysical Year (IGY) in 1957-8.¹

International cooperation in the IGY laid the foundations for the emergence of the novel international legal regime that applies to all human activities in Antarctica and the

Southern Ocean known as the Antarctic Treaty System (ATS). The ATS is composed of four main treaties: the 1959 Antarctic Treaty, the 1972 Convention on the Conservation of Antarctic Seals, the 1980 Convention on the Conservation of Antarctic Marine Living Resources, and the 1991 Protocol on Environmental Protection to the Antarctic Treaty. A key feature of the ATS regime is its emphasis on the three pillars of use for peaceful purposes, freedom of scientific research and environmental protection.

In the Arctic, international co-operation occurs through a series of international forums including the Arctic Council, the International Arctic Science Committee and the Arctic Military Environmental Cooperation programme. International co-operation in the Arctic also occurs through international forums such as the Barents Euro-Arctic Council, and the Nordic Council of Ministers. The Arctic Council is a high-level forum for cooperation, coordination and interaction between Arctic states, indigenous communities and other Arctic residents. The Arctic Council is an intergovernmental forum that seeks to address some of the common concerns and challenges faced by Arctic States (Canada, Denmark (including Greenland and the Faroe Islands), Finland, Iceland, Norway, the Russian Federation, Sweden and the USA). Six international organisations representing many Arctic indigenous communities have the status of Permanent Participants of the Arctic Council and are involved in the work of the Council in consultation with governments. The six international organisations representing Arctic indigenous communities are the Aleut International Association, the Arctic Athabaskan Council, Gwich'in Council International, the Inuit Circumpolar Conference, the Russian Association of Indigenous Peoples of the North and the Saami Council.

Recent discussions in a number of fora have raised the issue of the need for a comprehensive treaty regime for the Arctic as a product of this IPY. However, in the Ilulissat Declaration, issued in Greenland on 28 May 2008 (see Box 1), the five Arctic coastal states, Canada, Denmark, Norway, the Russian Federation and the USA, as well as Greenland which hosted the Ilulissat meeting, specifically rejected this call.

Nevertheless, the wealth of data being generated by researchers across all disciplines during the IPY has highlighted many new challenges for the Polar Regions as well as provided valuable data on the scale of challenges all ready known. Many of these challenges will require responses from policy makers and legislators around the globe, and especially from those States with interests in the Polar Regions. The Symposium was therefore convened to consider the implications of these challenges for international law and policy in the immediate and the long term future. In particular, the Symposium sought to address the following six key questions:

1. What are the main emerging and re-emerging issues in international law and policy relating to the Polar Regions warranting international action?

2. Are the current international legal and policy systems able to address these issues?
3. What issues require immediate action by the international community?
4. What issues will require action by the international community in the longer term?
5. What steps should countries take to address these issues?
6. Which of these issues warrant further detailed research by legal scholars and other disciplines?

For the purposes of discussion at the symposium, these questions were considered across four broad themes:

- Theme I: Challenges for the Protection of Biodiversity and Wilderness in the Polar Regions;
- Theme II: Sustainable Development and Human Rights;
- Theme III: Environmental Governance in the Polar Regions;
- Theme IV: Emergent and Re-emerging Jurisdictional Issues in the Polar Regions.

BOX 1: THE ILULISSAT DECLARATION

On 28 May 2008, at the invitation of the Danish Minister for Foreign Affairs and the Premier of Greenland, representatives of the five coastal States bordering on the Arctic Ocean, (namely Canada, Denmark, Norway, the Russian Federation and the USA as well as Greenland that co-chaired the meeting) met at the political level in Ilulissat, Greenland, to hold discussions on the Arctic ocean and climate change. At the conference the country representatives including the Russian Minister for Foreign Affairs, Sergey Lavrov, the Norwegian Minister for Foreign Affairs, Jonas Støre, the Canadian Minister for Nature Resources Gary Lunn and the American Deputy Secretary of State John Negroponte agreed on the text of the Ilulissat Declaration which reads as follows:

“The Arctic Ocean stands at the threshold of significant changes. Climate change and the melting of ice have a potential impact on vulnerable ecosystems, the livelihoods of local inhabitants and indigenous communities, and the potential exploitation of natural resources. By virtue of their sovereignty, sovereign rights and jurisdiction in large areas of the Arctic Ocean the five coastal states are in a unique position to address these possibilities and challenges.

In this regard, we recall that an extensive international legal framework applies to the Arctic Ocean as discussed between our representatives at the meeting in Oslo on 15 and 16 October 2007 at the level of senior officials. Notably, the law of the sea provides for important rights and obligations concerning the delineation of the outer limits of the continental shelf, the protection of the marine environment, including ice-covered areas, freedom of navigation, marine scientific research, and other uses of the sea. We remain committed to this legal framework and to the orderly settlement of any possible overlapping claims.

This framework provides a solid foundation for responsible management by the five coastal States and other users of this Ocean through national implementation and application of relevant provisions. We therefore see no need to develop a new comprehensive international legal regime to govern the Arctic Ocean. We will keep abreast of the developments in the Arctic Ocean and continue to implement appropriate measures.

The Arctic Ocean is a unique ecosystem, which the five coastal states have a stewardship role in protecting. Experience has shown how shipping disasters and subsequent pollution of the marine environment may cause irreversible disturbance of the ecological balance and major harm to the livelihoods of local inhabitants and indigenous communities.

We will take steps in accordance with international law both nationally and in cooperation among the five states and other interested parties to ensure the protection and preservation of the fragile marine environment of the Arctic Ocean. In this regard we intend to work together including through the International Maritime Organization to strengthen existing measures and develop new measures to improve the safety of maritime navigation and prevent or reduce the risk of ship-based pollution in the Arctic Ocean.

The increased use of Arctic waters for tourism, shipping, research and resource development also increases the risk of accidents and therefore the need to further strengthen search and rescue capabilities and capacity around the Arctic Ocean to ensure an appropriate response from states to any accident. Cooperation, including on the sharing of information, is a prerequisite for addressing these challenges. We will work to promote safety of life at sea in the Arctic Ocean, including through bilateral and multilateral arrangements between or among relevant states.

The five coastal states currently cooperate closely in the Arctic Ocean with each other and with other interested parties. This cooperation includes the collection of scientific data concerning the continental shelf, the protection of the marine environment and other scientific research. We will work to strengthen this cooperation, which is based on mutual trust and transparency, inter alia, through timely exchange of data and analyses.

The Arctic Council and other international fora, including the Barents Euro-Arctic Council, have already taken important steps on specific issues, for example with regard to safety of navigation, search and rescue, environmental monitoring and disaster response and scientific cooperation, which are relevant also to the Arctic Ocean. The five coastal states of the Arctic Ocean will continue to contribute actively to the work of the Arctic Council and other relevant international fora.

Ilulissat, 28 May 2008.”

Source: Danish Ministry of Foreign Affairs.²

1.3 The format of the Symposium and the structure of this report

The Symposium was opened by H.E. Mr. Ólafur Ragnar Grímsson, President of the Republic of Iceland who delivered the opening keynote address. The Symposium then heard from key representatives of some of the sponsoring organizations including Dr. Bakary Kante, UNEP, Thorsteinn Gunnarsson, Rector of the University of Akureyri; Professor A.H. Zakri Director of the United Nations University Institute of Advanced Studies; and Associate Professor Sigurður Kristinnsson, Dean, Faculty of Humanities and Social Science, University of Akureyri. The texts of several of these addresses are set out in Chapter 2 of this report.

Papers were then presented by the Symposium participants on the four themes of the Symposium and a record of the proceedings kept by Rapporteurs

assigned to each session. Summaries of these presentations are set out in Chapter 3. The full text of many of these papers will be available in the new *Yearbook of Polar Law* to be published by Brill Publishing.

In the final session, participants developed a range of recommendations for policy makers and for further research which are set out in Chapter 4 of this report. The Symposium concluded with a closing comment from H.E. Mr. Patrick Van Kaveren, Ministre conseiller, Principauté de Monaco.

The programme for the Symposium is reproduced in Annex 1. The biographies of each of the Chairs, Speakers, Commentators and Rapporteurs are reproduced in Annex 2. A list of participants is attached as Annex 3 to this report.

Figure 1: Participants of the International Experts Symposium, September 2008



1.4 Acknowledgements

We are grateful to the Chairs (Professor Gudmundur Alfredsson, Professor Said Mahmoudi, Professor Brian Burdekin, Professor Rene Lefebvre and Dr. Marie Jacobsson, Dr. Kees Bastmeijer and Dr. David Leary) and the Rapporteurs (Antje Neumann, Elisa Burchert, Kári á Rógvi MP, and Alena Ingvarsdóttir) for their invaluable assistance in conducting and preparing the Symposium proceedings. We would also like to thank all of the following people who assisted with the planning, preparation and running of the Symposium: Professor A.H. Zakri and Dr. William Bradnee Chambers the Director and the Senior Programme Officer of UNU-IAS, respectively, Dr. Balakrishna Pisupati (now with UNEP), Dr. Claudia

ten Have, Sam Johnston, University of Akureyri Rector Thorsteinn Gunnarsson and the Dean of the Faculty of Humanities and Social Sciences Associate Professor Sigurður Kristinnsson, Dr. Natalia Loukacheva, Dagmar Stefánsdóttir, Terry Collins, Rachel Schutte, John Leary OAM, Harumi Komura, Miho Takai, Kazumi Mamine, Wendy Elliot, Hiromi Suzuki, Ken Suzuki, Mugi Akimoto, Dexter Thompson-Pomeroy, Miki Hirano, Taeko Morioka, Hulda Ingadóttir, and Ragnheidur Jakobsdóttir.

Feedback on drafts of this report from symposium speakers, Session Chairs and other participants is also gratefully acknowledged.

2. Opening Addresses

2.1 Opening Keynote address by H.E. Mr. Ólafur Ragnar Grímsson, President of the Republic of Iceland³

A few years ago when the widow of Vilhjalmur Stefansson, Evelyn Stefánsson Neff, came here, she reminded us through many fascinating personal stories how Vilhjalmur had in old age still been fascinated by his experience of discovering new territories in the Arctic part of Canada and bringing the knowledge of the existence of these territories and the customs and the lifestyle of their people to the so-called established world.

This reminded us how recently we in the western intellectual hemisphere have incorporated the Arctic and the Northern areas into our concerns. Even during the heyday of my life, for most of us who are here this morning, the Cold War so deeply froze this part of the world that it was almost a political and intellectual taboo to concern oneself with the issues of the Arctic and the Northern Regions. Honestly, most of us never really expected the Cold War to end in our lifetime. It was therefore perhaps a hopeless academic or intellectual career choice to decide to be active in the Arctic.

All of a sudden, with the end of the Cold War, the Arctic opened up in many different ways, but it has taken the international community a long time to realise how we must cope with these challenges, from the point of view of international law, policy making and cooperation between the nations which encircle the Arctic. As I have sometimes reminded Bill Clinton, even his enlightened administration with Al Gore on board was hesitant, reluctant, even negative towards the establishment of a special Arctic Council to deal with these issues. In the end, he finally accepted that it should be established, but with no permanent secretariat, and only one short meeting every year.

Even these two global leaders, who have in recent years created names for themselves in the international dialogue and debate on climate change, had in the early 1990s little perception of the political and intellectual importance of the Arctic Regions.

I have also been reminded in my visits to the Northwest Territories in Canada and to Siberia and the eastern part of Russia, Chukotka and Yamal Nenets, how the intellectual and historical framework which we adopted in our youth and adult life has not taken into account the rights and the position of the indigenous people in these areas.

It was for me a startling discovery to visit the reindeer herders in Chukotka and to discover that for thousands of years, long before Iceland was discovered, the ancestors of these people had, as they were now, been living in harmony with the reindeer herds, deriving their food, their clothes, their tents, their livelihood entirely and solely from their animals.

I will never forget the meeting I had one evening in the Northwestern Territories in Canada with my friend Adrienne Clarkson, then Governor-General of Canada, with the elders, the leaders of the indigenous community. They didn't speak English, and definitely not French; their language was so far away from ours that when I spoke a few sentences it took a couple of minutes, even three or four, to translate them. After a while it became hilarious: I said a few sentences and had to wait for three, four or even five minutes for them to be translated. When I asked afterwards, I was told their language had no framework for concepts or ideas; it was entirely a language of concrete natural phenomena. The interpreter had to create the meaning of my words by referring to the experience in nature by these people.

But what really moved me most, was when they told me of their frustration for decades in dealing with the Government of Canada with respect to their rights, their land and their future. Now they were hopeful because one young man from their tribe had decided to go to university and study law. He was the first in the history of their tribe to do so. They were sitting there with their life and their problems on their shoulders waiting for this young man to come back from university to give their campaign, their vision, their hopes, a new strength.

It reminded me of the Icelanders before the middle of the 19th century who were brought up on farms, some here in northern Iceland, and went as students to my residence, Bessastadir, which was then the only school in the country. They then travelled to Copenhagen to study law with the hope of being able to argue the case why this nation of poor farmers and fishermen living far away in the North Atlantic should gain independence.

So we come to this table of International Polar Law with a legacy which is filled more with hopes than with substance, with the humility that there is more which we don't know than we know. And also with the fundamental challenge of making the knowledge which we can, together, bring to the table politically and internationally relevant. All of a sudden, due to many different factors, the Arctic and the Polar Regions have become, potentially, politically the hottest regions in the first half of the 21st century. Apart from the Middle East, there is no area on the globe which will require as much new intellectual and juristic policy-making contribution within a cooperative framework on how to solve future challenges.

Climate change has fundamentally transformed the essence of this region. In Alaska, whole villages are disappearing into the sea. What are the fundamental rights of the inhabitants? Their homes are disappearing through the ice due to the actions of the rest of us in Europe and North America over previous

decades. What are the claims that they can make on the international community?

In addition, the northern part of the world harbours about a quarter of the untapped energy reservoirs in the world. We only have to look at the relevance of the Middle East in recent decades to understand the significance of such resources, with their combination of gas, oil and hydro-geothermal power.

The melting of the ice will potentially open up new shipping routes, linking Asia to America and Europe in a completely new way, perhaps revolutionizing global trade in a way similar to the Suez Canal.

How is Russia going to deal with such commercial traffic along her northern coast? How is Iceland going to deal with potential environmental threats brought by increasing commercial shipping in our waters, and how are our towns and regions, including Akureyri, to use the opportunities which this new type of shipping will create?

I indicated before that the indigenous people in these territories have a much longer history and perhaps more fundamental claims than the descendants of those who came a few hundred years ago to those lands or those who now govern states that have only existed for, in the case of Russia today, a few decades, less than two, or in the case of the United States a few centuries, just a little more than two.

Are we going to impose the legal framework created by these state structures on people who have existed in those lands and areas for thousands of years, long before anybody ever thought about the structure of modern states? Even those of us in the Nordic countries who tend to present ourselves as enlightened human-rights advocates, how are we going to treat the people in the northern parts of our countries, with similar claims to the lands and to livelihood beyond what our states have up to now recognised?

It was for me an interesting reminder of the global relevance of these issues far beyond the Arctic and the North, that only a week ago during my visit to Bangladesh, I learned from the Minister of the Environment in that poor country, that he was also the King of an indigenous tribe of 400,000 people living, as many other tribes do, inside the State of Bangladesh. Taking his position as the King of his tribe very seriously, he had familiarized himself in great detail with the situation, the rights and the political challenges facing the indigenous people in the Arctic and the North, for example the attendance of the indigenous association at meetings of the Arctic Council as a basis for claiming in the future a stronger political role for his tribe within the State of Bangladesh.

It brought home to me that what we are trying to do in the North, in the Arctic, and here today, to find our

way among these new challenges and try to bring together the intellectual legacy and the framework of the rule of law to this part of the world, is of great global relevance for people in different continents.

How we succeed or fail in this endeavour will have an impact on people in Africa, Asia and Central and Latin –America, because those parts of the world are also populated by indigenous people who have to find harmony within the modern state structure in their part of the world.

It made me realize, as I have gradually come to conclude in recent years, that the Arctic and the North poses, for us in the eight countries that encircle the Arctic, an important and fascinating intellectual and political challenge.

It is in this spirit that I welcome you all here today and look forward to learning about the conclusions of your discussions.

2.2 'Challenges for the Changing Polar Environment'

Dr. Bakary Kante, Director of the Division of Environmental Law and Conventions, United Nations Environment Programme (UNEP)

Your Excellency, Mr. President, Your Excellency, Mr. Patrick Van Klaveren, Rector Gunnarsson, Professor Kristjánsson, Professor Zakri, Members of the diplomatic corps, Representatives of intergovernmental organisations, Dear colleagues, Dear friends, Good morning.

I feel very grateful to be able to stand before you today and see so many very learned and respected members of society in the audience – all united by the real concern for the environmental sustainability of the Polar Regions. Speaking to you on behalf of UNEP, the environmental pillar of the UN system, and as the director of UNEP's Division of Environmental Law and Conventions, I would like to stress the importance of environmental law, environmental conventions and environmental governance with respect to the Polar Regions. All three can have a very positive effect on the regions in question and moreover help us save the unique polar ecosystems which are so important to our own survival on this planet Earth. His Excellency, the President, has just given us some highlights, some proof and exemplary evidence of the many threats the Polar Regions face. The environmental importance of the Polar Regions, the role they play for the health and the climate of our planet overall is undoubted but we risk losing this enormous pool of environmental benefits.

In the focus of global environmental threats, be it climate change, the loss of biodiversity, ozone depletion, or hazardous chemicals, the importance for us to safeguard the environmental sustainability of

these vital areas is even magnified. Additionally, the regions uniting us here today have also increasingly become the zeal of economic explorations and strategies in the global economy – because of the resources which are found in these two regions. Developments in our Polar Regions are both a serious warning and a call to action. We know that the poles are changing faster than the rest of the planet and the prospect of offshore petroleum and gas has raised the stakes for the countries and companies interested in the region. The findings of the Intergovernmental Panel on Climate Change (IPCC) and UNEP's Global Environmental Outlook leave no doubt that this serious and increasingly rapid change is man-made and can only be halted if we act swiftly.

I am coming from a family of 12 children, same father, and same mother. My parents were quite active. All of us had the chance to go to the university. My Father did not have a single penny as regular income in the form of a salary. How did he manage to bring us up, and for us to be so lucky to afford education and even go to the university? Ladies and gentlemen, as simple as this may sound but nature provided for us. I could go to a river, fish and bring into family a big fish without paying a penny. We could afford medicines to cure whatever we wanted without paying a single penny. The intactness of ecosystem services when I was growing up provided my whole family with steady income. Poverty is not only defined by the lack of available currency and daily per capita income but in many parts of the world also by the availability of ecosystem services. From the view of the poor people, environment is their wealth. It is their capital. If you destroy it, you destroy their capital. You destroy it – you destroy them. Mind you that recent estimates say that around 60% of the world's ecosystem services are or are being degraded.

Therefore, the survival of the Polar Regions does also have a very concrete impact for the indigenous communities and for all other communities dependent on these flows of income. What happens to the Polar Regions has profound implications for many indigenous populations and for millions of people living at lower latitudes. The fact that the greatest costs of global warming and other impacts will be borne by the poor, who have the least responsibility for the current state of affairs, makes these issues of justice and ethics.

The major challenge, therefore, is to identify themes that are important to the region and the world, and that are deemed essential by the international scientific and policy-making community and reflect the needs and interests of society. Only then can we design legal and governance structures that will hold the promise of solving the environmental sustainability crisis faced by the Polar Regions. This will also necessitate bridging out to the institutions of the financial world and partners from the non-governmental sector.

Since the year of the environmental sea-change in 1972, we have developed quite a number of environmental conventions. Today we are at a crossroads. There is a type of fatigue associated with all these international negotiations and multitude of meetings. What happened? How did it come to this fatigue? One main issue is clearly the lack of monitoring of the implementation of existing agreements, there is no global environmental police and many Governments struggle with the national implementation of very complex and demanding internationally agreed environmental objectives. The best example is the 2010 biodiversity target aiming at a significant reduction of the loss of biodiversity by 2010. Over ambitious as a target or not, if 60% of the world's ecosystems are or are being degraded, one could easily draw the conclusion it is because the legal agreements which we have adopted are not working, are not being effectively implemented.

What should we do then today? For one, we should not get pessimistic. No body of international law has developed so rapidly and in such a volume as environmental law. This is remarkable and shows the importance the world attaches to the problems faced. However, we need to be stronger in developing national laws towards the implementation of those conventions. This is a major focus of UNEP's work and it will be for the future.

Should we then at all continue developing, elaborating new conventions? In my country, we say when you don't know where to go, just stop for a while and look behind, at what went wrong, and maybe you can find new ways for you to orientate yourself. However, in addition to looking back and assessing what went right and what went wrong, we also need to assess the gaps of the current international environmental governance structure as it relates to the Polar Regions. We may not have the time to sit back and wait to see what happens. In this respect I very much look forward to the ensuing discussion with you.

Ladies and Gentlemen, Mr. Rector, on behalf of UNEP, I really want to offer to this university and to all of you our committed help in ensuring a yearly meeting here in beautiful Akureyri, to discuss and help improve how multilateral environmental agreements can safeguard the polar regions, discuss how they can impact and solve the problems in the polar regions and help improve and guide the way forward for the environmental governance of the polar regions – for we all have “an important stake” in the polar regions.

Thank you so much.

2.3 'Setting the Scene—the purpose of the Symposium and what we hope to achieve'

Professor A.H. Zakri, Director, United Nations University Institute of Advanced Studies

Your Excellency Mr. President, Your excellency Mr. Van Klaveren, members of the diplomatic corps, Rector Gunnarsson, representatives of intergovernmental organisations, Madam Mayor, Professor Kristinsson, Distinguished Colleagues.

Before I begin, I would like to extend my sincere gratitude to the University of Akureyri for hosting and co-organizing this symposium with the United Nations University Institute of Advanced Studies (UNU-IAS), and to Tilburg University and the Northern Institute for Environmental and Minority Law, Arctic Centre, University of Lapland for the instrumental roles they have played in the realisation of this event.

I am also extremely grateful for the generous funding and other support that has been provided by:

- the Prince Albert the Second of Monaco Foundation;
- the Monaco Permanent Representation to Scientific, Environmental and Humanitarian International Bodies;
- the United Nations Environment Program (UNEP);
- the Dutch International Polar Year Committee;
- the University of Akureyri and
- the town of Akureyri.

I would like to express my thanks to His Excellency Mr. Ólafur Ragnar Grímsson the President of the Republic of Iceland for honouring us with his presence and for his Opening Address.

And last but not least I would like to welcome and thank all of you, our guests for taking time out of your busy schedules, many of you travelling vast distances to come to this remote, but beautiful nation for the convening of this Symposium occurring towards the end of the fourth International Polar Year.

It should additionally be noted that this symposium coincides with the launch of a new Masters Program on Polar Law at the University of Akureyri. I would like to applaud this initiative, and wish the University the best of luck with their new programme.

As you are aware, the title of this symposium is: "Looking Beyond the International Polar Year: Emerging and Re-emerging Issues in International

Law and Policy in the Polar Regions." Its purpose is to bring together the world's leading scholars in international law and policy, to identify emerging and re-emerging issues in international law as it relates to the Polar Regions, and to map out a research agenda for future research beyond the International Polar Year.

The first International Polar Year was held in 1882-1883—showing that even as far back as the 19th century there was an awareness of the importance of Polar Regions to global strategic, environmental, scientific and commercial interests. During the first International Polar Year a total of 12 nations were involved in 15 expeditions to the Polar Regions. The current International Polar Year involves over 60 nations collaborating on over 200 scientific research projects.

Research during this International Polar Year concentrates on six main focal areas: Atmosphere, Ice, Land, Oceans, People and Space, and is providing valuable scientific knowledge regarding a range of issues including inter alia UV radiation and ozone depletion, traditional knowledge of Arctic peoples, changes in the mass of sea ice, permafrost degradation, invasive species and their effects on marine ecosystems, and geomagnetic drifting of the Earth's poles.

As we look beyond the current International Polar Year, and we reflect upon the body of scientific research and data that has been generated, it is important to think about the legal and policy decisions which will have to be made regarding the many challenges facing the Polar Regions in light of this new scientific data. These challenges are many and varied.

One of the most significant of these challenges of course is climate change. According to the Arctic Climate Impact Assessment, in many areas of the Arctic climate change is already having a dramatic impact on the Arctic environment and as a consequence on the peoples of the Arctic.

In many Arctic regions the tree line is steadily advancing northward, converting tundra into forest. As vascular plants expand their territories in both Polar Regions, they displace native species such as mosses and lichens. Diseases are also likely to spread northward along with the trees.

Another threat posed by climate change is that of melting sea ice, which provides a habitat for a diverse community of organisms, from krill to polar bears—all equally important to polar ecosystems and the lives of both indigenous and other peoples of the Arctic. Polar ice sheets contain 68% of the Earth's fresh water supply, and there is enough Ice on the Antarctic Peninsula alone to raise global sea levels by 0.5 meters.

Climate change is not the only challenge faced by that continent and the vast Southern Ocean that surrounds it. There are also considerable challenges faced in relation to the conservation and sustainable management of the fish stocks and other life in Antarctica and the Southern Ocean, as well as in the Arctic sea areas.

In the Southern Ocean close to Antarctica for example, despite the measures taken to implement the Convention on the Conservation of Antarctic Marine Living Resources, Antarctic fish populations such as the Patagonian toothfish continue to be depleted through illegal, unregulated and unreported fishing, as highlighted by the Millennium Ecosystem Assessment.

Of course issues such as the sustainable management of marine and other living and non living resources are closely linked to the whole question of sustainable development and human rights. While the Antarctic is uninhabited except for the presence of scientific researchers and tourists, the Arctic provides a permanent home to 4 million people; a sizable proportion of which are the original indigenous inhabitants.

The Arctic has been populated for over 10,000 years, and consequently the area is steeped in a rich mix of human history and traditions. Unfortunately, these age-old traditions are under new threats from modernization and globalization, as with traditional communities anywhere in the world, but also from the amplified effects of climate change in the Arctic.

As the ecosystems of the Arctic are affected by climate change, so too will the inhabitants be affected, due to their heavy reliance on the natural resources of the Arctic.

It is therefore of paramount importance that the voices of the indigenous and other peoples of the Arctic be heard in the course of the development of climate-change policies of their governments at all levels.

Of course one of the main impacts of climate change that has received much attention in the media has been the emergence of new disputes in relation to international boundaries in the Arctic.

Whether these are new disputes or just the re-emergence of disputes previously frozen by the Arctic ice is one of the issues you will be debating during the conference.

What challenges the opening up of the Northwest Passage, the Arctic Bridge and the Northern Sea Route may pose for international law and policy are but some of the emerging jurisdictional challenges you will consider during this symposium.

The melting of sea ice also makes questions surrounding access to the vast oil, gas and mineral resources of the continental shelves of the Arctic and Antarctica even more significant. Is this new rush for the resources of the Polar Regions something that is manageable within existing framework of international law or not? This is one question we hope you might consider.

Pollution is another major challenge for the Arctic. The Millennium Ecosystem Assessment, of which I was fortunate to be the Chair, includes some alarming statistics on the impact of pollution in the Arctic. 100% of the human population of East Greenland have concentrations of mercury in their blood that are deemed unacceptable—to the point whereby health advisories have suggested avoiding certain local foods.

Unfortunately, these are the same traditional foods that have provided health benefits to the local population for millennia. The concentrations of Persistent Organic Pollutants, or POPs in mother's milk in communities in coastal Greenland and Canada where marine mammals are a significant food source, are high enough to be considered a health risk.

In addition to climate change and pollution, some of the pressing issues for indigenous and other local communities in the Arctic include rights to land and natural resources, the value of traditional knowledge in guiding polar law and policy, self-governance, including the rights of indigenous and local communities to share in the benefits of oil and gas exploitation in the Arctic.

Another emerging issue is bioprospecting in both Polar Regions. This is an issue of particular interest to UNU-IAS and we have already made significant contributions to the debate on this issue in various international forums.

While there are fundamental differences between the Arctic and Antarctica when it comes to the question of sovereignty, perhaps there are nonetheless many lessons both regions can learn from the other on this issue.

Bioprospecting in Antarctica in particular raises new questions about its impact on freedom of scientific research and the unique framework of international co-operation and governance in Antarctica and the Southern Ocean, which is built upon the ideals of Antarctica as a region devoted to science and peace.

These are but a few of the many emerging and re-emerging issues in the Polar Regions which we hope you will focus on during your deliberations over the next few days.

Of course your deliberations over the next few days are more than just of academic interest, however

noble the pursuit of knowledge in its own right is. We hope also that your deliberations may come up with guidance for policy makers and governments on what emerging and re-emerging issues they may need to tackle beyond the International Polar Year.

In that regard we have posed a number of questions for you and hope that you will come up with some interesting answers for us on some or all of these questions.

Namely,

- (1) What are the main emerging and re-emerging issues in international law and policy relating to the Polar Regions warranting international action?
- (2) Are the current international legal and policy systems able to address these issues?
- (3) What issues require immediate action by the international community?
- (4) What issues will require action by the international community in the longer term?
- (5) What steps should countries take to address these issues?

To the extent that you cannot address these questions then we hope you might also be able to map out a future research agenda by highlighting which of these issues warrant further detailed research by legal scholars and scholars of other disciplines.

I am confident that the exciting, interesting and pressing nature of the wide range of topics to be debated and discussed, combined with the large gathering of experts in these fields will provide a worthwhile, productive and intellectually stimulating symposium, and I look forward to watching the events of the next few days unfold here in Akureyri.

I would like to wish you all the best of luck, and I urge you to take advantage of the many opportunities presented by this symposium.

Thank you.

3. Summaries of Presentations

3.1 Introduction

This chapter presents summaries of the speakers' presentations during each session of the symposium. The presentations were given across four broad themes as follows:

- Theme I: Challenges for the Protection of Biodiversity and Wilderness in the Polar Regions;
- Theme II: Sustainable Development and Human Rights;
- Theme III: Environmental Governance in the Polar Regions;
- Theme IV: Emergent and Re-emerging Jurisdictional Issues in the Polar Regions.

3.2 Theme 1: Challenges for the Protection of Biodiversity and Wilderness in the Polar Regions

Session Chair: Professor Said Mahmoudi, Stockholm University, Sweden.

3.2.1. 'So Much Law so Little Protection'

Professor Malgosia Fitzmaurice, Queen Mary, University of London, United Kingdom

In her presentation "So much Law - So little Protection! A case study of the Protection of the Narwhal," Professor Malgosia Fitzmaurice stated that although there is a great number of existing global, regional and bilateral conventions referring to the Arctic region—there are still gaps in the protection of species. Concerning the Narwhal there are several international conventions, regional and bilateral treaties in place, but the protection of this species is still lacking; the Narwhal is close to extinction.

Her conclusion was that there are gaps in scientific knowledge, in the effective implementation of national law as well as in the enforcement of existing international agreements. She also concluded the solution would be rather in the mobilising and strengthening of the existing treaties than in creating a general Arctic Treaty as an additional regulation, providing once more a further framework instrument only.

3.2.2 'From the new Geopolitics of Resources to Nanotechnology: Emerging Challenges of Globalism in Antarctica'

Dr. Alan D. Hemmings, University of Canterbury, New Zealand and University of Tasmania, Australia

In his presentation, Dr. Alan Hemmings connected a new instability in Antarctic affairs with the region's

transition to a post Cold-War period influenced by a globalism that appears to deny legitimacy to Antarctic-specific responses. He noted increasing commercial and resource pressures in-area, increasing porosity of the region's boundaries, an emerging logistic 'hard-wiring' of the region, and the reappearance of nationalism and assertive territorial positions.

He concluded that the preservation of Antarctic stability now required the acceptance of restraints on human activity, a deliberative Antarctic exceptionalism, rehabilitation and development of the ATS and the abandonment of territorial sovereignty claims.

3.2.3 'Protecting Polar Wilderness Values: Just a Western Philosophical Idea or a Useful Concept for Polar Law and Policy Development?'

Dr. Kees Batsmeijer, Tilburg University, The Netherlands

In his presentation, Dr. Kees Bastmeijer discussed two main questions:

- 1) To what extent does wilderness protection receive attention in the Arctic and Antarctic?
- 2) Should wilderness protection be acknowledged as an emerging issue for policy and law making in respect of the Polar Regions?

While discussing these questions, he first dealt with the definition of 'wilderness'. He stressed that wilderness is not just a 'state of mind' as (within a region or certain country) one could agree on the main characteristics and values of wilderness and thereby make it the subject of law and policy making. Next, he discussed the extent to which wilderness protection does receive attention in the international systems of governmental cooperation in both Polar Regions. He explained that the focus is on biodiversity (species and habitat types) and on balancing interest and that wilderness values do not receive attention in the international debates in both Polar Regions. Particularly in view of the fast increase of human activities, Kees Bastmeijer considers this as a major concern. In discussing the subject, he also stressed that wilderness protection does not necessarily exclude all human activities. Particularly the rights and culture of indigenous people in the North must be respected when developing wilderness policy. Also certain forms of tourism may well take place in wilderness areas. On these issues, experiences at the domestic level (e.g., Finland, USA, Canada, Iceland) may provide lessons for policy and law making at the international level.

He concluded that, in respect to the Arctic, relevant Multinational Environmental Agreements and the Arctic Council policy strongly focus on the

protection of species and habitat types and on balancing of interests, and that within the existing frameworks, wilderness does not receive serious attention. In respect to the Antarctic, wilderness protection is in the Environmental Protocol, however, there is very little implementation (e.g., in implementing environmental impact assessment, in designating areas, in developing tourism policy, etc.). Consequently, referring to both Polar Regions, wilderness protection depends on domestic legal systems. Due to the absence of an international debate, these national approaches do not safeguard wilderness protection in the Polar Regions; however, domestic experiences may be of high value for developing wilderness policy at the regional or international level. Consequently, and particularly in view of the fast increase of human activities in the Polar Regions, wilderness protection must be acknowledged as one of the emerging issues for policy and law making in respect of the Polar Regions.

3.2.4 'Terrestrial Area Management in Polar Regions: Applying the Ecosystem-Based Approach to the Coalface of Climate Change'

Professor Michael Jeffery, QC Centre for Environmental Law, Macquarie University, Australia

In his presentation, Professor Michael Jeffery emphasized that due to current challenges it is necessary to re-evaluate the current international, regional and domestic environmental policies and practices in the North. As regards domestic policies a more detailed account of the example of Canada and the protection of polar bear was given. He underscored that the effects of climate change have been felt faster on land than in the oceans.

He concluded that there is a need to move beyond traditional single-species protection in addressing ecosystem interdependence. He also summarized that legal and policy mechanisms for protecting Arctic biodiversity must be elaborated, enhanced and backed with hard law. In the absence of conclusive scientific evidence with respect to climate change the precautionary principle should be applied. Furthermore, co-operation between governments, indigenous people and NGOs should be promoted.

3.2.5. 'Polar Bears, Penguins and the United States Endangered Species Act: The Role of Domestic Wildlife Law in Polar Biodiversity Protection'

Ms. Kassie Siegel, Centre for Biological Diversity, USA

In her presentation, Ms. Kassie Siegel placed the listing of the polar bear and listing process for the penguin species under U.S. domestic legislation in context. She provided an overview of the U.S. Endangered Species Act (ESA), including its overarching objectives and key provisions. She then discussed how the ESA should operate to protect

species imperilled by global warming and create an obligation on U.S. federal agencies and corporations to reduce greenhouse gas emissions. She used the examples of the polar bear and penguins to explore the possibilities and limitations of using domestic wildlife law such as the ESA to bring the subject of global warming into the courtroom, to address otherwise unregulated greenhouse gas emissions, and to otherwise address protection of the highly imperilled polar regions.

In her conclusion she emphasized the importance of the proper implementation of domestic legislation. At the same time she added the importance of international efforts. In this relation, the Antarctic regime could possibly be a useful model for the protection of species in the Arctic.

3.2.6 'Bioprospecting in Antarctica and the Arctic. Common challenges?'

Dr. David Leary, United Nations University Institute of Advanced Studies, Japan

In his presentation, Dr. David Leary gave an overview of the level and nature of commercial interest in bioprospecting in the Antarctic and the Arctic. His presentation considered evidence on the nature and scale of bioprospecting in the Polar Regions. In the Antarctic context he drew on data from a prototype Antarctic Bioprospecting Database which is accessible on the internet at <http://www.bioprospector.org/bioprospector/antarctica/home.action> currently under development at the United Nations University Institute of Advanced Studies (UNU-IAS).⁴ Data on the Arctic was presented from Dr. Leary's own research in Arctic jurisdictions over the past two years as documented in the recently published *UNU-IAS Report Bioprospecting in the Arctic*.⁵ This data has also recently been uploaded to the on line database mentioned above.

In the context of the Arctic he argued that there is significant interest in the biotechnology potential of Arctic biodiversity. In many cases this potential has moved beyond the research of the academic community to commercialisation by industry. In fact given the number of companies involved in research on or the actual exploitation of biotechnology based on Arctic genetic resources (forty three companies in total) one clear conclusion is that this industry, in various forms, is well established. This conclusion is supported by the existence of more than thirty patents or patent applications based on Arctic genetic resources.

Dr. Leary highlighted that biotechnology based on Arctic genetic resources covers several key areas including enzymes (including those used in life science research and a range of industrial applications), anti-freeze proteins, bioremediation, pharmaceuticals, nutraceuticals and dietary supplements, cosmetics

and other health care applications. There is also a significant focus of marine biotechnology research and development.

His presentation then drew out some of the critical issues in this debate by examining recent developments in relation to bioprospecting in the context of the Antarctic Treaty. He briefly introduced the history of the debate on bioprospecting in the Antarctic context and then went on to examine some key issues in this debate in light of the *Report of the Antarctic Treaty Consultative Meeting (ATCM) Intersessional Contact Group to examine the issue of Biological Prospecting in the Antarctic Treaty Area* tabled at ATCM XVII in Kiev in June 2008. This report provides a concise summary of the main issues at stake drawing together the main points raised by stakeholders and others in the debate so far.

His presentation then concluded with some thoughts on the relevance of the Arctic experience to the debate in relation to Antarctica and whether or not there is an 'Arctic Model' for a response to the bioprospecting question in Antarctica. In that context he noted specific new legislation in Greenland and Norway and conscious choices not to regulate made in some Arctic jurisdictions including Denmark and Sweden. Each of these responses to bioprospecting in the Arctic is consistent with international law.

He concluded that there is a significant emphasis on bioprospecting, especially in the marine environment in both Polar Regions and it is likely to remain on the agenda of Antarctic forums for the foreseeable future. It remains to be seen whether Arctic processes such as the Arctic Council or the Nordic Council of Ministers will consider this issue in any detail. He concluded by noting that Arctic marine areas in areas beyond national jurisdiction should be considered in the context of the debates associated with the ad hoc processes established by the UN general assembly to consider the status of marine genetic resources in areas beyond national jurisdiction, and other international processes and forums. Dr. Leary acknowledged funding for his research provided by the Japan Society for the Promotion of Science.

3.3 Theme II: Sustainable Development and Human Rights

Session Chair: Professor Brian Burdekin, Raoul Wallenberg Institute, Lund University, Sweden.

3.3.1 'Land claims and self-government arrangements in Arctic Canada in light of International Human Rights Norms'

Professor Nigel Bankes, University of Calgary, Canada

In his presentation, Professor Bankes examined Canadian land claim agreements in light of applicable international norms. In addressing this question

Professor Bankes outlined several reasons why there has, to this point, been little discussion of this issue:

- Canada generally does not pass specific legislation to implement international treaties ("we're already in compliance" argument);
- no tradition or culture within the Canadian bar of using international human rights law in Aboriginal rights cases;
- no tradition of the legislature of asking for an expert international legal assessment of proposed legislation or agreements;
- and a certain arrogance: "we are beyond these standards" (especially note Canada's vote against the Declaration on the Rights of Indigenous Peoples in UN General Assembly).

Professor Bankes' presentation focused on three groups of provisions in the land claims agreements, viz. the extinguishment clause (which has received some international scrutiny); the land selection provisions of the agreements (some lands within the Nunavut settlement area are recognised as Inuit owned lands with the balance recognised as Crown lands); and provisions dealing with the nature and quality of the Inuit title. Professor Bankes argued that the land selection process was driven by politics and the art of the possible rather than driven by a need to fulfil international norms such as those embodied in ILO Convention 169, Article 14 and the property rights protection of the Inter American Declaration on the Rights and Duties of Man. Bankes suggested that the Inuit property interests that are recognised should be subject to a no less level of legal protection than other privately owned lands of settlers.

Professor Bankes concluded that the state has a duty to delimit, demarcate and title the lands owned or possessed by indigenous peoples in accordance with their customary norms and that the contents of agreements to settle land claims should be scrutinized in light of international human rights norms.

3.3.2 'Human Rights in the Arctic'

Professor Gudmundur Alfredsson, University of Akureyri, Iceland

In his presentation, Professor Alfredsson brought up a series of current challenges, presenting both problems and opportunities that relate to the Arctic, such as climate change, improved access to natural resources, environmental issues, biodiversity, the rights of indigenous peoples to land and self-governance, boundary disputes on land and at sea, new shipping routes, and security considerations. He argued that, while the international human rights framework is relevant to all of these issues, the Arctic States have been reluctant to endorse the relevant instruments

(like the ILO Convention No. 169 on Indigenous and Tribal Peoples in Independent Countries from 1989 and the UN Declaration on the Rights of Indigenous Peoples from 2007), that the rights of local communities are often overlooked in the conduct of Arctic affairs, and that the picture of human rights in the Arctic therefore raises a number of questions concerning the acceptance of common standards, their national implementation and international monitoring of the same.

He highlighted the case of Greenland and the outcome of recent negotiations between Denmark and Greenland whereby the powers of the Greenlandic Home Rule will be expanded and, furthermore, whereby the Greenlanders will be recognized as a people with the right of self-determination, including the option of independence. He maintained that this conclusion that is still subject to approval by the Greenlanders in a referendum and by the Danish Parliament, rests on the law of political decolonization that has been confirmed in the consistent practice of States and international organizations, including decisions of the International Court of Justice. He pointed out that the Greenlandic people meet all the criteria for decolonization: they live in a distinct, notably overseas territory and possess subjective and objective identity and culture. Denmark had acknowledged the colonial character of the relationship by listing Greenland as a non-self-governing territory under the UN Charter, but had failed in bringing the colonial situation properly to an end and in the process provided the United Nations with seriously misleading information.

In conclusion he welcomed in particular the ongoing developments in Greenland and called in general for increased attention to and scrutiny of human rights in the Arctic countries, in particular in the face of considerable political opposition when it comes to sharing power and natural wealth with indigenous peoples and other local communities.

3.3.3 'Indigenous self-government and the right to land and natural resources'

Professor Asbjørn Eide, Norwegian Centre for Human Rights, Norway

In his presentation, Professor Eide talked about the notion of "indigenous people" and what it embodies, and also about the international legal framework for the protection of their rights which has emerged over the past several decades and is still being formed. He pinpoints "contradictory but interrelated" trends which make these peoples more vulnerable, in particular:

- modern technology;
- global warming; and

- exploitation of natural resources (pressure is increasing).

On the other hand there is a growing number of indigenous organisations to protect their rights.

Professor Eide talked about the development of international law which has been transformed from the law governing relations between states into the body of law, strongly influenced by human rights, focused on equality and non-discrimination. Indigenous organisations started to change the basic human rights approach and assert their right to be different as well as the basic right to self-determination.

Concluding, Professor Eide emphasised the role of conservation policies in the debate while recognising the rights of indigenous peoples. They can be, for example, the reduction of use of the motorised vehicles in the areas of natural habitat, or protection of endangered species. He, however, warns about possible tensions between the city residents who want to enjoy the natural beauty and the diverse fauna, and those living in the countryside and relying on their income from agriculture, and therefore willing to sacrifice particular species for their own economic benefit.

3.3.4 'Sustainable Human Rights and Governance: The Quest of an Arctic Entity in Transition'

Joint paper by Dr. Natalia Loukacheva, Director of Polar Law Program, University of Akureyri, Iceland and Professor Matthew Garfield, University of Akureyri, Iceland and Former Chair of the Human Rights Tribunal of Ontario, Canada

In their presentation, Dr. Loukacheva and Professor Garfield talked about the case of Nunavut (Canada) and the political, economic, social and cultural challenges it is now facing, especially underlining the challenge of creating a functional human rights regime in the territory which occupies 1/5 the land mass of Canada. To many Inuit, the notion of human rights and discrimination was, and still is, foreign. Without adequate socio-economic functioning, and without a sufficient system of governance, the prospect of human rights in Nunavut is questionable. They outlined several challenges the new Nunavut government has to deal with, *inter alia*:

- Decentralisation policies: Nunavut has to deal with poor management and inadequate human resources;
- Pressure to maintain subsistence activities; on the other hand, pressure for industrialisation and at the same time preservation of the Arctic environment;
- The territory was created without a solid

economic base;

- Social ills in the territory: unemployment, drug trafficking, suicide, violence and abuse, etc.

When Nunavut was created, the government took the decision not to implement a pure Southern Canadian legal model, but to create a “made in Nunavut” legal model which is a balance between liberal-democratic thought and the indigenous Inuit values and knowledge (I.Q.). Accordingly, the Human Rights Act, and the rules and practices of the Nunavut Human Rights Tribunal have to consider Inuit customs and ways (i.e., I.Q.).

In conclusion, the speakers addressed the question of sustainability of the Nunavut human rights regime. The main problem is that many Nunavut residents are geographically and culturally remote from the Western notion of human rights. The major questions they posed are: Is the Nunavut Human Rights Act sustainable? What exactly is meant by governance there? Will the existence of the statute and the human rights apparatus become known to the people in a territory with few roads or airports? When they do know about them, will they accept and utilise them?

3.3.5 ‘Implementing Sustainable Development in the Arctic: What Principles Should Guide Environmental Governance in Traditional Areas of Indigenous Peoples?’

Professor Donna Craig, Centre for Environmental Law, Macquarie University, Australia

In her commentary, Professor Craig addressed broad historical issues in the area of human rights, and focused on the relationship between human rights and indigenous rights in the light of climate change. She outlined a number of principles which should guide the discussion of environmental governance and climate change between conventional governing bodies and indigenous peoples, *inter alia*:

- when the proposals are being lodged at the governing bodies, usually they have been developed without adequate engagement and participation of those communities which feel the impact of climate change first-hand, and indigenous peoples in particular; there is therefore a need for their better engagement and more active participation in the decision making process;
- addressing ‘specific’ (substantive and procedural) rights of indigenous peoples (example: the recent Indigenous Peoples Convention);
- a stronger recognition of intellectual and cultural property which is now evolving;

- protection strategies from the Arctic Council developed in cooperation with the permanent participants; using international human rights standards as part of the indigenous peoples’ campaign for self-determination.

3.3.6 Comments by the Session Chair

In opening the floor for questions and comments Professor Burdekin made the following observations.

- Clearly, all these issues are interrelated – including human rights, the environment and sustainable development. International human rights law is relevant to all of them. The Indian Supreme Court has held that the right to a decent environment is synonymous with the right to life and the human rights debate will increasingly be closely linked with environmental questions.
- We have a collective responsibility not only for our generation but for the impact of developments in the Polar Regions on the human rights of future generations.
- Civil society around the world has realised that the environment is their most important ‘capital asset’ and the increasingly active role played by civil society means that countries in the Polar Regions will not be allowed, alone, to (mis)manage critical issues which will impact on the enjoyment of human rights in all other countries.
- Activities of the private sector are increasingly and dramatically impacting human rights and the environment. For many reasons the private sector must therefore be included in this debate.

3.4 Theme III: Environmental Governance in the Polar Regions

Session Chair: Professor Rene Lefeber, Dutch Ministry of Foreign Affairs and Professor of International Environmental Law, University of Amsterdam, The Netherlands.

3.4.1 ‘Legal Issues relating to Navigation through Arctic Waters’

Professor Tullio Scovazzi, University of Milan, Italy

Professor Tullio Scovazzi in his paper titled “Legal Issues relating to Navigation through Arctic waters” highlighted a number of uncertainties with respect to the application of existing international law in Arctic waters. He focussed on navigation in the Arctic Ocean, in particular navigation through straits and the development of routes of navigation along the Arctic coastlines and perhaps across the Arctic Ocean.

He highlighted uncertainty as to how the expression “straits which are used for international navigation” contained in Article 37 of UNCLOS, which qualifies a strait for the transit passage regime, is applied in the Arctic region.

He noted specific tools have been developed to address navigation in the region (in particular, the IMO Arctic Guidelines), but noted these do not have a binding nature and may need to be strengthened. Other tools which have a general scope could be applied also in the specific context of the Arctic Ocean (for instance, area based management tools and marine protected areas, as envisaged by UNCLOS Art. 194(5)). He argued the need to take steps in the near future is reflected in the Ilulissat Declaration.

In both the opening and closing of his presentation, Professor Scovazzi observed that some decades ago new rules of customary law of the sea were developed in the Arctic Ocean as a consequence of the unilateral pioneer action of some of its coastal States. One such example he referred to was the concept of straight baselines, following the Norwegian Royal Decree of 12 July 1935; the environmental component of the exclusive economic zones, following the Canadian 1970 *Arctic Waters Pollution Prevention Act*. He noted that Article 234 of UNCLOS permits unilateral action by the coastal State in ice-covered areas, provided that the relevant measures are non discriminatory. Significantly though he highlighted difficulties in interpreting the provisions of Article 234 and in particular whether the coastal State can adopt the laws and regulations allowed by Article 234 also as regards innocent passage through its territorial seas and transit passage through international straits.

Today, a forum of regional co-operation among the eight Arctic States (the Arctic Council) has been established and could prevent resort to unilateral action. The five bordering States see no need to develop a new comprehensive international regime to govern the Arctic Ocean, as they stated in the Ilulissat Declaration. But this does not exclude the strengthening of existing legal provisions and the drafting of new ones where there is a need to do so, within the appropriate international and regional fora.

3.4.2 ‘Charting a sustainable course through changing Arctic waters’

Dr. Robin Warner, Australian Centre for Ocean Resources and Security, University of Wollongong, Australia

Dr. Warner commenced her presentation by noting that the prospect of major navigational channels opening up in Arctic waters brings risks as well as opportunities to this remote part of the globe, its unique marine environment, marine resources and indigenous inhabitants. She highlighted the threats

posed to the species, habitats and ecosystems of Arctic waters from a higher volume of shipping transits of the region including the potential for increased vessel source discharges of harmful substances, the transfer of alien species into the fragile Arctic environment and the catastrophic consequences of ship casualties for the marine environment and its biodiversity.

Dr. Warner argued that to ensure that future shipping in changing Arctic waters exercises environmentally sustainable navigation, it would be prudent for Arctic States to instigate forward planning for a robust regulatory framework which is consistent with both law of the sea and international environmental law. Shipping disasters causing major damage to the marine environment in other parts of the world have demonstrated that the powers of coastal states to prescribe and enforce laws and regulations unilaterally for the potentially adverse impacts of increased shipping traffic under the provisions of the LOSC and other international law instruments have proven insufficient.

This presentation noted that there is now a trend in State practice for member States of the IMO to submit joint proposals for protective measures to be applied to certain classes of vessel with the potential to cause harm to environmentally sensitive areas of the sea. Dr. Warner suggested that parallel assessments of the likely shipping density and biodiversity protection needs in Arctic waters, which are already being undertaken through the Arctic Council and associated bodies could eventually form the basis for a feasibility study of Arctic shipping routes in environmentally sensitive areas of Arctic waters and subsequent Particularly Sensitive Sea Areas (PSSA) and MARPOL special area designation proposals negotiated at a global level with member States of the IMO.

Significantly, Dr. Warner stressed that the development of these measures should be a product of consultation by Arctic States which transcends the sovereignty and legal status disputes over Arctic waters. Joint proposals for PSSA designations in other oceanic regions with unique environmental conditions, such as those in the Baltic Sea, Wadden Sea, Western European waters and the Torres Strait between Australia and Papua New Guinea provide useful insights into the physical extent, nature of associated protective measures and balance between navigational access and environmental protection which will find acceptance in the global community.

In developing a case for introducing protective measures associated with a PSSA and special areas designations, Dr. Warner argued it will be important to emphasise that unfettered military and strategic access to Arctic waters is preserved through passage rights provisions of LOSC and sovereign immune exemptions. Effective implementation of protective measures to avert the adverse impacts of

increased shipping in the Arctic sea routes may also require collaborative enforcement measures which encompass transboundary and high seas areas and the development of a port State agreement among Arctic states to supplement flag State enforcement.

3.4.3 'Governance of Arctic Marine Shipping: A Preview from the Arctic Marine Shipping Assessment (AMSA)'

Professor David VanderZwaag, Dalhousie University, Canada

Professor David VanderZwaag in his powerpoint titled "Governance of Arctic Marine Shipping: A Preview from the Arctic Marine Shipping Assessment (AMSA)" highlighted a number of key findings of a recently completed technical report prepared by a team of researchers for ASMA. The report, involving 13 co-authors and prepared under the auspices of the Marine & Environmental Law Institute at Dalhousie University, is expected to serve as one of the background documents in the preparation of an AMSA Summary Report, and the technical report should be made available on the Protection of the Arctic Marine Environment (PAME) website in the near future.

After noting the 1982 Law of the Sea Convention establishes an over-arching legal framework for governance of shipping in the Arctic which struck a balance among powers of coastal states, flag states and port states to exercise jurisdiction over shipping, he highlighted that the jurisdictional status of some Arctic waters remains controversial. Differing national viewpoints over what waters may legitimately be claimed as internal and what waters constitute international straits have yet to be fully resolved and could give rise to future disputes concerning the exercise of jurisdiction over shipping activities. He noted that the extent of coastal state powers to control foreign shipping in the Arctic has been substantially bolstered by Article 234 of UNCLOS. However, the precise geographical scope of coverage (waters covered by ice most of the year) and the breadth of regulatory powers, in particular to unilaterally impose special construction, crewing and equipment standards, could give rise to differing interpretations.

Within its global mandate for the safety of international shipping and marine environmental protection, Professor VanderZwaag noted the IMO has focused attention on Arctic shipping and developed international voluntary Guidelines for Ships Operating in Arctic Ice-covered Waters (Arctic Guidelines) for safety of ships and seafarers in the Arctic. These Guidelines are currently under review by the IMO Design and Equipment Sub-Committee, which provides an opportunity to assess and strengthen guidance in the area of ship construction, equipment

and operations and possibly to consider the need for a legally-binding code.

Safe navigation in ice-covered waters depends much on the knowledge and skill of the ice navigator. The Arctic Guidelines urge all ships operating in ice-covered waters to have on board at least one ice navigator with documentary evidence of completing an approved training programme in ice navigation. Currently, most ice navigator training programs are *ad hoc* and there are no uniform international training standards. Arctic states may wish to consider if it would be practical and beneficial to incorporate into IMO's Standards of Training, Certification and Watchkeeping (STCW 78/95) training for navigation in polar conditions and training in Arctic safety and survival for seafarers.

The International Association of Classification Societies (IACS) Unified Requirements for member societies address essential aspects of construction for ships of Polar Class constructed on and after 1 March 2008, but they are not mandatory. The IMO Arctic Guidelines incorporate these standards. Arctic states could consider making the harmonized Polar Classes mandatory.

Other specific action areas highlighted in this presentation included:

- construction requirements for cruise ships operating in polar waters;
- a review of The International Maritime Dangerous Goods Code to identify any chemicals which may have a dangerous reaction if exposed to extremely low temperatures during transportation in the Arctic;
- harmonization of inconsistent national standards for regulating ship-source pollution in the Arctic region;
- a review of the adequacy for the Arctic of existing marine environmental standards set by MARPOL, in particular discharge standards. Stricter environmental standards could be established through the IMO by various means including designation of the Arctic Ocean beyond national jurisdiction as a "special area" under MARPOL where more stringent than normal standards could apply to oil, noxious liquid substances and garbage from ships.

In his presentation, Professor VanderZwaag also noted that with an increase in international shipping, it is likely that ships in need of assistance may need to request refuge in sheltered waters of Arctic states. There are likely to be significant practical difficulties to be encountered in finding and supporting suitable places of refuge for ships in need of assistance in the

Arctic and providing them with the necessary support. Similarly as international shipping in the Arctic grows and new ports are developed within the Arctic Circle, it may be necessary for the maritime authorities of regional states to consider whether they should coordinate port state control enforcement efforts through a new dedicated MOU, or whether existing MOUs are sufficient to enforce the higher regulatory standards applicable to the Arctic. Arctic states would need to consider what uniform standards would be enforced through port state control.

Expanded international shipping in the Arctic Ocean increases the possibility of introduction of alien species and other pathogens through the discharge of ballast water. A regional agreement as suggested by the Ballast Water Convention might be considered in the future to protect marine areas from the hazards posed by ballast water.

Professor VanderZwaag also noted that the international liability and compensation regime is quite fragmented and limited. Separate conventions address: oil pollution liability and compensation from tankers; damages from the spill of bunker fuel carried in non-tankers, such as cargo ships; and hazardous and noxious substance spills from ships. The Bunkers Convention and HNS Convention are not yet in force because of an insufficient number of ratifications. The Russian Federation is the only Arctic state that has ratified the HNS Convention. None of the conventions address damage to the high seas beyond national jurisdiction. While seven Arctic states have adopted the 1992 Civil Liability and Fund Conventions for oil pollution compensation from oil tankers, the United States is not a Party resulting in substantial differences in liability and compensation approaches.

His presentation also noted that in the Arctic, there is little or no governmental or commercial salvage response to support commercial shipping. This is possibly less the case on the Northern Sea Route, where the Russian Federation maintains a substantial fleet in support of shipping. Generally, there is limited infrastructure for ship repair and/or salvage and pollution countermeasures capability based in the Arctic basin.

Finally Professor VanderZwaag noted that the availability and cost of marine insurance is a major restraint on Arctic marine shipping. A major constraint continues to be the lack of an actuarial record to enable insurers to assess and cost the risk. However, the insurance industry appears to be willing to underwrite Arctic shipping on a case-by-case basis. The London market has published seasonal additional premiums for ships sailing to the Arctic.

In his conclusion, Professor VanderZwaag, drawing from the technical report, suggested a number of possible further studies, which are noted in section 4 of this report.

3.4.4 'Protecting Antarctica from non-native species: the imperatives and the impediments'

Sandra Potter, School of Geography & Environmental Studies, University of Tasmania, Australia

Sandra Potter's presentation noted that while the human introduction of non-native species and disease into the Antarctic environment has long been recognised as a matter of concern within the Antarctic Treaty System, the system's forums have been slow to consider how best to respond to the issue. Ms. Potter observed that developments in polar transport; an increase in tourism to the region; the expansion of scientific programs in intensity, range and complexity; climate change; and analyses of the impacts of introductions to the sub-Antarctic and temperate latitudes point to the importance of providing Antarctica with an appropriate level of protection from introductions, and to do so with a greater sense of urgency than is currently evident.

Ms. Potter's presentation outlined a range of factors bearing on action taken to minimise introductions including: the differing perspectives held as to where the introduction threats and management priorities lie; differing interpretations of the practical obligations arising from the Protocol on Environmental Protection to the Antarctic Treaty; the complexity of program operations coupled with the dictates of logistical expediency; the projected costs of implementing certain precautionary protection measures; the perspectives and capacities of individuals involved in implementing biosecurity procedures; and the realisation that no system can provide complete protection.

This presentation noted however, that in May 2008, Australia, China, India, Romania and the Russian Federation jointly agreed upon a suite of measures aimed at minimising introductions to the Larsemann Hills, Princess Elizabeth Land, East Antarctica, where they all have operational bases. It is hoped that the development of this first multilateral Antarctic biosecurity initiative will prompt other parties to actively engage on determining the best means of providing Antarctica with an appropriate level of protection.

In concluding, Ms. Potter noted that while the development of a uniform set of quarantine protocols for application by all users of the Antarctic region offers various (mainly administrative) benefits, pursuing a standardised approach may prove problematic. It is unlikely that any one set of biosecurity protection measures could be ecologically, logistically or economically acceptable to all operators due to variations in, for example, the types of transport and departure ports used, the facilities available where landings are made, the arrangements by which personnel are kitted and deployed, and the nature of the local receiving environments.

Ms Potter suggested that policymakers would assist operators in addressing the issue by developing clear positions on: (i) the intended targets of exclusion measures; (ii) what constitutes direct and indirect introduction by humans, including any management implications arising from climate change; (iii) any circumstances whereby self-introduced species need arouse management concern; (iv) the criteria by which the range extension and or presence of species is delineated; (v) whether transient presences of introductions represent an adverse outcome; and (vi) any requirements to control or eradicate non-native species that are not thought to threaten the receiving environment or matters of anthropocentric interest.

3.4.5 'Protecting the Arctic environment: the interplay of global and regional regimes'

Dr. Olav Schram Stokke, Fridtjof Nansen Institute, Norway

Dr. Stokke's presentation considered what is the appropriate role of regional institutions in international efforts to protect the Arctic environment? In particular, how do activities under the leading circumpolar institution, the Arctic Council, interact with narrower, sub-regional regimes in the North and with broader institutions whose spatial ambit partly overlap but exceeds the Arctic? Examples of the latter include the regional regime based on the OSPAR Convention on Marine Pollution in the Northeast Atlantic and the global climate regime.

Dr. Stokke noted these questions are politically contested and in his presentation sought to examine them through a particular lens that narrows in on the interplay of international institutions, especially on how such interplay may influence regime effectiveness. He began by briefly explaining some concepts that are useful when analyzing interaction between regimes and reviewed some salient regional and broader institutions in Arctic environmental governance, especially the Arctic Council and the global oceans regime based on the United Nations Law of the Sea Convention. Central to Dr. Stokke's framework is the notion of institutional niches that regional institutions may opt for in the overall governance structure. Dr. Stokke argued that effectiveness-oriented niche selection must reflect an institution's distinctive features as well as the strengths and limitations of other institutions and therefore should vary from one issue area to another.

On this conceptual basis, Dr. Stokke examined the interplay between regional and global regimes in six areas of Arctic environmental governance: climate change, inflows of hazardous compounds, regional toxics, offshore petroleum activities, maritime transport, and fisheries management. Distinctive features of the Arctic Council and other institutions that Arctic states built in the 1990s, are functional broadness, strong involvement of non-state actors,

and placement in broader cooperative efforts. Those features equip Arctic institutions well for carving out a cognitional niche, notably concerning Arctic impacts of global warming and extra-regional discharges of hazardous compounds that threaten regional ecosystems and the living conditions for certain indigenous groups. Such cognitional niche selection reaps efficiency gains from coordinated data collection and analysis among states sharing such biophysical characteristics as slow regenerative capacity and large imports of toxic pollutants.

Dr. Stokke argued that the differences States sometimes have over niche selection, mostly originate in different positions on the need for international regulation or different views on the usefulness of the Arctic as compared to other levels of governance. Thus, the emphasis on fact-finding activities also reflects opposition among certain regional states to development of regulatory international institutions in the Arctic. Normative contributions have been few and far between in Arctic governance: in terms of explicit norms, regional institutions largely echo rules under broader institutions and fail to provide review procedures that would give political teeth to Arctic soft-law contributions. In some cases nevertheless, Arctic institutions carve their cognitional niche in a normative direction by highlighting findings that suggest stronger regulatory action in broader regimes and by prodding Arctic states to take a more common stand in such broader negotiations. In the cases of POPs regulation, such catalytic contributions exploit the particular edge that the Arctic Council has over other institutions due to its highly esteemed monitoring program and its external credibility as conveyor of indigenous concerns.

Finally, argued Dr. Stokke, the capacity niche that Arctic institutions occupy in such areas as nuclear dumping and safer regional storage and treatment of hazardous waste capitalizes on the willingness among some Arctic states to pay for projects that enmesh Russia and the Western Arctic states within common cooperative structures. With Russia's growing financial strength, such willingness is now receding.

3.4.6 'Creating a new future for the Arctic: is a new framework convention the solution?'

Dr. Tatiana Saksina, WWF International Arctic Programme

In her presentation, Dr. Tatiana Saksina noted that sea ice melting caused by global warming will present new opportunities for the expansion of economic activities and development of the Arctic region's plentiful natural resources – in particular, the prospect of new shipping routes, expanded offshore petroleum development, and growing commercial fishing. However these activities have the potential to trigger negative environmental impacts: overfishing, illegal, unreported and unregulated fishing, pollution

from ships and offshore extraction of oil and gas, oil spills, invasion of alien species carried by ships' ballast water, and other extremely harmful effects. She argued that many Arctic species are already under stress from changes to the ecosystem related to climate change. The expansion of economic activities such as oil and gas extraction, fishing, shipping and other commercial development will increase pressure and further endanger the existence of species that depend on fragile Arctic ecosystems, to the point that they could be lost permanently.

Retreat of ice caused by climate change and absence of a regional fishery management regime already allow for overfishing, illegal, unreported and unregulated fishing in the Okhotsk Sea and the Bering Sea. She highlighted several gaps in the fisheries management in the Arctic, including absence of the agreements for the regulation of shared and straddling fish stocks and international or regional agreements covering the shift of fish stocks to the high Arctic, and the fact that there is no regional fisheries management organization for the entire region.

She also noted that lack of environmental rules for offshore petroleum development pose a great threat to the marine environment as large scale offshore oil and gas exploration is about to start extensive oil and gas exploration is already underway in Russian, Canadian, Norwegian and U.S. northern land and offshore regions. She noted the Arctic is one of the areas most vulnerable to oil pollution. Currently there is inadequate control of environmental impacts and no internationally binding rules to regulate operational pollution from offshore installations. She argued strict standards in the transportation of oil in the Arctic are also urgently needed. Her presentation also highlighted increased risks of oil spills associated with the opening up of the Northern Sea Route (over Eurasia) and the Northwest Passage (over North America). She noted that the same conditions that contribute to high oil spill risks in the Arctic (including lack of natural light, extreme cold, moving ice floes, high wind and low visibility) can also make spill response operations extremely difficult or totally ineffective.

Although noting the existence of many global and regional treaties concerned with the protection of the Arctic marine environment and effective management of shipping issues by the International Maritime Organization (IMO), Dr. Saksina highlighted several issues requiring immediate attention including the need for an Arctic ship routing system, traffic separation schemes and use of Automatic Identification System (AIS) and Long Range Identification and Tracking (LRIT) as well as enhanced standards for ballast water exchange, fuel content, discharge and emission in Arctic waters. She also argued for internationally binding standards for construction, design, equipment and crewing of ships.

Dr. Saksina also highlighted that national marine environmental protection regimes comprise a fragmented system of governance for the Arctic with large gaps in jurisdiction, implementation and notably in effectiveness and that at the international level UNCLOS alone cannot address the special problems and growing threats facing the Arctic.

In conclusion she argued that the main challenge for protection of the Arctic marine environment is the development of international rules, standards and systems for marine environmental protection in the face of rapidly increasing offshore economic activity that may bring adverse effects on the marine environment if not properly managed. A comprehensive holistic approach to management of the Arctic will ultimately require a regional treaty.

WWF proposes the adoption of a simple framework convention to improve Arctic governance. This mechanism would provide a framework for Arctic environmental issues, a harmonious uniform approach as opposed to the current fragmented regime based on national approaches and provide for sustainable ecosystem-based management of the region. The convention would be based on the relevant provisions of customary international law reflected in Part XII of the United Nations Law of the Sea Convention and, in particular, Article 197 on global and regional cooperation for the protection and preservation of the marine environment.

3.4.7. 'A Bird's-Eye View of Polar Governance: Reflecting on the Role of International Law in Arctic Cooperation from a Bird Conservation Perspective'

Dr. Arie Trouwborst, Netherlands Institute for the Law of the Sea, Utrecht University, the Netherlands

Dr. Arie Trouwborst in his presentation focussed on the mounting challenges in the field of bird conservation in the Arctic, including the incidental mortality of seabirds in fishing operations in Arctic waters. In particular he examined the ability of the current international legal framework to meet these challenges, and offered some thoughts on its future directions.

After providing several different examples of bird species in the Arctic region he noted that the threats to such birds are many and varied including habitat degradation, depletion of prey and links to other species, taking from the nest, climate change, scientific research, tourism, pollution such as POPs. He stressed that one of the most significant emerging threats is by-catch in fisheries.

Dr. Trouwborst then highlighted that given the many different threats conservation of birds required not only national and Arctic wide responses but also responses from countries outside the region

are required. He highlighted that a significant impediment to the effective implementation of existing international law was limited participation by key states in certain treaties and processes. One such example is the limited participation by key range states in the Convention on Migratory Species and relevant daughter agreements.

In summary he concluded that while there is a significant body of existing international law gaps in how these laws are applied, implementation and participation have undermined their effectiveness and appear to be failing in efforts to conserve bird species in the Arctic.

Dr. Trouwborst suggested that optimization of the existing framework should be pursued by promoting:

- a broader participation by pertinent States in the instruments involved;
- an extended coverage of the existing instruments, for instance by bringing more Arctic species within their scope;
- the adoption of and refinement of targeted bird conservation measures by existing treaty bodies e.g. the prescription of seabird bycatch mitigation measures by RFMOs; and
- their full implementation on the ground.

In addition, Dr. Trouwborst suggested that it is also worth considering the possibility of any future Arctic environmental treaty or other legally binding regime incorporating substantive norms adequately addressing the inadequacies of the existing framework. He suggested that in view of the many and varied threats to Arctic birds and in light of modern conservation standards, such substantive norms would need to apply a holistic and precautionary approach and reflect contemporary insights relating to the establishment of representative networks of protected areas and the sustainable use of natural resources outside those areas. The overall aim should be to maintain all bird species naturally occurring in the Arctic in a favourable conservation status, or restore them to that status. They should also include detailed prescriptions concerning the protection of individual species from killing, disturbance and the like as well as habitat conservation. He also highlighted the need for transparent rules based on scientific criteria to assess and control the impact of potentially harmful human activities. In that respect he noted the valuable lessons that could be learnt from other regimes such as CCAMLR and the EU Birds and Habitats Directives.

3.4.8 'The outer continental shelf: opportunities for marine environmental protection in Polar Regions'

Mr. Daniel Owen, Barrister, Fenners Chambers, Cambridge, United Kingdom

Daniel Owen started with a disclaimer, noting that his presentation is a summary and necessarily involves simplification of a complex area of international law. He explained that the presentation should not be relied upon or treated as a substitute for legal advice in relation to individual situations and that he shall have no responsibility for any loss which may arise from reliance on any part of the presentation.

Mr. Owen in his presentation highlighted how existing provisions of UNCLOS might provide opportunities for marine environmental protection in the Polar Regions. He noted that if a coastal State has an outer continental shelf, it has sovereign rights to explore that outer shelf and to exploit its natural resources. It has the exclusive right to exploit 'sedentary species' and non-living resources (e.g. gas hydrates) of the outer shelf. But it also has the right to regulate such activities in order to protect the marine environment. Thus the continental shelf regime, in potentially bringing areas of seabed and subsoil beyond 200 nm within coastal State jurisdiction, creates opportunities for protection of that seabed and subsoil by the particular coastal State in question. In that regard, Mr. Owen added that although we often stress the *rights* of States, certain *duties* regarding environmental protection on the continental shelf also exist (e.g. Articles 194 (5) and 208).

The right of the coastal State to regulate certain activities on the outer shelf in order to protect the marine environment may, in principle, be applied to the management of any marine protected areas ('MPAs') located there. If a coastal State were to designate one or more MPAs on its outer continental shelf, its right to regulate certain activities on the outer shelf could, in principle, be used to effect management of such sites. Of course, the extent to which activities could be managed would need to be consistent with the coastal State's sovereign rights regarding the continental shelf. The extent of the management would also need to reflect the fact that the outer continental shelf is overlain by high seas.

Mr Owen also noted that the outer continental shelf is overlain by high seas and that this potentially raises some complex issues. In particular, it raises the possibility of some interactions between the exercise of high seas freedoms in the waters overlying the outer shelf (e.g. bottom trawling for non-sedentary species, which may damage sedentary species) and a coastal State's rights regarding its outer shelf (e.g. the exclusive right to exploit sedentary species there).

3.5 Theme IV: Emergent and Re-emerging Jurisdictional Issues in the Polar Regions

Session Chair: Dr. Marie Jacobsson, Principal Legal Advisor on International Law, Swedish Ministry for Foreign Affairs, Member of the United Nations International Law Commission and Associate Professor, University of Lund, Sweden.

In her opening remarks, session chair Dr. Marie Jacobsson encouraged participants to explore jurisdictional issues not only in the Arctic, but also in Antarctica, as this region has been addressed comparatively less in previous discussions at the conference.

3.5.1 'Understanding what's at stake: mapping and presenting jurisdictional issues in the Polar Regions'

Mr. Martin Pratt, International Boundaries Research Unit, Department of Geography, Durham University, United Kingdom

Martin Pratt spoke about the challenges of mapping maritime jurisdictional issues in the Arctic. He started his presentation by discussing some of the lessons learned from the reactions to an Arctic map published by the International Boundaries Research Unit at Durham University (IBRU) (See Figure 2). The difficulty resides in depicting overt and potential claims and boundaries in an accessible way. As the map reflects IBRU's selection of material, criticism of it is primarily based on a perceived lack of specifics, regarding for instance seabed geology, maritime space and prospective disputes. According to Pratt, visual representation is essential for communicating legal information to stakeholders and can contribute to border management and dispute resolution. While working with the media holds some complications as to data interpretation and preparation, it is also an integral part of promoting the map and informing the public debate about Arctic issues.

3.5.2 'Governance of Arctic waters beyond national jurisdiction'

Professor Rosemary Rayfuse, University of New South Wales, Australia

In her presentation on the implications of the Ilulissat Declaration, Professor Rayfuse questioned the Arctic coastal states assertion to assume stewardship over the high seas portion of the central Arctic Ocean. While possibly in line with Article 122 of the LOSC, the coastal states jurisdictional claim may cease to be tenable as changing physical conditions dissipate the states special rights in ice-covered areas if they fail to adequately respect the legitimate rights and interests of other states in access to and utilization of the high seas. She noted that the Declaration fails to address

three issues of critical importance to the legitimacy of any assertion of stewardship, namely military uses of the high seas, access to high seas fisheries, and the protection and preservation of the high seas marine environment.

Professor Rayfuse further highlighted some shortcomings and lacunae of the existing legal framework, including potential overlaps in governance and regulatory regimes; lack of coordination as well as spatial gaps. She ended by suggesting the establishment of a regional oceans management organization (ROMO) that would have jurisdiction over all high seas activities (and uses) and would moderate between the interests of Arctic coastal states and the international community. She noted the need to incorporate legitimate interests of the international community (third state perspectives), particularly as regards (de) militarization, fisheries, and environment in the Arctic central ocean and the importance of taking action before colliding interests get entrenched (precaution instead of belated reaction).

3.5.3 'Governance challenges facing polar regimes'

Professor Timo Koivurova, Northern Institute for Environmental and Minority Law, Arctic Centre, University of Lapland, Finland

Professor Timo Koivurova spoke about emerging challenges to the functioning of polar regimes, notably the Antarctic Treaty System and the Arctic Council. Outlining some of the implications arising from State processing and submitting their extended continental shelf submissions to the Commission on the Limits of the Continental Shelf, he stressed that the procedure of submissions has been orderly so far. Contrary to the often-perceived conflict potential in the Arctic region, he stated the reality of states' claims testifies to the power of rules.

He argued mining and the status of territorial claims may re-emerge from time to time in the Antarctic, although it is unlikely that they will challenge the mining prohibition or the current frozen sovereignty situation. Offshore hydrocarbon exploitation will be an emerging issue in the Arctic as well but only as a larger scale issue since offshore hydrocarbon activities have been done in some parts of the Arctic (e.g. the Beaufort Sea).

Focusing on the Arctic Council, Professor Koivurova addressed limits in decision-making procedures, mandate and participation. He stressed it was important to keep the status of Arctic indigenous peoples as good as it is in the Arctic Council (i.e. as Permanent Participants). He emphasized the need for further analysis of legal and policy systems and underlined the important contribution indigenous people can make to polar governance.

3.5.4 'Reactions and overreactions to the Russian flag on the seabed at the North Pole'

Mr. Andrew Serdy University of Southampton, United Kingdom

Reemphasizing that whatever happens on the seabed had no effect on sovereignty over land, Mr. Serdy argued that there was no cause for alarm with respect to Russian activities in the Arctic. While the melting of the ice cover in the Arctic Ocean will have profound consequences for navigation, there is no reason for the resources regime of the continental shelf (including the part beyond 200 nm from the baselines) to be affected. He then described the rules in Article 76 of UNCLOS for establishing the outer limits of the continental shelf beyond 200 nm and their concrete application to the geological and geomorphological circumstances of the Lomonossov Ridge traversing the North Pole. He concluded by presenting reasons to ignore the widespread oil grab arguments:

- the fundamental difference between a claim and a submission - the Article 76 process is the latter, not the former;
- Oil industry perspectives: market distance, extreme conditions and high extraction costs make resource exploitation in the central Arctic ocean unlikely in near future;
- the gimmickry of the flag aside, the Russian submission was a good example of compliance with the international legal framework, and criticism on the incorrect assumption that it was a departure from that framework was not warranted.

Comments from the Session Chair:

In a comment to Mr. Serdy's presentation, the chair said that it would be interesting to examine the extent of which the planting of the Russian flag was an act of State or an act to draw media attention, expressed by some individual scientists.

3.5.5 'Arctic State-Changes: Self Interest or Common Interest'

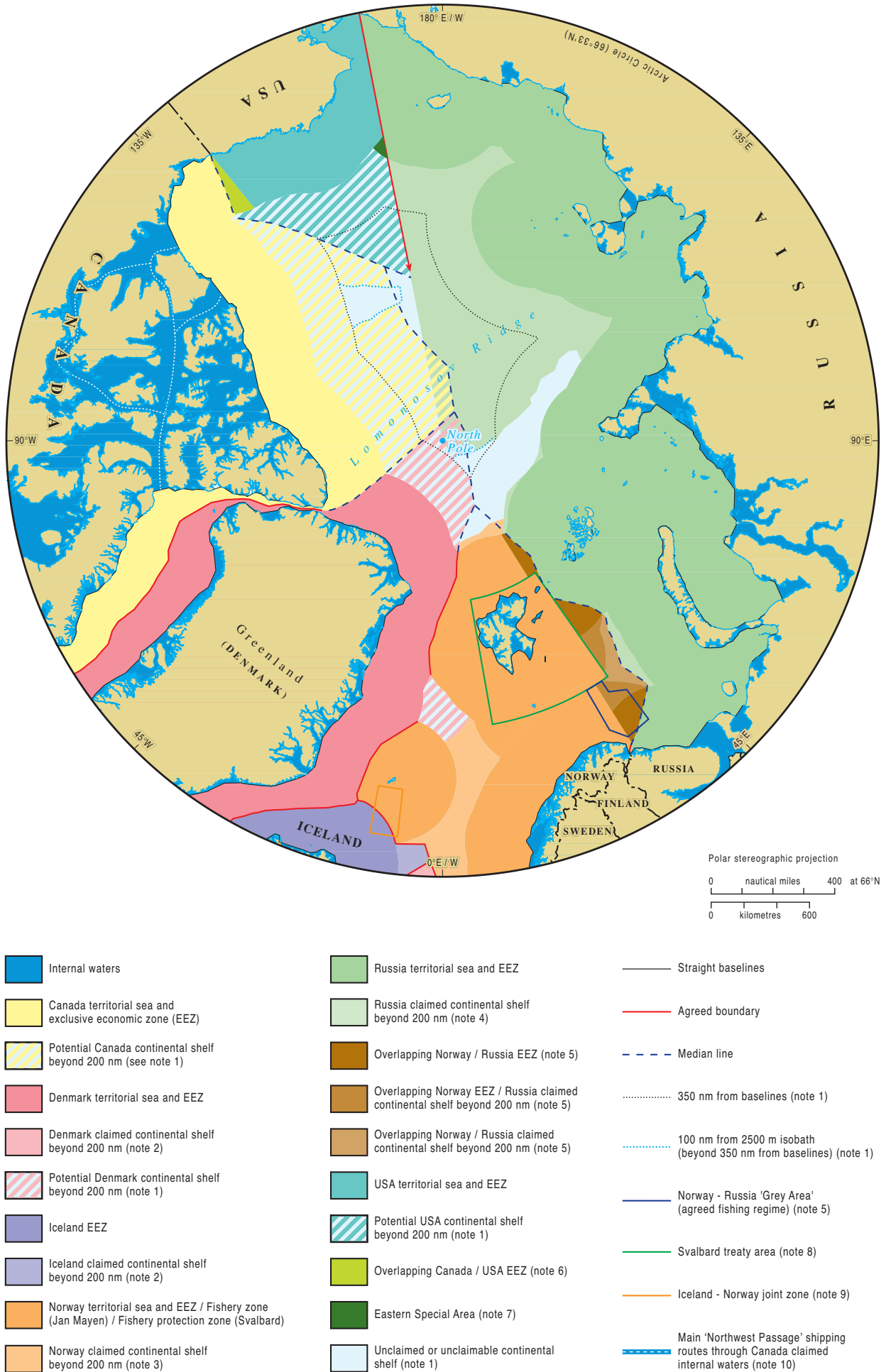
Professor Paul Berkman, University of Cambridge

In his commentary, Professor Paul Berkman began by noting that the environmental state-changes in the Arctic Ocean involved environmental security risks to the economic, political and cultural stability of the region. He also noted that the recent Illulissat Declaration mentioned neither security nor peace. Professor Berkman identified that the center of the Arctic Ocean is High Seas under customary international law as well as the United Nations Convention on the Law of the Sea. Moreover,

the High Seas is independent of the sea floor and subsoil, which currently have unclear jurisdictional status in the Arctic Ocean. Since the Arctic coastal States "remain committed to this legal framework" of the law of the sea, as they stated in the Illulissat Declaration, the High Seas is an acceptable 'international space' for Arctic and non-Arctic nations to collaborate in the governance of the region. Associated with the geopolitical state-change, Professor Berkman further identified that 'security' is explicitly mentioned in the United Nations Convention on the Law of the Sea, which already exists for the international community to cooperatively resolve environmental security issues in the Arctic Ocean separate from "matters related to military security," which the Arctic Council has been precluded from considering since it was formed in 1996.

Consequently, with the United Nations Convention on the Law of the Sea in force, there is "no need to develop a new comprehensive international legal regime to govern the Arctic Ocean," as the Arctic coastal States expressed in the Illulissat Declaration. In line with Professor Rayfuse's presentation, he suggested that a necessary next step for the international community would be to formalize their "common interests" in the international space of the central Arctic Ocean, such as use of this area for peaceful purposes only. Professor Berkman also called for greater attention to the continuum of basic to applied science in determining and shaping decision-making processes.

Figure 2: Maritime jurisdiction and boundaries in the Arctic region



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NOTES

1. The depicted potential areas of continental shelf beyond 200 nautical miles (nm) for Canada, Denmark and the USA are theoretical maximum claims assuming that none of the states claims continental shelf beyond median lines with neighbouring states where maritime boundaries have not been agreed. In reality, the claimable areas may fall well short of the theoretical maximums (see the summary of the definition of the outer limit of the continental shelf below and the seabed relief map on page 31).
It is also possible that one or more states will claim areas beyond the median lines.

Where the continental margin of a coastal state extends beyond 200 nm from the state's territorial sea baseline, the outer limit of the continental shelf is defined with reference to two sets of points: (i) points 60 nm from the foot of the continental slope; (ii) points at which the thickness of sedimentary rocks is at least 1% of the shortest distance from the points in question to the foot of the continental slope. The outer limit of the continental shelf is defined by a series of straight lines (not exceeding 60 nm in length) connecting the seawardmost of the points in the two sets described above. This map does not attempt to depict such lines, which can only be identified with precision through bathymetric and seismic surveys. However, it is possible to depict the 'cut-off' limit beyond which states may not exercise continental shelf jurisdiction regardless of the location of the foot of the continental slope and the thickness of sediment seaward of that point. The cut-off limit is the seawardmost combination of two lines: (i) a line 350 nm from the state's territorial sea baseline; (ii) a line 100 nm seaward of the 2,500 metre isobath. Both the 350 nm line and (where it runs seaward of the 350 nm line) the 2,500 m + 100 nm lines are depicted on the map. The 2,500 m + 100 nm line is derived from the US National Geophysical Data Center's ETOPO2 bathymetry dataset.

2. The depicted claims of Denmark and Iceland to continental shelf beyond 200 nm in the northeast Atlantic Ocean are defined in the "Agreed Minutes on the Delimitation of the Continental Shelf beyond 200 Nautical Miles between the Faroe Islands, Iceland and Norway in the Southern Part of the Banana Hole of the Northeast Atlantic" of 20 September 2006. The agreed division of the continental shelf in this area is subject to confirmation by the Commission on the Limits of the Continental Shelf (CLCS) that there is a continuous continental shelf in the area covered by the agreement. Neither Denmark nor Iceland has yet made a submission to the CLCS.
3. An executive summary of Norway's submission to the CLCS of 27 November 2006 is available at http://www.un.org/Depts/los/clcs_new/submissions_files/nor06/nor_exec_sum.pdf. The Commission has yet to respond to Norway's submission.
4. Maps and coordinates defining the area covered by Russia's submission to the CLCS of 20 December 2001 are available at http://www.un.org/Depts/los/clcs_new/submissions_files/submission_rus.htm. The Commission asked Russia to revise its submission relating to its continental shelf in the Arctic Ocean.
5. Norway and the Soviet Union agreed a partial maritime boundary in Varangerfjord in 1957 but disagree on the alignment of their maritime boundary in the Barents Sea: Norway claims the boundary should follow the median line, while Russia seeks a 'sector' boundary extending due north (but deviating around the 1920 Svalbard Treaty area). As the Barents Sea is an important fishery for both states, in January 1978 the two governments agreed on a fishing regime in the so-called "Grey Zone", a 19,475 nm² area covering 12,070 nm² of overlapping EEZ claims, 6,588 nm² of undisputed Norwegian EEZ and 817 nm² of undisputed Russian EEZ. Within the Grey Zone Norway and Russia have jurisdiction over their own fishing vessels.
6. Canada argues that the maritime boundary in the Beaufort Sea was delimited in the 1825 treaty between Great Britain and Russia defining the boundary between Alaska and the Yukon as following the 141° W meridian "as far as the frozen ocean". The USA argues that no maritime boundary has yet been defined and that the boundary should follow the median line between the two coastlines. The area of overlap between the two claims is more than 7,000 nm².
7. The Eastern Special Area lies more than 200 nm from the baseline of the USA but less than 200 nm from the baseline of Russia. Under the June 1990 boundary agreement between the two states, the Soviet Union agreed that the USA should exercise EEZ jurisdiction within this area. A second Eastern Special Area and a Western Special Area (in which the opposite arrangement applies) were established adjacent to the boundary south of 60° north. The agreement has yet to be ratified by the Russian parliament but its provisions have been applied since 1990 through an exchange of diplomatic notes.
8. Under a treaty signed in February 1920, Norway has sovereignty over the Svalbard archipelago and all islands between latitudes 74° and 81° north and longitudes 10° and 35° east. However, citizens and companies from all treaty nations enjoy the same right of access to and residence in Svalbard. Right to fish, hunt or undertake any kind of maritime, industrial, mining or trade activity are granted to them all on equal terms. All activity is subject to the legislation

adopted by Norwegian authorities, but there may be no preferential treatment on the basis of nationality. Norway is required to protect Svalbard's natural environment and to ensure that no fortresses or naval bases are established. 39 countries are currently registered as parties to the Svalbard treaty.

9. Under the 1981 continental shelf boundary agreement between Iceland and Norway, each country is entitled to a 25% share in petroleum activities on the other's continental shelf within a 32,750 km² area between latitudes 68° N and 70° 35' N and longitudes 6° 30' W and 10° 30' W. The idea of a joint development zone straddling the boundary was proposed by a conciliation commission set up by the two governments when they were unable to reach a negotiated boundary settlement. The continental shelf boundary itself is located 200 nm from the coast of Iceland but less than 100 nm from Jan Mayen, reflecting the significant disparity in the lengths of the relevant coastal fronts (more than 18:1 in Iceland's favour).
10. Canada claims that the waters of its Arctic archipelago are historic internal waters, and has enclosed them within a system of straight baselines. Under normal circumstances there is no automatic right of innocent passage through internal waters for foreign ships. However, other states (particularly the USA) argue that the channels in the archipelago which form part of the 'Northwest Passage' through the Arctic qualify as straits used for international navigation under Part III of UNCLOS, and that there is therefore a right of transit passage through the straits for foreign ships. While the Northwest Passage was under permanent ice cover, the debate was largely academic - but with the polar ice cap retreating and the Passage becoming increasingly navigable, the question of which legal regime applies has become increasingly pressing. Similar issues affect the straits of the 'Northeast Passage' around Russia's Arctic coastline.

Agreed maritime boundaries

Canada-Denmark (Greenland): continental shelf boundary agreed 17 December 1973.

Denmark (Greenland)-Iceland: continental shelf and fisheries boundary agreed 11 November 1997.

Denmark (Greenland)-Norway (Jan Mayen): continental shelf and fisheries boundary agreed 18 December 1995 following adjudication by the International Court of Justice.

Denmark (Greenland)-Iceland-Norway (Jan Mayen) tripoint agreed 11 November 1997.

Denmark (Greenland)-Norway (Svalbard): continental shelf and fisheries boundary agreed 20 February 2006.

Iceland-Norway (Jan Mayen): fisheries boundary following the 200 nm limit of Iceland's EEZ agreed 28 May 1980; continental shelf boundary and joint zone agreed 22 October 1981 (see note 9).

Russia-USA: single maritime boundary agreed 1 June 1990 (see note 8).

Seabed topography

As discussed in note 1, the outer limit of the continental shelf is defined in relation to the geology and geomorphology of the continental margin. The Arctic Ocean seabed is currently rather poorly surveyed, but existing public domain datasets such as US National Geophysical Data Center's ETOPO2 bathymetry dataset, from which the seabed relief map below was generated, suggest that in many areas of the Arctic the outer limit of the continental shelf may fall well short of the theoretical maximum limits shown on the main map. The Arctic coastal states are currently conducting hydrographic and geophysical surveys of the Arctic Ocean in order to identify the outer limits of the continental shelf with precision. Some data being acquired through collaborative ventures are being made available to the public, notably the International Bathymetric Chart of the Arctic Ocean (<http://www.ngdc.noaa.gov/mgg/bathymetry/arctic>).

Arctic seabed relief map generated in CARIS LOTS using ETOPO2 data



Source: http://www.gfdl.noaa.gov/products/vis/data/datasets/etopo2_topography.html
Updated: 15 August 2008

4. Recommendations

4.1 Introduction

Each session of the symposium included time for questions and discussion. While it was acknowledged that current legal and policy systems are extensive, some participants considered that their functioning and comprehensiveness still need improvement. There was support for thinking about a set of new rules to complement or extend responses to pressing polar questions. Some suggestions on how to proceed are set out in the recommendations below.

In the course of discussion, a number of key overall trends with respect to issues discussed were evident, especially with respect to environmental issues. Not all trends related to all issues discussed. These included:

- Inadequate knowledge on risks and abatement options;
- Inadequate regulatory coverage in terms of (i) substance, (ii) spatial scope and (iii) participation;
- Inadequate means for implementation at international and national level, including jurisdiction and other resources for (i) verification, (ii) review, (iii) facilitation/capacity enhancement, and (iv) enforcement, including response activities.
- Inadequate institutional architecture, reflecting the recurrent discussion of whether advances with respect to the first three categories is more likely in the short and long term with an integrative approach (like a Framework Agreement) or with an institutional focus that differs from one issue area to another; and finally
- Inadequate management of interplay/ interlinkages between institutions, generating unnecessary fragmentation or regulatory uncertainty.⁶

These inadequacies are reflected across 7 cross cutting themes including:

- Climate change;
- Human rights challenges;
- Challenges of new commercial activities in the Polar Regions;
- Challenges posed by shipping and newly opening sea lanes;
- Threats to specific species and assemblages of species;

- Environmental governance in the Polar Regions;
- Implementation of existing international laws and domestic laws.

Significantly, one of the major constant themes in discussion was that arguments for potential conflicts based on a scramble for the regions' resources were portrayed as being improbable in the short and medium term. However, potential security threats associated with rising activities in the Arctic and Antarctic should be taken into account seriously and treated in a balanced and timely manner.

The concluding workshop session of the symposium considered a draft list of findings and recommendations based on speakers presentation and discussion during the symposium prepared by the symposium Chair, Dr. David Leary. During the workshop session these recommendations were refined by participants. All participants were also given the opportunity to comment on a draft of this report and make suggestions for changes to the report and the recommendations after the workshop. It is acknowledged that not all participants endorse all aspects of these recommendations, but in general terms the recommendations do represent a consensus view from the symposium. It is also acknowledged that these recommendations are by no means exhaustive.

The final recommendations from the symposium are set out below.

4.2 The main recommendations

Six key questions were posed for the symposium participants:

- (1) What are the main emerging and re-emerging issues in international law and policy relating to the Polar Regions warranting international action?
- (2) Are the current international legal and policy systems able to address these issues?
- (3) What issues require immediate action by the international community?
- (4) What issues will require action by the international community in the longer term?
- (5) What steps should countries take to address these issues?
- (6) Which of these issues warrant further detailed research by legal scholars and other disciplines?

The following recommendations are presented as replies to these questions. These answers do not address all issues which of itself highlights the need

for further detailed consideration of these issues beyond the time constrained forum of an experts symposium.

4.2.1 What are the main emerging and re-emerging issues in international law and policy for the Polar Regions?

Climate Change

Climate change is already an existing issue impacting on the Polar Regions. Concerns were expressed about the potential for increased human activities in the Arctic to add to green house gas emissions and therefore accelerate global warming and thereby impact further on the Polar Regions. Specific activities discussed included the introduction of 'black carbon' due to increased shipping activity in the newly opening sea lanes in the Arctic and through increased industrialization associated with the exploitation of Arctic oil, gas and other mineral resources in newly accessible areas of the Arctic. Such resources are becoming more accessible in the Arctic in part due to climate change.

Human Rights Challenges

It is clear that climate change has significant human rights implication in the Arctic, especially with respect to indigenous peoples.

Significantly, quite apart from the impact of climate change considerable concerns were expressed about the failure of some states to accept, ratify and implement human rights instruments especially with respect to indigenous peoples in the Arctic.

There are also numerous environmental, social and economic challenges associated with the possible emergence of Greenland as an independent sovereign Arctic State and or the move to greater autonomy for both Greenlanders and other peoples of the Arctic. There also remains many unresolved issues associated with the rights to lands and resources of indigenous peoples.

In that respect, the experts note the need for development of substantive and procedural rights of civil society, indigenous communities and peoples in the Arctic context including dissemination and access to information. This is especially important given emerging evidence of conflicts between various stakeholders in relation to access to resources.

In that regard, the symposium also took note of the important role industry and commercial interests do play in sustainable development of the Arctic, and the need to balance their legitimate needs and interests with the social and environmental responsibilities of these actors.

New Commercial Activities in the Polar Regions

Significant concerns were expressed about the lack of effective regulation of the environmental impact of new and increased commercial activities in the Arctic such as exploitation of off shore oil, gas and other mineral resources, shipping, fishing and bioprospecting.

Tourism in the Polar Regions has been an issue for some time but recent significant increases in tourist visits to the Polar Regions suggest the need for a more detailed focus on this issue. Ongoing difficulties of regulating similar activities in the Antarctica and the Southern ocean should also be noted.

Participants also expressed concerns about the lack of scientific data on the environmental impact of emerging, re-emerging and expanding human activities in both Polar Regions, but especially in the offshore and seabed areas of the Arctic.

Challenges Posed by Shipping and Newly Opening Sea Lanes

Concerns were expressed about the lack of institutions and or mechanisms for effective responses to emergencies involving vessels in the newly opening sea lanes of the Arctic. In particular, concerns were expressed about the adequacy of existing search and rescue capabilities in the Arctic, and the ability of Arctic States and other actors to respond to pollution incidents associated with the sinking of vessels or other incidents such as oil spills. In part these issues are also related to the lack of effective coastal zone management by some Arctic States. Similar concerns were raised in relation to Antarctica especially having regard to the dramatic increase in sea borne tourism in Antarctica and the Southern Ocean in recent years.

Concerns were also expressed about the impact of sound (especially on whales and dolphins) associated with increased shipping in the newly opening sea routes of the Arctic.

Threats to Specific Species and Assemblages of Species

Threats to specific species including Polar Bears, Narwhals and several species of seabirds were identified. These threats come from multiple sources and are not the same for all species. For example, in the case of Polar Bears one of the major threats is climate change; for Narwhals it is commercial hunting; and for sea birds while a range of threats exist one of the most significant threats emerging in the Arctic is seabirds as by-catch. Participants also noted the lack of scientific data on specific species levels to enable informed management of such species.

In part these threats can be alleviated through measures such as the creation of a network of protected areas in the Arctic, including marine protected areas within and beyond areas of national jurisdiction in the Arctic.

In the Antarctic context, concerns were also expressed about the departure from the 'wilderness values' that underlie the Antarctic Treaty System reflected in environmental management practices of individual states and the increasing commercialisation of activities in Antarctica such as tourism, fishing and bioprospecting. In that respect, it is also noted that there appears to be an emerging conflict between objectives of science and policy makers, especially in the Antarctic context.

Similar concerns were expressed in relation to the Arctic where relevant Multinational Environmental Agreements and the Arctic Council policy strongly focus on the protection of species and habitat types and on balancing of interests; within these existing frameworks, wilderness does not receive serious attention.

Due to the absence of an international debate, these national approaches do not safeguard wilderness protection in the Polar Regions; however, domestic experiences may be of high value for developing wilderness policy at the regional or international level. Consequently, and particularly in view of the fast increase of human activities in the Polar Regions, wilderness protection should receive far greater attention from policy makers as part of an overall holistic response to the many and varied threats to individual species and habitats in the Polar Regions.

Preventing the introduction of non native species and the translocation of native species in Antarctica and the Southern Ocean was also highlighted as a significantly urgent issue requiring action by states. As new sea lanes open in the Arctic, States (both within and outside the Arctic region) also need to consider the potential for the introduction of non-native species to the region and take appropriate and effective action to prevent their introduction.

Environmental Governance in the Polar Regions

Much of the debate during the symposium centred on the absence of an overall 'hard law' framework or environmental governance structure for the Arctic. Various views were expressed on whether there is a need for some sort of Arctic Environmental Treaty or whether an expanded mandate and or program of work for existing institutions and processes such as the Arctic Council might be more appropriate. (See below for more detail on this point in particular).

International Peace and Security and Emerging Perceived Conflicting Claims to Territory and Jurisdictional Disputes

Participants took note of strategic deployments by new and old actors in the Arctic. Contrary to views expressed in the media and by politicians in some countries there appears to be no basis in law for assertions that there is any new or re-emerging 'grab for territory' occurring in the Arctic. Quite the contrary, there was a consensus that existing processes for resolving such claims such as the continental shelf regime under the 1982 United Nations Convention on the Law of the Sea (UNCLOS) were functioning effectively and to date States (including Russia) have acted in accordance with international law.

4.2.2 Are the current international legal and policy systems able to address these issues?

In some areas more effective implementation of existing domestic and international laws is required. In addition, divergent interpretation of the provisions of some treaties also undermines the effectiveness of existing international law. For example, divergent interpretation of the provisions of UNCLOS addressing environmental issues and their application to the ice covered waters of the Polar Regions (but especially the Arctic). In other areas, new treaties or other instruments may be required.

Specific areas where more effective implementation of existing domestic and international laws were identified include:

- Sustainable management of certain species in the Arctic such as Narwhals;
- Strengthening and effective implementation of existing measures for the protection of certain species of birds in the Arctic;
- Sustainable management of certain fishing practices such as bottom trawling by Arctic coastal States within areas of national jurisdiction;
- Participants expressed the view that the International Maritime Organisation (IMO) has been a very effective actor in addressing issues associated with marine pollution globally, but highlighted a number of specific areas where the IMO should be more active including:
 - development of appropriate ship routing, traffic information and identification systems for vessels active in the Arctic;
 - more detailed regulation of construction and design of ships (especially tourist vessels) active in the Arctic;

- specific regulation of risks to the environment posed by the transport of oil, gas and other hazardous substances through Arctic sea routes;
- ballast water discharge in the Arctic waters.

A significant impediment to the effective implementation of existing international law is limited participation by key states in certain treaties and processes. One such example is the limited participation by key range states in bird conservation treaties and instruments. Some participants also highlighted the lack of participation by key players in some major treaties or processes such as the USA's failure to ratify UNCLOS. In relation to this specific example, other participants noted that notwithstanding non-ratification State Practice of the USA has largely been consistent with the object and purpose of UNCLOS.

Specific areas where new laws, treaties, instruments or processes may be required include:

- Threatened and or endangered species such as Polar Bears;
- Transboundary, regional and domestic environmental impact assessment of emerging and increased commercial activities in the Arctic, such as offshore oil and gas exploration;
- As the scale of fishing intensifies in the Arctic, including fishing by actors from outside the Arctic Region, the absence of an Arctic-wide Regional Fisheries Management Organisation or RFMO will become a major gap in environmental governance in the region. An initial priority area for such an RFMO should be regulations to minimise seabird by-catch in the Arctic.
- Beyond the fisheries context there is also a lack of effective laws and or processes for the sustainable management of marine biodiversity in areas beyond national jurisdiction.
- The general exemption of military activities and marine scientific research from regulation of environmental impact in marine areas beyond national jurisdiction was also highlighted.

In the Arctic marine context participants also took note of the provisions of Article 123 of the UNCLOS which provides a firm basis in international law for co-operation by States bordering enclosed or semi-enclosed sea areas to co-operate through appropriate regional organizations:

- to co-ordinate the management, conservation,

exploration and exploitation of the living resources of the sea;

- to co-ordinate the implementation of their rights and duties with respect to the protection and preservation of the marine environment;
- to co-ordinate their scientific research policies and undertake, where appropriate, joint programmes of scientific research in the area;
- to invite, as appropriate, other interested States or international organisations to co-operate with them in relation to the above.

4.2.3 What issues require immediate action by the international community?

Several key issues were identified as requiring immediate action by the International community. They are:

Implementation of Existing International Laws and Domestic Laws

An urgent first priority for states should be to effectively implement obligations under existing treaties and act appropriately through other existing mechanisms and institutions. States should also ensure the effective implementation, compliance with and enforcement of existing domestic laws.

In that respect we suggest priority areas include:

- Effective protection of Arctic habits and species but especially threatened and endangered species such as Polar Bears, Narwhals and certain species of birds;
- The adoption of practical measures to minimize the introduction of non-native species to Antarctica;
- Transboundary, regional and domestic environmental impact assessment of emerging and increased commercial activities in the Arctic such as offshore and seabed oil and gas exploration and the sustainable management of such activities.

States should also undertake forward planning for a robust regulatory framework consistent with the law of the sea and international environmental law for regulating environmental and safety risks associated with shipping which transcends sovereignty and legal status disputes over Arctic waters.

Climate Change

There is a clear and urgent need for effective measures to be implemented to provide for mitigation and adaptation in response to climate

change, especially in particular the impact of climate change on the peoples of the Arctic and especially indigenous communities.

In that context we endorse the recommendations (some already made elsewhere as acknowledged) that States:

- Promote full and effective participation of Arctic Indigenous People in the design and implementation of sustainable solutions to combat climate change, in particular in the UNFCCC, Kyoto Protocol and the IPCC;
- Promote binding commitments to ensure that climate change regimes, policies and programmes potentially affecting Indigenous Peoples are in full conformity and promote the implementation of human rights standards, including the UN Declaration on the Rights of Indigenous Peoples and the principles of Free Prior and Informed Consent;⁷
- Develop mechanisms to avoid climate adaptation and mitigation regimes, policies and programmes that risk violating the rights of Indigenous Peoples;⁸
- Address legal and institutional barriers that prevent or impede indigenous peoples from coping with climate change;⁹
- Develop mechanisms to ensure that information on climate regimes, impacts and planned mitigation and adaptation schemes is made available to indigenous peoples;
- Promote and support the conduct of interdisciplinary and participatory research, related to the above, including traditional knowledge (with free prior informed consent and when appropriate);
- Develop indigenous capacity in international processes, negotiation, research, adaptation and mitigation.

4.2.4 What issues will require action by the international community in the longer term?

We recommend two issues that will require action by the international community in the longer term:

- Design and implementation of effective mitigation and adaptation strategies in response to climate change;
- Increase awareness of environmental issues and good environmental management practices in the Arctic Region.

4.2.5 What steps should countries take to address these issues?

Implementation of Existing International Laws and Domestic Laws

An urgent first priority for states should be to effectively implement obligations under existing treaties and act appropriately through other existing mechanisms and institutions. States should also ensure the effective implementation, compliance with and enforcement of existing domestic laws.

States should enhance actions to identify species at risk, ecosystems, ecosystem process and appropriate modalities for their sustainable management.

States should also consider introduction of review processes to soft law and other processes to bolster compliance and effectiveness.

Environmental Governance in the Polar Regions

We recommend States consider closely the need to strengthen Arctic environmental governance both within and beyond areas of national jurisdiction. In that regard a range of possible options and issues for States to consider include:

- Enhancing or expanding the mandate of existing co-operation and mechanisms such as those associated with the Arctic Council, the Nordic Council of Ministers and other processes;
- Negotiating and implementing an effective comprehensive environmental regime for offshore marine activities such as oil and gas exploitation;
- Negotiating and implementing a simple framework convention for environmental governance and ecosystem based management of the Arctic Region and agreement on a process for development and enhancement of more detailed obligations and modalities over time;
- Negotiation and implementation of an environmental treaty modelled on the OSPAR Convention;
- Negotiation and implementation of an environmental treaty modelled on the Madrid Protocol to the Antarctic Treaty;
- Either as part of a comprehensive environmental governance regime above or as a stand alone regime, negotiate and implement an effective RFMO for fish stocks of the Arctic;
- The development of a code of eco-

responsibility for tourism.

Regardless of which environmental governance regime is adopted any future environmental governance regime should at a minimum:

- be consistent with international law and in particular UNCLOS; and
- have regard to the legitimate interests and actions of States and other actors from outside the Arctic region.

In the absence of a new treaty regime, Arctic states could consider specific initiatives under existing mechanisms including strengthening the institutional framework of the Arctic Council and expanding its mandate to give it regulatory power in certain key defined areas.

There should be greater engagement with non state actors including civil society-NGOs and, in particular, industry.

There should also be further scientific co-operation to enhance international understanding in the Arctic as has already been and should continue to be the case in Antarctica.

Challenges Posed by Shipping and Newly Opening Sea Lanes

In the context of shipping in the Arctic states should explore:

- making use of tools already provided within the IMO Framework, such as MARPOL special areas, PSSAs vessel traffic systems, including long range identification and tracking;
- develop IMO guidelines for Arctic shipping which are mandatory in character; and
- concluding an MOU for port state control.

Threats to Specific Species and Assemblages of Species

On the question of the introduction of non-native species to Antarctica States should work towards achieving shared understanding of existing obligations, agree on principles to underpin action and adopt practical measures to address the issue. In particular, policy makers should assist operators in addressing the issue by developing clear positions on:

- the intended targets of exclusion measures;
- what constitutes direct and indirect introduction by humans, including any management implications arising from climate change;

- any circumstances whereby self-introduced species need arouse management concern;
- criteria by which the range extension and or presence of species is delineated;
- whether transient presences of introductions represent an adverse outcome; and
- any requirements to control or eradicate non-native species that are not thought to threaten the receiving environment or matters of anthropocentric interest.

States should also negotiate and implement, as appropriate, new species specific treaties or instruments for the protection of vulnerable species such as Arctic bird species.

Human rights

Consistent with the recommendations made elsewhere in this report, we recommend strengthening representation of indigenous peoples including recognizing and facilitating the exercise of rights of indigenous communities to share in benefits of new and existing exploitation of the resources of the Arctic. At a minimum this should include:

- respect for rights recognized under international and domestic human rights regimes;
- engagement with indigenous peoples in all processes and decisions that may impact upon them; and
- co-management of resources with indigenous peoples.

4.2.6 Which of these issues warrant further detailed study by legal scholars and other disciplines?

A number of key further studies by legal scholars are recommended. They are:

- A study of the advantages and disadvantages of each of the options for future environmental governance in the Arctic mentioned above. In that regard such a study should play particular attention to the strengths and weaknesses of an Arctic regional environmental treaty as opposed to existing instruments and processes. Such a study should in part aim to offer conclusions on whether a 'soft law' or a 'hard law' approach to environmental governance in the Arctic might be more effective. It should also consider the potential of other Arctic models such as the Spitzbergen Treaty and other models such as OSPAR, CCAMLR, the Madrid Protocol to the Antarctic Treaty and EU nature conservation law. A study might also

consider what issues an Arctic environmental treaty should cover including suggestions on key elements of such a treaty.

- A study which considers the international legal implications of the claim to 'Stewardship of the Arctic' which is implicit in the Ilulissat Declaration. What does this mean and where does this claim come from?
- With respect to climate change and indigenous peoples it is noted that the participants in this meeting could act upon these recommendations through the development of a thematic Arctic research programme on Human Rights, Indigenous Rights and Climate Change in partnership with Greenland Home Rule Government, Permanent Participants in the Arctic Council, the UN Human rights Council, the UN Permanent Forum on Indigenous Issues and the International Working Group on Indigenous Affairs (IWGIA).
- In the context of shipping in the Arctic, the participants endorsed the preliminary list of research issues set out in the technical report prepared for the Arctic Marine Shipping Assessment which suggests the need for:
 - A comparative investigation of national construction and equipment standards for ships and their consistency with IACS Unified Requirements for Polar Class ships;
 - Comparative examination of the extent to which states have followed the IMO Arctic Guidelines;
 - A review of national approaches to controlling marine pollution from ships not subject to the Arctic Guidelines and not strictly bound by international standards, namely, warships, naval auxiliaries and other vessels owned by a state and used only on government non-commercial service;
 - A comparative study of how Arctic states are addressing liability and compensation, especially for bunker fuel spills and hazardous and noxious substance incidents, since of the Arctic states only Norway has adopted the bunkers Convention and only the Russian Federation has ratified the HNS Convention;
 - Drawing on IMO ships routings from other regions, an examination into how Arctic states have addressed or could address ship routings in the Arctic in order to protect sensitive areas of the marine environment and meet concerns of indigenous communities and organisations;

- A survey of existing and potential fee systems for ice breaking and other services, such as navigational aids and search and rescue, provided by Arctic states.

A number of key further studies by other disciplines are recommended. They are:

- A study of adaptation measures and implementation of such measures in response to climate change and the impact of such measures on peoples of the Arctic and in particular indigenous peoples;
- A comprehensive look at the contingency planning and response capabilities of Arctic states for shipping-related emergencies and pollution incidents;
- A scientific study of the impact of increased shipping on the introduction of 'black carbon' to the Arctic;
- A scientific study of the impact of noise associated with increased shipping in the Arctic on marine biodiversity but especially cetaceans;
- Further scientific studies of the status of species where data is deficient. One such species highlighted was the Narwhal;
- A study of what new permanent on land facilities may be required in the Arctic to support resource extraction, transport, shipping and tourism and their associated environmental impact;
- A study of the need for a new political forum for Antarctica (in addition to existing mechanisms) to provide a venue for addressing complex emerging cross cutting issues at the Head of State or Ministerial level.

It is also noted that to assess legacy lessons of the Antarctic Treaty on its 50th anniversary in the city where it was signed "in the interest of all mankind [sic]" - the Antarctic Treaty Summit: Science-Policy Interactions in International Governance (www.atsummit50.aq) will be convened in an inclusive international and interdisciplinary manner at the Smithsonian Institution in Washington, DC from 30 November to 3 December 2009. Academics and policy makers alike are urged to participate in and support this important international initiative that has been endorsed by the International Polar Year programme.

Annex 1

PROGRAMME

**INTERNATIONAL SYMPOSIUM
LOOKING BEYOND THE INTERNATIONAL POLAR YEAR:
EMERGING AND RE-EMERGING ISSUES IN INTERNATIONAL LAW AND
POLICY IN THE POLAR REGIONS**

7th-10th September, 2008
University of Akureyri, Iceland

Co-organisers: United Nations University-Institute of Advanced Studies (Japan) and
the University of Akureyri (Iceland)

With the involvement of Tilburg University (the Netherlands), and the Northern
Institute for Environmental and Minority Law, Arctic Centre, University of Lapland
(Finland)

Funded by

Prince Albert II of Monaco Foundation

*The Monaco Permanent Representation to Scientific, Environmental and
Humanitarian International Bodies*

The Dutch International Polar Year Committee

The United Nations Environment Programme (UNEP)

United Nations University Institute of Advanced Studies (UNU-IAS)

The University of Akureyri

and

The Town of Akureyri



Háskólinn á Akureyri
Sólborg w/ Norðurslóð
600 Akureyri
Sími: 460 8000



Akureyri
ÖLL LÍFSINS GÆÐI

SUNDAY 7TH SEPTEMBER 2008

19.00-20.30: WELCOME RECEPTION HOSTED BY THE MAYOR OF AKUREYRI

Please assemble at **18.50 hours (6.50pm)** in the lobby of Hotel Akureyri which is located at Hafnarstræti 67 (a 5 minute walk from the other hotels).

From there you will be guided to the venue for the welcome reception, which is a 5 minute walk from Hotel Akureyri.

For those arriving on later flights details on the location of the reception will be available in the reception of Hotel Akureyri.

MONDAY 8TH SEPTEMBER

8.30: BUS DEPARTS HOTEL AKUREYRI FOR THE UNIVERSITY

(BUS ALSO PICKS UP AT HOTEL HARPA/HOTEL KEA AT 8.35. THOSE PEOPLE STAYING AT AKUREYRI GUESTHOUSE SHOULD MAKE THEIR WAY TO ONE OF THESE PICK UP POINTS WHICH ARE ONLY A 5 MINUTES WALK FROM AKUREYRI GUESTHOUSE)

9.15-10.30: OPENING AND WELCOME REMARKS

CHAIR: PROFESSOR GUDMUNDUR ALFREDSSON, University of Akureyri, Iceland

SPEAKERS:

- *Words of welcome*
THORSTEINN GUNNARSSON, Rector, University of Akureyri
- *Opening Keynote Address*
H.E. MR. ÓLAFUR RAGNAR GRÍMSSON, President of the Republic of Iceland
- *Welcome to Akureyri*
SIGRUN BJÖRK JAKOBSDOTTIR, Mayor of Akureyri
- *Welcome from the Faculty*
ASSOCIATE PROFESSOR SIGURÐUR KRISTINSSON, Dean, Faculty of Humanities and Social Science, University of Akureyri
- *'Challenges for the Changing Polar Environments'*
DR. BAKARY KANTE, Director of the Division of Environmental Law and Conventions, United Nations Environment Programme (UNEP)
- *'Setting the scene-the purpose of the symposium and what we hope to achieve'*
PROFESSOR A.H. ZAKRI, Director, United Nations University Institute of Advanced Studies

10.30-11.30: THEME I- CHALLENGES FOR THE PROTECTION OF BIODIVERSITY AND WILDERNESS IN THE POLAR REGIONS

CHAIR: PROFESSOR SAID MAHMOUDI, Stockholm University, Sweden

SPEAKERS:

- *'So Much Law so Little Protection'*

PROFESSOR MALGOSIA FITZMAURICE, Queen Mary, University of London, United Kingdom

- *'From the new Geopolitics of Resources to Nanotechnology: Emerging Challenges of Globalism in Antarctica'*

DR. ALAN D. HEMMINGS, University of Canterbury, New Zealand and University of Tasmania, Australia

- *'Protecting Polar Wilderness Values: Just a Western Philosophical Idea or a Useful Concept for Polar Law and Policy Development?'*

DR. KEES BASTMEIJER, Tilburg University, The Netherlands

RAPPORTEUR: MS ANTJE NEUMANN, Germany

11.30-11.45: Coffee Break

11.45-13.15: THEME I- CHALLENGES FOR THE PROTECTION OF BIODIVERSITY AND WILDERNESS IN THE POLAR REGIONS (CONTINUED)

CHAIR: PROFESSOR SAID MAHMOUDI, Stockholm University, Sweden.

SPEAKERS:

- *'Terrestrial Area Management in Polar Regions: Applying the Ecosystem-Based Approach to the Coalface of Climate Change'*

PROFESSOR MICHAEL JEFFERY QC, Centre for Environmental Law, Macquarie University, Australia

- *'Polar Bears, Penguins and the United States Endangered Species Act: The Role of Domestic Wildlife Law in Polar Biodiversity Protection'*

MS. KASSIE SIEGEL, Centre for Biological Diversity, USA

- *'Bioprospecting in Antarctica and the Arctic. Common challenges?'*

DR. DAVID LEARY, United Nations University- Institute of Advanced Studies, Japan

Discussion (30 minutes)

RAPPORTEUR: MS ANTJE NEUMANN, Germany

13.15-14.15: Lunch

14.15-15.15: THEME II- SUSTAINABLE DEVELOPMENT AND HUMAN RIGHTS

CHAIR: PROFESSOR BRIAN BURDEKIN, Raoul Wallenberg Institute, Lund University, Sweden

SPEAKERS:

- *'Land claims and self government arrangements in Arctic Canada in light of International Human Rights Norms'*

PROFESSOR NIGEL BANKES, University of Calgary, Canada

- *'Human Rights in the Arctic'*

PROFESSOR GUDMUNDUR ALFREDSSON, University of Akureyri, Iceland

- *'Indigenous self-government and the right to land and natural resources'*

PROFESSOR ASBJÖRN EIDE, Norwegian Centre for Human Rights, Norway

RAPPORTEUR: AGUST THOR ARNASON, University of Akureyri, Iceland

15.15-15.30 Coffee Break

15.30-17.05: THEME II- SUSTAINABLE DEVELOPMENT AND HUMAN RIGHTS (CONTINUED)

CHAIR: PROFESSOR BRIAN BURDEKIN, Raoul Wallenberg Institute, Lund University, Sweden.

SPEAKERS:

- *'Sustainable Human Rights and Governance? The Quest of an Arctic Entity in Transition'*

Joint paper by DR. NATALIA LOUKACHEVA, University of Akureyri, Iceland and
PROFESSOR MATTHEW GARFIELD, University of Akureyri, Iceland and Former Chair
of the Human Rights Tribunal of Ontario, Canada

PANEL COMMENTATOR:

- *'Implementing Sustainable Development in the Arctic: What Principles Should Guide Environmental Governance in Traditional Areas of Indigenous Peoples?'*

PROFESSOR DONNA CRAIG, Centre for Environmental Law, Macquarie University,
Australia

Discussion: (55 minutes)

RAPPORTEUR: AGUST THOR ARNASON, University of Akureyri, Iceland

17.05-17.30: WRAP UP OF DAY ONE AND SOME TENTATIVE FINDINGS & RECOMMENDATIONS SO FAR

CHAIR: DR. DAVID LEARY, United Nations University- Institute of Advanced Studies, Japan

17.30: GROUP PHOTO

17.40: BUS DEPARTS UNIVERSITY FOR RETURN TO HOTELS

TUESDAY 9TH SEPTEMBER

8.30: BUS DEPARTS HOTEL AKUREYRI FOR THE UNIVERSITY

(BUS ALSO PICKS UP AT HOTEL HARPA/HOTEL KEA AT 8.35. THOSE PEOPLE STAYING AT AKUREYRI GUESTHOUSE SHOULD MAKE THEIR WAY TO ONE OF THESE PICK UP POINTS WHICH ARE ONLY A 5 MINUTES WALK)

9.15-10.35: THEME III- ENVIRONMENTAL GOVERNANCE IN THE POLAR REGIONS

CHAIR: PROFESSOR RENE LEFEBER, Dutch Ministry of Foreign Affairs and Professor of International Environmental Law, University of Amsterdam

SPEAKERS:

- '*Governance of Arctic Marine Shipping: A Preview from the Arctic Marine Shipping Assessment (AMSA)*'

PROFESSOR DAVID VANDERZWAAG, Dalhousie University, Canada

- '*Charting a Sustainable Course through Changing Arctic Waters*'

DR. ROBIN WARNER, Australian National Centre for Ocean Resources and Security, University of Wollongong, Australia

- '*Protecting the Arctic environment: the interplay of global and regional regimes*'

DR. OLAV SCHRAM STOKKE, Fridtjof Nansen Institute, Norway

- '*Legal Issues Relating to Navigation through Arctic Waters*'

PROFESSOR TULLIO SCOVAZZI, University of Milan, Italy

RAPPORTEUR: MR. KARI A ROGVI, Lawyer and Member of Parliament, Faroe Islands (Denmark)

10.35 – 10.50 Coffee Break

**10.50-12.20: THEME III- ENVIRONMENTAL GOVERNANCE IN THE POLAR REGIONS
(CONTINUED)**

CHAIR: PROFESSOR RENE LEFEBER, Dutch Ministry of Foreign Affairs and Professor of International Environmental Law, University of Amsterdam

SPEAKERS:

- *'Creating a New Future for the Arctic: Is a New Framework Convention the Solution?'*
DR. TATIANA SAKSINA, Arctic Governance Officer, WWF International Arctic Programme
- *'Protecting Antarctica from non-indigenous species: the imperatives and the impediments'*
SANDRA POTTER, School of Geography & Environmental Studies, University of Tasmania, Australia

PANEL COMMENTATORS:

- *'Polar governance: a bird's-eye view'*
DR. ARIE TROUWBORST, Netherlands Institute for the Law of the Sea, Utrecht University
- *'The outer continental shelf: opportunities for marine environmental protection in polar regions'*
MR. DANIEL OWEN, Barrister, Fenners Chambers, Cambridge, United Kingdom

Discussion (30 minutes)

RAPPORTEUR: MR. KARI A ROGVI, Lawyer and Member of Parliament, Faroe Islands (Denmark)

12.20-13.20 PM Lunch

13.20-14.40: THEME IV- EMERGENT AND RE-EMERGING JURISDICTIONAL ISSUES IN THE POLAR REGIONS

CHAIR: DR. MARIE JACOBSSON, Principal Legal Adviser on International Law, Swedish Ministry for Foreign Affairs, Member of the United Nations International Law Commission and Associate Professor, University of Lund

SPEAKERS:

- *'Understanding what's at stake: mapping and presenting jurisdictional issues in the Polar Regions'*
DR. MARTIN PRATT, Director of Research International Boundaries Research Unit, Department of Geography, Durham University, United Kingdom
- *'Warm Waters and Cold Shoulders: Jostling for Jurisdiction in Polar Oceans'*

PROFESSOR ROSEMARY RAYFUSE, Faculty of Law, University of New South Wales, Australia

- *'Do the continental shelf claims challenge the commons regimes in the Polar regions?'*

PROFESSOR TIMO KOIVUROVA, Northern Institute for Environmental and Minority Law, Arctic Centre, University of Lapland, Finland

- *'Reactions and overreactions to the Russian flag on the seabed at the North Pole'*

MR. ANDREW SERDY, University of Southampton, United Kingdom

RAPPORTEUR: MS. ELISA BURCHETT, University of Heidelberg, Germany

14.40-14.55 Coffee Break

14.55- 15.35 THEME IV- EMERGENT AND RE-EMERGING JURISDICTIONAL ISSUES IN THE POLAR REGIONS (CONTINUED)

CHAIR: DR. MARIE JACOBSSON, Principal Legal Adviser on International Law, Swedish Ministry for Foreign Affairs, Member of the United Nations International Law Commission and Associate Professor, University of Lund

PANEL COMMENTATOR:

- *'Arctic State-Changes: Self Interest or Common Interest'*

PROFESSOR PAUL BERKMAN, Fulbright Distinguished Scholar, Cambridge University.

Discussion (30 Minutes)

RAPPORTEUR: MS. ELISA BURCHETT, University of Heidelberg, Germany

15.35-17.35: WORKSHOP SESSION AND DEVELOPMENT OF RECOMENDATIONS

CHAIR: DR DAVID LEARY, United Nations University-Institute of Advanced Studies, Japan

Presentation on the Antarctic Treaty Summit at the Smithsonian Institution in Washington D.C from November 30 - December 3, 2009 (<http://www.atsummit50.aq>) and potential future process for collaborative research on Arctic Ocean Geopolitics. PROFESSOR PAUL BERKMAN, Fulbright Distinguished Scholar, Cambridge University

Based on the papers presented and subsequent discussion the workshop session aims to address these questions:

- (1) What are the main emerging and re-emerging issues in international law and policy relating to the Polar Regions warranting international action?
- (2) Are the current international legal and policy systems able to address these issues?

- (3) What issues require immediate action by the international community?
- (4) What issues will require action by the international community in the longer term?
- (5) What steps should countries take to address these issues?
- (6) Which of these issues warrant further detailed research by legal scholars and other disciplines?

17.35 CLOSE

17.40: BUS DEPARTS UNIVERSITY FOR RETURN TO HOTELS

WEDNESDAY 10TH SEPTEMBER

FIELD TRIP:

8.15: BUS DEPARTS HOTEL AKUREYRI

Bus also stops at Hotel Harpa at 8.20

Return to Hotels approximately 16:00 hours.

Lunch not provided but can be bought on route.

Annex 2 Chairs, Speakers and Panellists Biographies

H.E. Mr. Ólafur Ragnar Grímsson **President of the Republic of Iceland**

Mr. Ólafur Ragnar Grímsson was elected the fifth President of the Republic of Iceland on 29 June 1996 for a four-year term. He received 68,370 votes, or 40.9% of the total ballot. Participation was 85.9%. He was sworn in for his fourth term as the President of Iceland on the 1st August 2008.

Mr. Grímsson has a Ph.D. degree in Political Science. He was a professor at the University of Iceland, served as Member of Althingi (parliament), was Minister of Finance 1988-1991 and served as chairman of the People's Alliance Party.

Mr. Grímsson was born in Ísafjörður in Northwest Iceland on 14 May 1943. His parents were Mr. Grímur Kristgeirsson, barber and town councillor in Ísafjörður and Mrs. Svanhildur Ólafsdóttir Hjartar, housewife. Mr. Grímsson was raised in Ísafjörður and also by his grandparents in Ingeyri.

After completing his elementary education, Mr. Grímsson enrolled in the Reykjavík Higher Secondary Grammar School, graduating in 1962. He was involved in extra-curricular activities during his school years and was president of the school's old debating society, The Future. His path then led him to Manchester University, here he studied Economics and Political Science. He took his BA degree in 1965 in these subjects and five years later, in 1970, took his doctorate in Political Science at the same University. His doctoral research was part of the project "Smaller European Democracies", directed by the American professor Robert Dahl and the Norwegian professor Stein Rokkan.

Upon returning to Iceland at the end of his studies, Mr. Grímsson was appointed lecturer in Political Science at the University of Iceland, becoming a full professor in 1973. Mr. Grímsson built up the Social Science Department of the University and his main speciality was the evolution of the Icelandic political system. Mr. Grímsson is the author of many articles and teaching texts on the Icelandic political system, as well as essays on international affairs in numerous periodicals and essay collections.

Mr. Grímsson's involvement in politics began at an early age. He sat on the board of the Progressive Party's Youth Federation in the years 1966-1973 and was on the executive board of the Progressive Party from 1971-1973. He first stood for parliament on behalf of the Liberal and Left Alliance in 1974, representing the East part of the country. During that parliamentary session, he twice sat as an alternate member, in 1974 and again in 1975. Mr. Grímsson was chairman of the executive board of the Liberal and Left Alliance from 1974-1975.

In the elections in 1978, Mr. Grímsson was elected to Althingi as a representative for Reykjavík, the capital, for the Peoples' Alliance Party and again in 1979. He sat in the Althingi until 1983 and became chairman of the parliamentary group of the Peoples' Alliance Party 1980-1983. He served three times as an alternate member representing Reykjavík in the years 1984 and 1985 and four times, representing Reykjavík, in 1987, 1988, 1989 and 1990. Mr. Grímsson was Minister of Finance in the Government of Mr. Steingrímur Hermannsson, 1988-1991. He was re-elected to Althingi representing the Peoples' Alliance Party in Reykjavík in 1991 and again in 1995. In 1987, Mr. Grímsson was elected leader of the Peoples' Alliance Party, a position which he relinquished at the party's national convention in autumn 1995.

Mr. Grímsson has been a member of various public bodies. He was a member of the Economic Council 1966-1968, on the board of the Icelandic Broadcasting Service 1971-1975, was chairman of a committee concerned with the relocation of public institutions 1972-1975 and chairman of the Icelandic Social Sciences Association, 1975. Mr. Grímsson was vice-chairman of the Icelandic Security Commission from 1979-1990 and sat on the board of the National Power Company from 1983-1988.

Mr. Grímsson was chairman and later International president of the International Association of Parliamentarians for Global Action (PGA), in the years 1984-1990 and has sat on the board since. The PGA is an association of over 1,800 parliamentarians in about 80 countries. The association organised the "Six Nations Peace Initiative" 1984-1989, which included amongst others the late premiers Olav Palme of Sweden and Rajiv Gandhi of India. Mr. Grímsson sat on the executive committee of this initiative. He accepted the Indira Gandhi Peace Prize on behalf of the association in 1987 and has himself received international prizes.

Mr. Grímsson was a member of the parliamentary assembly of the Council of Europe 1980-1984 and again in 1995. He was chairman of the organising committee of the "Parliamentary Conference of the Council of Europe, North-South: Europe's Role 1982-1984". This conference created the basis for the Council of Europe's work on North-South relations and the foundation of the North-South Centre in Lisbon. In recent years, Mr. Grímsson has been advisor to Icelandic firms seeking new markets, particularly in Asia and South America.

Professor A.H. Zakri **Director, United Nations University** **Institute of Advanced Studies**

Malaysian-born Zakri is the Director, Institute of Advanced Studies, United Nations University (UNU-IAS) in Yokohama, Japan. He was the Co-Chair of the Millennium Ecosystem Assessment Board (2001-05),

a four-year U.N. study undertaken by 1,360 experts from 95 countries to assess the state-of-health of the world's ecosystems. He was the Vice-President of the Academy of Sciences of the Developing World (TWAS); member of the Board of Trustees of the Institute for Global Environmental Strategies (IGES); member of the Arab Fund Fellowship Program, member of the International Cosmos Prize Committee, member of the Evaluation and Selection Panel for the 2006 Consultative Group on International Agricultural Research (CGIAR) Science Awards, and Expert member of the FAO/CGIAR 1st External Review (2007) of the Harvest Plus Challenge Program on High-Impact Research.

He was the deputy head of the UNU delegation at the World Summit on Sustainable Development (2002) and leader of the UNU delegation to the meetings of the UN Commission on Sustainable Development from 2003 to the present. He led the university delegation to the 7th (2004) and 8th (2006) meetings of the Conference of Parties of the Convention on Biological Diversity.

Prof. Zakri served as the Secretary General of the Society for the Advancement of Breeding Researches in Asia and Oceania (SABRAO) from 1981-89 and was Deputy Vice-Chancellor of Universiti Kebangsaan Malaysia from 1992-2000. He was the Founding President (1994-2000) of the Genetics Society of Malaysia. Zakri was the Chairman of the National Task Force that prepared the Malaysian National Policy on Biological Diversity (1996) and the Founding Chairman (1999) of the National Genetic Modification Advisory Committee (GMAC Malaysia).

Zakri was a senior member of the Malaysian government delegation to negotiate the Convention on Biological Diversity (CBD) (1990-1992), and subsequently a member of his country's delegation to the various meetings of the treaty's Conference of Parties (1993-2000). He chaired the CBD Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) from 1997-99. He led the Malaysian delegation in the intergovernmental negotiations on biosafety (1995-2000) which eventually led to the Cartagena Protocol on Biosafety (2003). Throughout the years, he has participated in meetings of UN bodies like the Food and Agriculture Organization (FAO) and the International Atomic Energy Agency (IAEA). From 1999-2000, he was the Team Coordinator for the Asia-Pacific region in the UNDP/GEF project on "Capacity Development Initiative."

A graduate of Michigan State University, USA (M.S., 1974; PhD, 1976), Prof. Zakri's interests include biodiplomacy, education for sustainable development, and biotechnology and biodiversity policies for developing countries. During the last few years, he has given numerous keynote addresses and invited lectures on these subjects. Recipient of a Fulbright-Hays Fellowship (1981), and a Gold Medal Award from

the Rotary Research Foundation (1999), Prof. Zakri is a Fellow of the Academy of Sciences Malaysia (1995), the Academy of Sciences of the Developing World (TWAS) (1996), the World Academy of Art and Science (2003) and the Islamic World Academy of Sciences (2006). In 1998 he received the Langkawi Award, a national laureate for outstanding contribution in the field of environmental awareness in Malaysia. Three species known to science are named after him: a beetle (*Paleosepharia zakrii*); a cicada (*Pomponia zakrii*), and a pitcher plant (*Nepenthes zakriana*).

Mr. Bakary Kante **Director of the Division of Environmental Law and Conventions, UNEP**

Mr. Bakary Kante has more than 20 years experience as senior manager both at the national, in Senegal, and international levels. He is currently at the helm of the Division of Environmental Law & Conventions of the United Nations Environment Programme UNEP.

Mr. Kante has extensive expertise and experience in the development and implementation of environmental law as well as development policies and human development in general. A climate change expert, Mr. Kante has led Senegal in all climate change negotiations up until 1999. From 1997 to 1999 he also served as the Chairman of the subsidiary body for policy implementation (SBI) of the United Nations Framework Convention on Climate Change.

In 1999, UN Secretary-General Kofi Annan appointed Mr. Kante a member of the UN SG Task Force to assess environmental damage in the war-torn Balkans.

Mr. Kante holds degrees in environmental sciences and law.

Thorsteinn Gunnarsson **Rector, University of Akureyri, Iceland**

Thorsteinn Gunnarsson has been the Rector of the University of Akureyri since 1994 and is a member of various governmental and institutional committees. Thorsteinn received his PhD in Curriculum and Instruction from Ohio University in 1990, M.Ed in Higher Education Administration from the same university in 1986 and B.A. in Psychology from the University of Iceland in 1976.

Thorsteinn was a Counsellor of Science & Education at the Embassy of Iceland in Brussels in 1993-94, Head of Division, Department of Higher Education and Research at the Ministry of Science, Education and Culture, 1990-1993.

Associate Professor Sigurður Kristinnsson
Dean, Faculty of Humanities and Social Science,
University of Akureyri, Iceland

Sigurður Kristinnsson is current Dean of the faculty that includes the Department of Law at the University of Akureyri. The Faculty of Humanities and Social Sciences was established on August 1 2008 through the merger of the Faculty of Law and Social Sciences and the Faculty of Education. Before the merger, Sigurður had been Dean of the Faculty of Law and Social Sciences since 2007.

Sigurður is a philosopher by training, having received his Ph.D. in philosophy from Cornell University in 1996, and B.A. in philosophy and history from the University of Iceland in 1989. He specializes in ethics and moral psychology, with a special focus on individual autonomy. He has also published in bioethics, professional ethics, and the philosophy of education.

Sigurður has been Associate Professor of Philosophy at the University of Akureyri since 2005. Sigurður joined the University of Akureyri in 2000, as Assistant Professor in Philosophy and director of a new interdisciplinary humanities program called Modern Studies. He had previously been Assistant Professor of Philosophy at the University of Missouri-St. Louis in 1996-2000.

Professor Gudmundur Alfredsson
Faculty of Social Sciences and Law, University
of Akureyri, Iceland

Gudmundur Alfredsson is an Icelandic lawyer, with an MCJ-degree from NYU (1976) and an SJD-degree from Harvard Law School (1982).

He was Director of the Raoul Wallenberg Institute of Human Rights and Humanitarian Law (also in Lund, 1995-06), served with the UN Secretariat 1983-1995 (Office of Legal Affairs in New York and the Centre for Human Rights in Geneva), and was an expert member of the UN Sub-Commission on the Promotion and Protection of Human Rights (2004-06). He is a member of the Greenlandic-Danish Self-Governance Commission, appointed by Greenland's Home Rule Government.

He is the Editor-in-Chief of the *International Journal on Minority and Group Rights* and the author/editor of several books and academic articles on mostly human rights issues.

Agust Thor Arnason
University of Akureyri, Iceland

Agust Thor Arnason is a lecturer at the Department of Law at the University of Akureyri. His research interests include Constitutionalism, human rights, philosophy of political science. His recent research

projects include: Constitution and welfare states: The Nordic Countries and Germany; The Constitution of micro states, philosophical foundation of human rights, constitutionalism and democracy. Agust is a member of the Editorial Board of the Nordic Journal of Human Rights.

Professor Nigel Banks
University of Calgary, Canada

Nigel Banks is a Professor of Law at the University of Calgary where he has taught since 1984 and where he is currently the holder of the chair in natural resources law. He was seconded to Canada's Department of Foreign Affairs and International Trade as Professor in Residence for the 1999-2000 academic year. His principal research interests are in the areas of indigenous peoples law, water law, oil and gas law and international environmental law. He was the lead author of the "Legal Systems" chapter of the Arctic Human Development Report for the Arctic Council. He served as the chair of the Canadian Arctic Resources Committee a Canadian NGO during the mid-1990s. He is currently working on a new edition of *Canadian Oil and Gas Law* while also working on two interdisciplinary projects one focusing on carbon capture and storage issues and the other on in stream flow requirements.

Dr. Kees Bastmeijer
Faculty of Law, Tilburg University,
The Netherlands

Kees Bastmeijer works as an Associate Professor of Environmental Law at the Law Faculty of Tilburg University, The Netherlands. His research relates to international, European, and national environmental law, with an emphasis on nature protection law. His publications on the international management of Antarctica illustrate his special interest in the role of law in protecting the world's last wildernesses. Before his appointment at Tilburg University, Kees Bastmeijer worked from 1989 to 1999 as a legal policy adviser at the Dutch Ministry of Environmental Protection. He has been participating in the Antarctic Treaty Consultative Meetings since 1992.

Professor Paul Berkman
Fulbright Distinguished Scholar, University of
Cambridge, United Kingdom

Paul Arthur Berkman integrates science, policy and information technology with global perspectives that are relevant to the future of humankind. He is a Research Professor at the Bren School of Environmental Science & Management at the University of California Santa Barbara. He also is the Chief Executive Officer and co-founder of EvREsearch LTD, which utilizes its patented *Digital Integration System* (DigIn®) for government, business and education applications. In 2007-08, Prof. Berkman received the prestigious Fulbright Distinguished

Scholar award to conduct research at the Scott Polar Research Institute, University of Cambridge, on the governance of international spaces.

Prof. Berkman conceived the *Antarctic Treaty Summit: Science-Policy Interactions in International Governance* (www.atsummit50.aq) that will be convened at the Smithsonian Institution in 2009 on the 50th anniversary of the signing of the Antarctic Treaty to identify its legacy lessons and stories “*in the interest of all mankind*.” Prof. Berkman now serves as Chair of the International Board for this interdisciplinary project that has been endorsed by the International Council for Science and World Meteorological Organization joint committee for the International Polar Year with public and private funding. At the invitation of the University of Cambridge, Prof. Berkman also has initiated a new interdisciplinary programme on Arctic Ocean Geopolitics.

Prof. Berkman has wintered, SCUBA dived under the sea-ice and lead government-sponsored research expeditions to Antarctica. He is the author of *Science into Policy: Global Lessons from Antarctica* (Academic Press, 2002), which emerged from an undergraduate capstone course that he began teaching at the University of California Los Angeles as a Visiting Professor in 1982 when he was 24. Paul has a master's degree and doctorate in biological oceanography from the University of Rhode Island, where he was a National Science Foundation Graduate Fellow. For his research and education contributions – which include nearly 80 publications – Prof. Berkman also has received the Antarctic Service Medal from the United States Congress as well as additional fellowships from the National Aeronautics and Space Administration at the Jet Propulsion Laboratory; Ohio State University at the Byrd Polar Research Center; Ministry of Science, Education and Culture at the National Institute of Polar Research (Japan); and University of Canterbury in the Gateway Antarctica program (New Zealand).

Elisa Burchert
University of Heidelberg, Germany

As a doctoral student in public policy at the University of Heidelberg, Elisa Burchert conducts research on governance approaches and policy options for Arctic cooperation, focusing on oil and gas exploitation and related conflict potential of diverging indigenous, corporate, and state claims. Elisa's interests lie at the intersection of sustainability and the challenges of cooperative decision-making; specifically the effects of climate change on actors' strategies and behaviour.

Throughout her academic training at Sciences Po Paris, Columbia University, and Cambridge University, Elisa specialized in the field of environmental governance, conflict mediation, and risk management. She spent time interning with the United Nations Environment Programme (UNEP) in New York and non-governmental organizations

in Guatemala and Madagascar, concentrating on sustainable development issues and indigenous people rights. Elisa earned her Master's in International Affairs (with distinction) from Sciences Po Paris, and holds a Bachelor's degree in Political Science and Philosophy from the University of Heidelberg.

Professor Brian Burdekin AO
Raoul Wallenberg Institute of Human Rights and Humanitarian Law,
University of Lund, Sweden

Brian Burdekin is currently Visiting Professor at the Raoul Wallenberg Institute in Sweden, teaches in the post-graduate program at Melbourne University Law School Australia and is international adviser to a number of national human rights institutions in Africa, Asia and Central and Eastern Europe.

From 1995 to 2003, as Special Adviser on National Institutions to the first three United Nations High Commissioners for Human Rights, he conducted over 200 missions to 55 countries in Africa, the Asia-Pacific, Europe and Latin America where governments or civil society had expressed a genuine interest in establishing an independent Human Rights Commission.

Prior to his appointment with the United Nations, Professor Burdekin was, from 1986 to 1994, the first Federal Human Rights Commissioner of Australia. From 1978 to 1986 he was principal adviser to a former Australian Prime Minister, Deputy Prime Minister, Minister for Trade and Federal Attorney General. Prior to this he was a diplomat and lawyer.

In June 1985, Professor Burdekin was made an Officer of the Order of Australia for his services to human rights both in Australia and other countries. He is generally considered to be the leading international expert on national human rights institutions.

Professor Donna Craig
Centre for Environmental Law, Macquarie
University, Australia

Donna Craig is an academic and specialist practitioner in the area of international and national environmental law and policy. She obtained a Masters degree in Environmental Law from Osgoode Hall Law School, York University, Canada in 1983. Donna has over 30 years experience in research, legal practice, teaching and working with communities, indigenous peoples' organisations, governments and corporations. Her many publications emphasise the social, cultural and human rights dimensions of environmental and social impact assessment and sustainable development. In private practice, Donna has developed corporate environmental management strategies, compliance training and environmental audit programmes. She has worked with

Aboriginal organisations developing environmental management regimes and advised on their rights under national laws, treaties and environmental and human rights conventions.

Donna is currently Professor in Law and the Co-Director of the Environmental Law Centre at Macquarie University and Director of their Indigenous rights research program, Member the *Northern Territory Environmental Protection Authority* (2007-2010), Foundation and continuing member of Advisory Board of Greenland-based *International Training Center of Indigenous Peoples* (ITCIP), Regional Governor of the International Council on Environmental Law.

Her past positions include Foundation Professor of Desert Knowledge, Institute of Advanced Studies, Charles Darwin University (2004-2007), Foundation Member of Governing Board of the *IUCN Academy of Environmental Law* (2006-2007), Foundation Convener of *IUCN CEL Specialist Group on Indigenous Peoples and Environmental Law*.

Her relevant publications include:

-Nettheim,G, Meyers,G and Craig,D *Indigenous Peoples and Governance Structures: A Comparative Analysis of Land and Resource Management Rights*, Aboriginal Studies Press, Canberra, 2002;

-Craig,D, Robinson,N and Koh,KL (eds), *Capacity Building for Environmental Law in the Asian and Pacific Region ; Approaches and Resources* (Two Volumes), Asian Development Bank, Manilla,2002.

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Professor Asbjørn Eide
Norwegian Center for Human Rights,
University of Oslo, Norway

Asbjørn Eide, b. 1933, is former Director and presently Senior Fellow of the Norwegian Center for Human Rights at the University of Oslo. He has been Professor at Gothenburg University and guest Professor at the University of Lund and Adjunct Professor at American University, Washington DC.

He was previously a Director of the International Peace Research Institute in Oslo, a former Secretary-General of the International Peace Research Association, and the author of numerous books, contributions to books, articles in periodicals and studies for the United Nations on peace and conflict issues and human rights, including the seminal study on the right to adequate food as a human rights (1987) which has affected the subsequent literature and monitoring of economic, social and cultural rights.

Among the books edited by him is *'The Universal Declaration of Human Rights: A Common Standard of Achievement'* (with Gudmundur Alfredsson) and *'Economic, Social and Cultural Rights: A textbook'* (with C.Krause and A.Rosas).

He was for 20 years, until 2004, expert member of the United Nations Sub-Commission on Promotion and Protection of Human Rights, the first Chairman of its Working Group on the Rights of Indigenous Peoples, and from 1995 to 2004 Chairman of the United Nations Working Group on the Rights of Minorities. From 2002 to 2006 he was member and from 2004 the President of the Advisory Committee on the Council of Europe's Framework Convention for the Protection of National Minorities. He is the President of the Panel of Eminent Experts on Ethics in Food and Agriculture, appointed by the Director General of FAO.

Professor Malgosia Fitzmaurice
Queen Mary, University of London,
United Kingdom

Professor Malgosia Fitzmaurice holds a chair of Public International Law at Queen Mary, University of London. Her main research interests include: the law of treaties, international environmental law (with a special focus on Polar law, water law and human right to clean environment) and indigenous peoples, of the Northern Europe, the Saami. She has published extensively on all these topics and in 2001 delivered the Hague Academy of International Law lectures on International Protection of the Environment.

Mr. Matthew D. Garfield
C.Med., C.Arb., LL.B.

Matthew D. Garfield is a Chartered Mediator and Chartered Arbitrator, specializing in human rights and workplace disputes. In addition to carrying on his private practice, he is also a part-time Member of the Canadian Human Rights Tribunal. In that capacity, he adjudicates cases under the *Canadian Human Rights Act* involving claims of discrimination, harassment and retaliation.

Since 2005, he has been the Monitor for the implementation of the Orders of the Honourable Alvin Rosenberg in the case of *Lepofsky v. Toronto Transit Commission*, involving disability accommodation/ accessibility issues on the entire TTC fleet (subway, buses and streetcars). Mr. Garfield also serves on the Selection Advisory Board for the appointment of members to the Immigration and Refugee Board of Canada, the equivalent of the Judicial Advisory Committee for IRB members.

From 2000-04, Mr. Garfield was the Chair of the Human Rights Tribunal of Ontario. He joined the tribunal as Vice-Chair in 1998. Prior to his appointment to the tribunal, Mr. Garfield practised law in Toronto. He graduated from Dalhousie Law

School in 1988 and was a recipient of the class prize in constitutional law. He was called to the Nova Scotia Bar in 1989 and the Ontario Bar in 1992. He was also the Co-Chair of the 2001 Conference of Ontario Boards and Agencies. In 2006, Mr. Garfield received an Award from the Society of Ontario Adjudicators and Regulators for his contributions to its programs and activities.

Mr. Garfield will be teaching abroad in 2008-09 as Assistant Professor of Law at the University of Akureyri in Iceland.

Dr. Alan D. Hemmings
Senior Fellow, Gateway Antarctica Centre for Antarctic Studies and Research, University of Canterbury, New Zealand and Research Associate, Institute of Antarctic and Southern Ocean Studies, University of Tasmania, Australia

Alan Hemmings, trained as a zoologist, is now a specialist on Antarctic governance and environmental management based in Canberra. He is presently focussed on the ways in which globalisation and the erosion of Antarctica's historic physical and political isolation is affecting post Cold-War Antarctica and the wider Antarctic politico-legal regime, and the growing pressures on Antarctica from familiar industries such as fishing and tourism and emergent activities such as bioprospecting and nanotechnology.

Hemmings spent two and a half years, including two winters, in Antarctica with the British Antarctic Survey, and has subsequently been to Antarctica and the subantarctic with the French and New Zealand Antarctic programmes, Greenpeace and as New Zealand Government Representative on a tourist ship. He has participated in the annual Antarctic Treaty Consultative Meetings, meetings of experts groups on tourism, liability, and meetings of the Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR) since 1989.

He is currently appointed by the Minister for Environment, Heritage and the Arts to Australia's Antarctic Science Advisory Committee. Hemmings has been a Senior Adviser to the Antarctic and Southern Ocean Coalition and chaired IUCN's Antarctic Advisory Committee. He was a lead author in the UN Environment Programme's 2007 *Global Environment Outlook (GEO 4): Environment and Development* and an editor of *Looking South: Australia's Antarctic Agenda*, published by Federation Press in 2007.

Dr. Marie Jacobsson
Principal Legal Adviser on International Law, Swedish Ministry for Foreign Affairs, Member of the United Nations International Law Commission and Associate Professor, University of Lund, Sweden

Dr. Marie Jacobsson is the Principal Legal Adviser on International Law to the Swedish Ministry for Foreign Affairs (MoFA) and a Member of the United Nations International Law Commission (ILC). Dr. Jacobsson is also Associate Professor of International Law at the University of Lund, Sweden and has extensive experience in the field of polar law and politics.

Professor Michael Jeffery, QC
Centre for Environmental Law, Macquarie University, Australia

Professor Jeffery holds a Chair in Law in the Division of Law at Macquarie University, Sydney and is Director of the University's Centre for Environmental Law (MU-CEL). Appointed a Queen's Counsel in 1978 he practiced for many years at the Canadian Bar and chaired the Environmental Assessment Board of Ontario, in the 1980s. He served as Dean of Macquarie's Division of Law in 1999 during a critical restructuring of the University and completed two terms as Head of the Department of Environmental Law.

He is the immediate past Deputy Chair of the IUCN's Commission on Environmental Law and Regional Governor of the International Council of Environmental Law and currently serves as a Board Member of the New South Wales' Environmental Defender's Office.

In 2004 he founded the Macquarie University *Journal of International and Comparative Environmental Law* and has been its Editor-in-Chief since its inception. His teaching and research interests lie primarily in the area of international environmental law and he has undertaken extensive research and published recent articles on environmental governance, climate change and the use of market-based financial mechanisms, biodiversity and bioprospecting, the impact of IPRs and trade-related issues on biodiversity and the need for intervenor funding in the context of public participation in environmental decision-making. He has taught components of marine law for many years as part of both undergraduate and postgraduate course on international environmental law and has supervised and examined PhD candidates completing their theses on marine and ocean governance related topics.

Professor Timo Koivurova
Northern Institute for Environmental and Minority Law, Arctic Centre, University of Lapland, Finland

Research Professor Timo Koivurova has specialized in various aspects of international law applicable in the Arctic and Antarctic region. In 2001, Koivurova defended his doctoral dissertation in the University of Lapland on the topic of environmental impact assessment (EIA) as it applies in the Arctic. Increasingly, his research work addresses the interplay

between different levels of environmental law, as in the study he conducted over the Vuotos case (proposed construction of an artificial lake in the upper part of the Kemijoki river).

Professor Koivurova's current research includes topics such as the legal status of indigenous peoples, law of the sea in the Arctic waters, the role of law in mitigating/adapting to climate change and the function and role of the Arctic Council in view of its future challenges.

He has been involved as an expert in several international processes globally and in the Arctic region, for instance, in the drafting of the Guidelines for EIA in the Arctic. Professor Koivurova has been and is involved in many international research projects. He was a co-leader of a global research project on the theory and practise of transboundary environmental impact assessment, the outcome of this research project now being published by Martinus Nijhoff Publishers (2008).

He is a research leader-in-charge in Finnish Academy funded CIGSAC (The Capability of International Governance Systems in the Arctic to Contribute to the mitigation of Climate Change and Adjust to its Consequences) and Commission of the EU funded project comparing the ocean governance and law of the sea positions of Canada and EU respectively (co-director). He is also in charge of research group having as its aim to outline the policy and legal context in the Arctic marine region, this research group being part of the EU Commission funded "TRANSFORM: Transatlantic Policy Options for Supporting Adaptations in the Marine Arctic", which was accepted as part of Commission's "Transatlantic Methods for Handling Global Challenges EU-US" programme.

Dr. David Leary
JSPS-UNU Postdoctoral Fellow, United Nations University-Institute of Advanced Studies, Japan

David Leary is from Australia. He graduated with a BA majoring in Political Science and an LLB from the University of New South Wales (Sydney, Australia) in 1992. He obtained an LLM majoring in International Law from the same university in 2001 and a PhD for a thesis relating to International law and the status of the genetic resources of the deep sea in areas beyond national jurisdiction from Macquarie University, Sydney in 2006. His thesis has subsequently been published as a book *International Law and the Genetic Resources of the Deep Sea* (Martinus Nijhoff, 2007). He has also published journal articles on Arctic and Antarctic Affairs, the Law of the Sea and International Environmental law.

David is admitted as a Solicitor of the Supreme Courts of New South Wales and Western Australia and the High Court of Australia and had extensive experience

as a lawyer in practice and as in house counsel for a multinational corporation before becoming an academic. He has previously taught in undergraduate and postgraduate programs, mostly in the fields of international environmental law and international marine law at universities in Australia. He is a member of the IUCN Commission on Environmental Law and its working group on high seas governance. He is also Rapporteur on the International Maritime Organisation for the *Yearbook of International Environmental Law* and is a member of the panel of book reviewers for the *Law Society Journal*.

At UNU-IAS David is a Postdoctoral Fellow where he has just completed a two year research project analysing law, policy and governance regimes for bioprospecting in the Arctic and Antarctica. As part of this research he recently published a UNU-IAS Report on *Bioprospecting in the Arctic* and several journal articles on this topic as well as on the status of marine genetic resources in areas beyond national jurisdiction. His research was funded by the Japan Society for the Promotion of Science. His current research interests are in the broad areas of polar environmental governance, climate change mitigation and adaptation, nanotechnology and marine biotechnology.

Professor Rene Lefebber
Dutch Ministry of Foreign Affairs and Professor in International Environmental Law,
University of Amsterdam, The Netherlands

René Lefebber is legal counsel in the International Law Division of the Netherlands Ministry of Foreign Affairs since 2000 and holds a chair in International Environmental Law in the Faculty of Law of the University of Amsterdam since 2008. As legal counsel, he advises his Government on international law and represents the Kingdom of the Netherlands in international negotiations.

From 1994 to 2000, he worked for the legal services of the Ministry of Housing, Spatial Planning and the Environment and the Ministry of Economic Affairs. Before that, he was Assistant Professor teaching Law of International Organisations at the University of Leiden, and research trainee and Assistant Professor in International Law at the University of Amsterdam. René Lefebber studied Dutch Law and Political Science at the University of Leiden, and obtained his PhD from the University of Amsterdam in 1996 with a dissertation entitled *Transboundary Environmental Interference and the Origin of State Liability*.

The research of René Lefebber focuses on liability for environmental damage, compliance with international environmental law, and the sustainable management of international areas. The primary environmental aspects which his work deals with are climate change and the use of new technologies. His research is closely connected to his professional

international experience. René Lefebvre is chair of multilateral negotiations on damage caused by the use of biotechnology, member of the Kyoto Protocol Compliance Committee, and represents the Kingdom of the Netherlands in international negotiations relating to the management of international areas.

Dr. Natalia Loukacheva
Director of the Polar Law Program,
University of Akureyri, Iceland

Natalia Loukacheva is Director of the Polar Law Program and teaches law at the University of Akureyri. She is also a research associate at the Munk Centre for International Studies, University of Toronto, Canada. Natalia obtained her Diploma in Jurisprudence (With Distinction) and her Ph.D. degree from the Urals State Law Academy, Yekaterinburg, the Russian Federation and her Doctor of Juridical Science degree (S.J.D.) from the University of Toronto. She specializes in public law and has research interests in the Arctic. Natalia holds numerous academic awards and has been engaged in different initiatives that deal with legal issues in the Arctic. She is the author of the *Arctic Promise: Legal and Political Autonomy of Greenland and Nunavut*, (University of Toronto Press, 2007) and has several publications on the issues of governance in the North and legal challenges in the Arctic.

Professor Said Mahmoudi
Stockholm University, Sweden

Said Mahmoudi, LL.D. is Professor and Head of the Department of international law at Stockholm University. He is a member of International Advisory Board of the Law of the Sea Institute, University of California, Berkeley; Conseil européen du droit de l'environnement (CEDE); International Council of Environmental Law (ICEL) and International Jury for the Elizabeth Haub Prize in Environmental Law. His publications cover several areas of international law, particularly international environmental law and law of the sea.

Ms. Antje Neumann

Antje Neumann studied law at the Humboldt University of Berlin, Germany, from 1988 until 1992, followed by a legal internship between 1992 until 1995 where she specialized in national, European and international environmental law. During that time she also served at the Centre of Environmental Law at the University Robert Schuman in Strasbourg, France, under the supervision of Prof. Dr. jur. Alexandre Kiss where her research compared the protection of nature under the German and the French Law.

Since 2001, when she began working at the relevant section of the German Federal Environmental Agency, she has been involved in Antarctic matters. In this context her field of work included especially

the implementation of the Environmental Protocol to the Antarctic Treaty into national legislation as well as the elaboration of legal measures aiming at the protection of the environment such as the regulation of Antarctic tourism. She has also taken part in the Antarctic Treaty Consultative Meetings between 2001 and 2006, and been actively involved in several inter-sessional working groups established by these meetings and dealing with specific issues of environment protection.

Since she has been involved in Antarctic matters, her work has focussed on area protection and management. From a practical point of view, she especially dealt with the preparation of Fildes Peninsula and Ardley Island (an area on King George Island, Antarctica) designation as an "Antarctic Specially Managed Area" (ASMA). Her current academic research is focussing on the effectiveness and possible future development of that instrument. This research is conducted in close cooperation with Dr. Kees Bastmeijer of Tilburg University in the Netherlands.

Mr. Daniel Owen
Barrister , Fenners Chambers,
Cambridge, United Kingdom

Daniel Owen is a barrister at the bar of England and Wales. He specialises in international, European Community and United Kingdom law regulating the use of the marine environment. His practice covers both environmental protection and conduct of marine activities more generally. He deals with maritime zones under coastal State jurisdiction as well as areas beyond national jurisdiction. He is currently co-writing a book, *The EU Common Fisheries Policy: Law and Practice*, which is due to be published in 2009 by Oxford University Press. Daniel's first degree is in zoology, from Oxford University. Prior to becoming a barrister, he worked as a technical adviser for the International Tanker Owners Pollution Federation and then as a marine policy officer for the Royal Society for the Protection of Birds. In 1999 Daniel worked as a CCAMLR observer on a toothfish longliner in the Southern Ocean and in 2000 he spent five months as a 'stagiaire' in the legal unit of the European Commission's DG Fisheries in Brussels.

Ms. Sandra Potter
University of Tasmania, Australia

Sandra Potter is a researcher with the University of Tasmania's School of Geography and Environmental Studies, and a Senior Environmental Policy Advisor with the Antarctic Division of the Australian Government Department of the Environment, Water, Heritage and the Arts. In the latter role she heads the team responsible for the administration of the Australian Antarctic Territory and Australia's legislation implementing the Protocol on Environmental Protection to the Antarctic Treaty.

In the course of her twenty plus years with the Antarctic Division, Sandra Potter has travelled to the Antarctic and sub-Antarctic more than a dozen times – including as a leader of marine science and resupply voyages, as a guest of Antarctica New Zealand and, most recently, with the 53rd Russian Antarctic Expedition.

Mr. Martin Pratt
International Boundaries Research Unit,
Durham University, United Kingdom

Martin Pratt joined the International Boundaries Research Unit at Durham University in 1994 and is now the Unit's Director of Research. He has written extensively on land and maritime boundary issues around the world and has advised governments, NGOs and commercial organisations on a wide range of boundary and sovereignty disputes. Martin coordinates IBRU's consultancy and training programmes, and manages the Unit's website, GIS resources and the *int-boundaries* email list.

Recent projects in which Martin has been involved include: technical support to the government of Trinidad and Tobago in its maritime boundary arbitration with Barbados; geographical and historical research on boundary issues between Israel and Palestine; and support to the African Union Border Programme.

In August 2008 Martin prepared a detailed map of maritime jurisdiction in the Arctic region which received international media coverage. Recent publications include: *How to deal with maritime boundary uncertainty in oil and gas exploration and production areas* (with D.W. Smith, Association of International Petroleum Negotiators Research Papers, 2007); *A terminal crisis? Examining the breakdown of the Eritrea-Ethiopia boundary dispute resolution process* (Conflict Management and Peace Science, 2006); and *The role of the technical expert in maritime delimitation cases* (Maritime Delimitation: Proceedings of the 2004 Symposium of the International Foundation for the Law of the Sea, 2006).

Professor Rosemary Rayfuse
Faculty of Law, University of New South Wales,
Australia

Professor Rayfuse (LLB Queen's, LLM Cantab., PhD Utrecht) is a Professor of International Law in the Faculty of Law at the University of New South Wales, Sydney, Australia. She has published widely on issues of public international law, particularly on the law of the sea and issues relating to high seas governance and sustainability, compliance and enforcement in high seas fisheries, and is the author of *Non-Flag State Enforcement in High Seas Fisheries* (Martinus Nijhoff, 2004). She has also published on issues relating to polar oceans governance in a warming world. Her

current research focuses on the normative effect of climate change adaptation and mitigation responses on international legal regimes.

Professor Rayfuse is the founding editor of the *ICSID Reports* and the *Australian Indigenous Law Reporter*, and is on the editorial and advisory boards of a number of international law journals. She is a member of the Australia Canada Oceans Research Network and the IUCN Commission on Environmental Law and Co-chair of its Working Group on High Seas Governance. She has been a consultant to the United Nations Office of Legal Affairs, the Australian and Canadian governments, and numerous non-governmental organisations including the International Committee of the Red Cross, the Australian and Canadian Red Cross societies, the World Wildlife Fund (WWF) and TRAFFIC Oceania.

Professor Rayfuse has been a frequent visitor to both the Arctic and the Antarctic. In 2006, her attempt to ski from the North Pole to Canada was cut short by rapidly deteriorating sea-ice conditions.

Mr. Kari a Rogvi M.P.
Lawyer and Member of Parliament, Faroe
Islands

Kári á Rógvi is a practicing lawyer in the Faroe Islands and holds an LLM from the University of Aberdeen. In 2008 he was elected as a Member of the Faroese Parliament.

From 2003 he has served as Vice Chairman of the Faroese Constitutional Committee and from 2003 he has also served as Chair of Committee to draft legislation for Faroese labour negotiations and dispute resolution.

From 2002 he has been a Teacher of Law and Co-ordinator of 'Law in the Faroes' a broad project to create and fund law at the University of the Faroe Islands. From 2001-2004 he served as Editor-in-Chief and later Editor of the Faroese Law Review.

Dr. Tatiana Saksina
WWF International Arctic Programme

Dr. Tatiana Saksina holds the position of Arctic Governance Officer at the WWF International Arctic Programme, based in Oslo. She worked as a Senior Legal Adviser for the Council for the Study of Productive Resources of the Russian Academy of Sciences and the Ministry of Economic Development and Trade before joining the WWF International Arctic Programme.

Dr. Tatiana Saksina holds a Ph.D. degree in International Law from Moscow State Institute of International Relations. Her thesis focused on the arbitration of law of the sea disputes. She also holds an LL.M. degree in International Maritime Law from

the IMO International Maritime Law Institute. She did her internship at the International Maritime Organization. Dr. Saksina has several publications on issues relating to the law of the sea.

Professor Tullio Scovazzi
University of Milan, Italy

Tullio Scovazzi is Professor of International Law at the University of Milano-Bicocca, Milan, Italy. His main fields of research are international law of the sea, environmental law, law of polar spaces, cultural matters. He occasionally participates in international negotiations as legal expert of Italy.

Mr. Andrew Serdy
University of Southampton, United Kingdom

Andrew lectures in Public International Law and the International Law of the Sea at the School of Law, University of Southampton in the United Kingdom. Since 2004 he has also been a Visiting Fellow in the Faculty of Law at the University of Wollongong (NSW), Australia.

Before his appointment to the University of Southampton in 2005, Andrew was first briefly an employed solicitor with Freehill, Hollingdale & Page in Sydney and then worked for many years in the Australian Government Department of Foreign Affairs and Trade. There he first served in a number of diplomatic positions (including postings in Tokyo and Warsaw), before specialising from 1996 in the law of the sea in the Department's Sea Law, Environmental Law and Antarctic Policy Section, from 2002 as Executive Officer (i.e. deputy director). In this capacity he drafted significant parts of Australia's November 2004 submission under the UN Convention on the Law of the Sea (UNCLOS) to the Commission on the Limits of the Continental Shelf on the outer limits of Australia's shelf where it extends beyond 200 miles from the territorial sea baseline, as well as being a member of the team that formally presented the submission to the Commission, and interacted with the sub-commission established to examine it, at its 15th session in New York in April 2005.

Earlier, Andrew appeared for Australia in 2000 in the Southern Bluefin Tuna case - the first ever to come before an UNCLOS Annex VII tribunal. Andrew is a member of the Board of Editors of *Ocean Development and International Law*.

Ms. Kassie Siegel
Director-Climate Change Program,
Center for Biological Diversity, USA

Kassie Siegel is the climate program director at the Center for Biological Diversity, a US non-governmental organization which combines conservation biology with litigation, policy advocacy, and an innovative strategic vision to secure a future

for animals and plants hovering on the brink of extinction, for the wild areas they need to survive, and by extension for the physical, spiritual, and cultural welfare of generations to come.

Siegel is a graduate of the Boalt Hall School of Law at the University of California. She develops and implements campaigns and strategies for the reduction of greenhouse gas pollution and the protection of wildlife threatened by global warming, and also litigates cases addressing global warming under U.S. federal and state law.

Siegel is the author of the Petition submitted by the Center for Biological Diversity in February 2005 seeking protection of the polar bear under the U.S. Endangered Species Act, and lead counsel in the litigation seeking full protection for the species. She has drafted similar petitions for other species threatened by global warming, such as twelve of the world's penguin species, including the Emperor penguin. Siegel is also a volunteer presenter for the Climate Project.

Mr. Olav Schram Stokke
Fridtjof Nansen Institute, Norway

Olav Schram Stokke is a Senior Research Fellow at the Fridtjof Nansen Institute, Norway. His research area is international political economy, with special emphasis on regime theory, international management of natural resources and the environment, and Arctic and Antarctic regional cooperation.

Stokke has published extensively in these fields, including the books *International Cooperation and Arctic Governance* (Routledge 2007), *Implementing the Climate Regime* (Earthscan 2005), *Governing High Seas Fisheries* (Oxford University Press 2001), *Governing the Antarctic* (Cambridge University Press 1996), and *The Barents Region: Cooperation in Arctic Europe* (SAGE 1994). His work is published in leading international journals, including *Annals of the American Academy for Political and Social Science*, *Journal of Business Research*, *Ocean Development and International Law*, *Global Environmental Politics*, *International Environmental Agreements*, *Marine Policy*, *Ocean and Coastal Management*, and *Cooperation and Conflict*. Stokke is a member of the editorial board of *Global Environmental Politics*.

Dr. Arie Trouwborst
Netherlands Institute for the Law of the Sea,
Utrecht University, The Netherlands

Dr. Arie Trouwborst, LL.M., lectures on international and European (environmental) law at Utrecht University School of Law and is a research associate at the Netherlands Institute for the Law of the Sea (NILOS). In 2000 he graduated from Utrecht University in international law. He developed an interest for polar issues when attending the

interdisciplinary Arctic Studies Program at the University of Lapland, Rovaniemi, during the first half of 1998. Other parts of the studies were spent at Justus Liebig University in Gießen, Germany, and the University of Granada, Spain.

Trouwborst's research interests cover international, European and national environmental law, especially nature conservation law, and the law of the sea. His publications include two books on the precautionary principle in international law, a topic on which he obtained a Ph.D. with distinction from Utrecht University in 2006. He has been awarded several research prizes, most recently by the Praemium Erasmianum Foundation in 2007, and has been a speaker at international conferences on various international and European environmental law themes. Current research focuses, inter alia, on species and area protection in the North Sea, and on the global and regional regulation of seabird bycatch in fisheries.

Professor David VanderZwaag
Marine & Environmental Law Institute
Dalhousie University, Canada

Professor David VanderZwaag holds the Canada Research Chair (Tier 1) in Ocean Law and Governance at the Marine & Environmental Law Institute, Dalhousie University, Halifax, Canada. He teaches in the areas of international environmental law and law of the sea. He is the past Co-director of Dalhousie's interdisciplinary Marine Affairs Program (1986-1991) and present Director of the Marine & Environmental Law Institute.

Professor VanderZwaag is currently a member of the IUCN's Commission on Environmental Law (CEL) and Co-chair of the CEL's Specialist Group on Oceans, Coasts & Coral Reefs. He is a Co-founder and Co-chair of the Australian-Canadian Oceans Research Network (ACORN) and has had extensive research and lecturing experience in South and Southeast Asia, the South Pacific, Australia and the Caribbean.

Professor VanderZwaag has authored over fifty papers in the marine and environmental law field. His most recent book publications are *Towards Principled Oceans Governance: Australian and Canadian Approaches and Challenges* (edited with D.R. Rothwell) (London: Routledge Press, 2006) and *Aquaculture Law and Policy: Towards Principled Access and Operations* (edited with Gloria Chao) (London: Routledge Press, 2006).

He has co-lead the writing of the ocean governance technical report for the Arctic Marine Shipping Assessment under the auspices of the Protection of the Arctic Marine Environment (PAME) Working Group of the Arctic Council.

Professor VanderZwaag's educational background includes: PhD (1994, University of Wales, Cardiff), LL.M. (1982, Dalhousie Law School), J.D. (1980, University of Arkansas Law School), M.Div. (1974, Princeton Theological Seminary), and B.A. (1971, Calvin College).

Dr. Robin Warner
Australian National Centre for Ocean Resources
and Security, University of Wollongong,
Australia

Dr. Robin Warner is a Senior Research Fellow at the Australian National Centre for Ocean Resources and Security. Her expertise and research interests include Law of the Sea, oceans governance, marine environmental law, transnational crime and international criminal law. She was formerly the Assistant Secretary of the International Crime Branch of the Criminal Justice Division in the Commonwealth Attorney General's Department from 2002 to 2006. During that period she led several Australian delegations negotiating mutual assistance, extradition and international transfer of prisoners treaties with regional partners and Australian delegations to the UN Convention against Corruption negotiations in Vienna and the OECD Working Group on Foreign Bribery in Paris.

Previously Dr. Warner served with the Royal Australian Navy as a legal officer. During her Defence Force legal career, she occupied a wide range of positions including Director of International Law for the Australian Defence Force and Deputy Director of Naval Legal Services. From 1996 to 2001, she was a member of several Australian delegations to multilateral and bilateral negotiations on Indonesia's archipelagic sea lanes proposal and to the UN Informal Consultative Process on the Oceans.

Dr. Warner is a graduate in Arts and Law from the University of Sydney and holds a Master of International Law degree from the Australian National University. She graduated as a PhD from the University of Sydney in November 2006. Her PhD research concerned the international law framework for protection of the marine environment and marine biodiversity beyond national jurisdiction. She has published articles and chapters in Australian and international journals and books on international law.

Annex 3 List of Participants

Name	Institution	Country
Anna Adalstiend	University of Akureyri	Iceland
Brynjar H. Agersson	University of Akureyri	Iceland
Professor Gudmundur Alfredsson	University of Akureyri	Iceland
Adjunct Professor Agust Thor Arnason	University of Akureyri	Iceland
Johann Asmundsson	University of Akureyri	Iceland
Professor Alyson Bailes	University of Iceland	United Kingdom
Professor Nigel Bankes	University of Calgary	Canada
Tom Barry	CAFF International Secretariat, Arctic Council	Iceland
Dr. Kees Bastmeijer	Tilburg University	The Netherlands
Professor Paul Berkman	Cambridge University	United Kingdom
Harry Borlase	University of Akureyri	Canada/Iceland
Professor Brian Burdekin	Raoul Wallenberg Institute, Lund University	Sweden
Ms. Elisa Burchert	Ruprecht-Karls University of Heidelberg	Germany
Professor Ove Bring	Swedish National Defense College	Sweden
Yi Chao Chen	University of Akureyri	China
Professor Donna Craig	Centre for Environmental Law, Macquarie University	Australia
Mr. Brendan Cummings	Centre for Biological Diversity	USA
Professor Asbjörn Eide	Norwegian Centre for Human Rights	Norway
Dr. Niels Einarsson	Vilhjalmur Stefansson Institute	Iceland
Gudbergur Egill Eyjolfson	Farmer	Iceland
Hildur Solveig Elvarsdottir	University of Akureyri	Iceland
Sebastian Erlandsson	University of Akureyri	Iceland
Professor Malgosia Fitzmaurice	Queen Mary, University of London	United Kingdom
Dr. Ingvar B. Fridleifsson	United Nations University-Geothermal Programme	Iceland
Professor. Matthew Garfield	University of Akureyri	Iceland/Canada
H.E. President Mr. Ólafur Ragnar Grímsson	The Government of the Republic of Iceland	Iceland
Soffia Gudmundsdottir	Programme for the Protection of the Arctic Marine Environment (PAME)	Iceland
Professor Thorsteinn Gunnarsson	Rector, University of Akureyri	Iceland
Huni H. Hallsson	University of Akureyri	Iceland
Sara Halldorsdottir	University of Akureyri	Iceland
Dr. Alan Hemmings	University of Canterbury and University of Tasmania	New Zealand/Australia
Dr. Jon Haukur Ingimundarsson	Stefansson Arctic Institute	Iceland
Georg F. Isaksson	University of Akureyri	Iceland
Professor Hiroji Isozaki	Meiji Gakuin University	Japan
Dr. Marie Jacobsson	Ministry for Foreign Affairs, Sweden	Sweden
Dr. Thor Edward Jakobsson	Stefansson Arctic Institute, Akureyri.	Iceland

Name	Institution	Country
Professor Michael Jeffery Q.C.	Centre for Environmental Law, Macquarie University	Australia
Rachael Larra Johnstone	University of Akureyri	Iceland
Nadja Jonsson	University of Akureyri	Iceland
Dr. Bakary Kante	United Nations Environment Programme	Senegal
Professor Timo Koivurova	University of Lapland	Finland
Dr. Joan Nymand Larsen	Stefansson Arctic Institute	Iceland
Kari Fannour Larusson	University of Akureyri	Iceland
Dr. David Leary	United Nations University-Institute of Advanced Studies	Australia
Professor Rene Lefebvre	Dutch Ministry of Foreign Affairs and University of Amsterdam	The Netherlands
Dr. Natalia Loukacheva	University of Akureyri	Iceland/Canada
Professor Said Mahmoudi	Stockholm University	Sweden
Antje Neumann	University of Akureyri	Germany
Embla Oddsdottir	University of Akureyri	Iceland
Daniel Owen	Fenners Chambers, Cambridge	United Kingdom
Associate Professor Kae Oyama	Chukyo University	Japan
Ms. Sandra Potter	School of Geography and Environmental Studies, University of Tasmania	Australia
Mr Martin Pratt	Durham University	United Kingdom
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Dr. Tatiana Saksina	WWF Arctic Programme	
Professor Tulio Scovazzi	University of Milano-Bicocca	Italy
Mr. Andrew Serdy	University of Southampton	United Kingdom
Ms. Kassie Siegel	Centre for Biological Diversity	USA
Mr. Olav Schram Stokke	Fridtjof Nansen Institute	Norway
Professor Baldur Torhallsson	Institute of International Affairs and Centre for Small State Studies, University of Iceland	Iceland
Dr. Arie Trouwborst	Netherlands Institute for the Law of the Sea, Utrecht University	The Netherlands
Professor David VanderZwaag	Marine & Environmental Law Institute, Dalhousie University	Canada
H.E. Mr Patrick Van Kaveren	Ministre conseiller, Principauté de Monaco	Principauté de Monaco
Dr. Robin Warner	Australian National Centre for Ocean Resources and Security, University of Wollongong	Australia
Professor A.H. Zakri	United Nations University Institute of Advanced Studies	Malaysia

Endnotes

¹ International Polar Year web site, <http://www.ipy.org/index.php?/ipy/about/>

² Danish Ministry of Foreign Affairs, Web site of the Embassy of Denmark to Washington D.C., <http://www.ambwashington.um.dk/en/menu/TheEmbassy/News/News+2008/DenmarkHoststheFiveNationsArcticOceanConferenceInGreenland.htm>

³ The speech was delivered without notes. This is a post-speech typescript.

⁴ The research for this database has been carried out by Sam Johnston, Kirsty Galloway McLean, Catherine Monagle and Marjo Vierros and David Leary. David Leary has contributed to this database including in particular data on bioprospecting in

the Arctic, elements of the reference list on both scientific, law and policy literature available on the database and other data.

⁵ D. Leary, *UNU-IAS Report-Bioprospecting in the Arctic*, (Yokohama, 2008). A PDF version of this report can be downloaded from http://www.ias.unu.edu/sub_page.aspx?catID=111&ddlID=674

⁶ The contribution of Olav Schram Stokke in suggesting this structure is acknowledged.

⁷ *Indigenous Affairs* 1-2/08

⁸ *ibid.*

⁹ *ibid.*

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