New Knowledge and Changing Circumstances in the Law of the Sea

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Day 1 (28 June 2018): Introduction

The Chairman of the Conference, **Tomas Heidar**, **Judge** of the International Tribunal for the Law of the Sea (ITLOS) and Director of the **Law of the Sea Institute of Iceland**, gave brief welcome remarks to open the Conference.[1] He thanked the co-host, the Korea Maritime Institute (KMI), and the associate sponsors, the Nordic Council of Ministers, the Netherlands Government and the K.G. Jebsen Centre for the Law of the Sea. He noted that the Conference had 127 registrants from 45 countries. The Conference focuses on topics where there has been a particular advancement in knowledge since the UN Convention on the Law of the Sea (UNCLOS or Convention) was negotiated—marine biological diversity of areas beyond national jurisdiction (BBNJ), the outer limits of the continental shelf and deep seabed mineral resources—and topics related to changed circumstances due to global warming—particularly sea level rise and the shrinking Arctic ice pack in the Central Arctic Ocean (CAO). Judge Heidar noted that confronting these issues may require different responses and solutions, and some may require new instruments, as is demonstrated by, inter alia, the BBNJ intergovernmental conference. He mentioned that in the coming weeks, a Conference report would be prepared and put on the website and that in due course, all the papers delivered at the Conference would be published in a book. The introduction concluded with a moment of silence in memory of the late Professor David Caron.

Mr. Joung Myung-saeng, Vice-President of the **Korea Maritime Institute**, followed with brief welcome remarks, noting that this is the first conference held in Iceland that KMI has sponsored. KMI considers this to be honourable and meaningful work for the Institute. In particular, KMI values the fact that the Conference aims to seek a proper way to cope with challenges of advancement of new knowledge on oceans and changing circumstances calling for new development of the law of the sea. Mr. Joung expressed his opinion that the discussions and exchange of views at the Conference will contribute to new development of the law of the sea, providing proper legal tools and solutions for the new knowledge and changing circumstances in the law of the sea. He hoped this Conference would be remembered for an important role in the new developments of the law of the sea.

[1] All speakers made their remarks in their personal capacity.

H.E. Guðni Th. Jóhannesson, the President of **Iceland**, welcomed the Conference-goers to Iceland and provided an entertaining account of the Cod Wars—which refers to the serious conflicts at sea from the 1950s-1970s between the UK and Iceland as Iceland extended its fisheries zone—on which he is a leading expert. Iceland ultimately prevailed, argued the President, because it had 6 "Cs," whereas the UK had only 5 "Ps." The UK's motivations were its distant waters fishing industry (pressure), its fear of creating a precedent by giving in to Iceland's position (precedent), a sense of international prestige that it felt it needed to protect, adherence to the existing legal norm establishing a 3 M territorial sea limit (principle), and geopolitical power. On the other hand, Iceland distrusted the British (cynicism), was wary of overfishing (conservation), benefited from the sympathy of other countries (compassion) and Cold War political dynamics, stood more to lose than the UK (commitment), and ultimately benefited from the code of law, wherein UNCLOS's establishment of coastal State jurisdiction affirmed Iceland's position. The President concluded by underlining the importance of both independence and interdependence for Iceland, and noted that Icelandic self-respect derived from its control of its natural resources.

Following President Jóhannesson, **ITLOS** President **Jin-Hyun Paik** gave a keynote address on issues related to resolving disputes involving scientific and technical matters at ITLOS. Recognizing that many law of the sea disputes are at the intersection between law, science and technology, President Paik acknowledged that this presents a challenge for members of ITLOS. The drafters of the Convention and the ITLOS Rules recognized this and provided three potential innovations: article 289 of and Annex VIII to the Convention, and article 82 of the ITLOS Rules.

ITLOS has yet to confront a dispute or request for advisory opinion involving a significantly complex scientific or technical question. So far, it has devised other ways to cope with these disputes without causing serious controversy, Paik said. First, ITLOS may ask parties to negotiate to reach an agreement on a certain issue, as in the *Southern Bluefin Tuna* case. Next, it may accept scientific evidence that is agreed by the parties, or uncontested by one party. Where precautionary measures are requested, ITLOS might be disposed to rely on the existence of scientific uncertainty to order such measures.

President Paik then explained how ITLOS would likely proceed to decide disputed scientific and technical issues. The traditional approach is to rely on party expert evidence, using cross-

examination coupled with questions from the bench that could help elucidate contentious points and lead to a better understanding of the issues. The traditional approach has limitations because parties' expert opinions tend to diverge from each other, are narrowly focused and not necessarily neutral. This complicates the Tribunal's task, especially with complex issues. Article 82 of the ITLOS Rules provides for an expert to be appointed by the Tribunal, who can help the Tribunal to decide a defined subject. This has the benefit of increasing the impartiality and reliability of the evidence. Article 289 of the Convention provides for the possibility of experts sitting with a court or tribunal, without a right to vote. In such a case, the experts could provide guidance throughout the critical phase of deliberation and respond to any judge's request for assistance. Yet this broad role could give rise to the possibility that the judicial function is delegated to or compromised by outsiders. International courts and tribunals have also informally appointed experts; some have found this practice to be controversial, but in President Paik's opinion, it is not troublesome if the appointment is confined to technical issues of minor importance. He concluded by emphasizing that courts and tribunals should not be shy of enlisting experts when the need arises: this is the best way to avoid the danger of reaching a decision that the court or tribunal does not fully understand.

Panel 2: Marine Biological Diversity of Areas Beyond National Jurisdiction II: Conservation and Management Tools and the Question of Fisheries

Because of scheduling issues, the first panel was Panel 2: Marine Biological Diversity of Areas Beyond National Jurisdiction II: Conservation and Management Tools and the Question of Fisheries.

Ms. Charlotte Salpin, Legal Officer, **UN Division for Ocean Affairs and the Law of the Sea**, the moderator, introduced the topic of the panel. She identified three main governance approaches being considered by the intergovernmental conference on BBNJ in relation to area-based management tools (ABMTs), including marine protected areas: first, a global approach whereby a global overarching framework would enable the identification, designation, management and implementation of area-based management tools, including MPAs; second, a regional and/or sectoral approach, which envisions general policy guidance at the global level, while recognizing the full authority of regional and sectoral organizations in decision-making; and third, a hybrid approach involving the development of general

guidance and objectives at the global level and provide a level of oversight to the decision-making and implementation by regional and/or sectoral bodies. Ms. Salpin highlighted the different views over the inclusion of fisheries in the potential scope of a BBNJ instrument.

The first presenter was **Mr. Jehki Härkönen** of **Greenpeace Nordic**, who spoke on behalf of **Ms. Veronica Frank**, Political Advisor, **Greenpeace International**, who was unable to attend, and discussed the importance of marine protected areas (MPAs) in managing BBNJ. He began by noting that changing circumstances require a different approach in ocean management since the Convention was concluded nearly 40 years ago, underscoring the need for an integrated and ecosystem approach to the management of BBNJ. ABMTs have a key role to play in the management of biodiversity; in this regard, the panelist said, cross-sectoral marine protected areas, in particular highly protected marine reserves, are the best way to address the cumulative impacts of human activities and climate change and achieve long-term conservation of biodiversity. An MPA can offer different levels of protection to a given area, ranging from areas that allow sustainable use of the resources to areas closed to extractive activities. Currently, only 1% of the high seas are protected via MPAs, in spite of longstanding global commitments to protect 10% of the ocean by 2020 and the scientific community call to strictly protect at least 30% of it by 2030.

Mr. Härkönen identified a number of governance gaps that are currently inhibiting more robust environmental protection in areas beyond national jurisdiction (ABNJ), including the lack of a global framework to designate and implement MPAs; fragmentation; the limits of regional and sectoral action; the lack of an overarching framework for review, implementation and compliance with conservation measures; and the absence of a global process to address cumulative impacts. Of the three suggested approaches identified by Ms. Salpin, Greenpeace and High Seas Alliance underscore the need for a global approach. A future instrument on BBNJ should establish an overarching framework, including common objectives, principles and a clear duty to cooperate and set up a process for global designation by Parties of MPAs/reserves and their protection measures, in close consultation with competent sectoral and regional bodies. The instrument should also be equipped with a robust institutional framework to ensure effective implementation. According to Mr. Härkönen a global approach seems to be the most effective way to fill current governance gaps, strengthening action by existing regional and sectoral bodies and meeting global conservation targets.

Next, **Mr. Vito De Lucia** of the **K.G. Jebsen Centre for the Law of the Sea** illustrated how the ecosystem approach ("EA")—a guiding principle suggested in the report of the Preparatory Committee for the development of an international legally binding instrument under UNCLOS on the conservation and sustainable use of BBNJ ("PrepCom")—might eventually be implemented in a future BBNJ agreement. The ultimate goal of the EA is to maintain the integrity of ecosystems. The EA enables integrated management across jurisdictional boundaries, taking into account cumulative effects of activities and all forms of knowledge. Requiring detailed knowledge of ecosystem functions, it is also iterative in that it permits the constant incorporation of feedback from the management of the ecosystem and developing knowledge.

The BBNJ PrepCom report has recognized the possibility of EA's inclusion in a future agreement. Mr. De Lucia identified 3 "normative clusters" that might inform what this means: (1) the Convention on Biological Diversity, (2) UNCLOS, and (3) international freshwater law. With respect to UNCLOS, Mr. De Lucia acknowledged that the Convention was developed before EA became a widely-recognized concept but noted that some have argued that the Convention nonetheless incorporates the concept.[2] Yet, because of the vagueness of EA, simply referring to EA in a BBNJ instrument would have an insignificant impact.

An eventual BBNJ instrument will therefore have to grapple with the following issues to operationalize the concept of EA: (1) how to determine what the unit of management should be (e.g., a large marine ecosystem) and (2) how to ensure compatibility amongst different maritime zones (e.g., high seas and EEZ) and sectoral governance regimes. From Mr. De Lucia's point of view, a BBNJ agreement will need to include provisions for fisheries management and provide a mechanism for existing bodies and institutions to better coordinate their efforts.

The final presenter, **Prof. Richard Barnes** of the **University of Hull** focused on the question of the inclusion of fisheries in a BBNJ instrument, which the PrepCom report identified as a

[2] In comments following the panel, a member of the audience indicated ecosystem approach was not contemplated as part of UNCLOS's conservation framework, contrasting it with the Convention for the Conservation of Antarctic Marine Living Resources.

major point of dispute. Prof. Barnes thinks fisheries should be included in the BBNJ instrument. He gave four main reasons for this. First, fishing activity is the main threat to BBNJ. Second, the PrepCom suggested that an integrated approach be incorporated into the instrument, and in this context it would be odd for any single sector to be excluded from the instrument. Third, and relatedly, fisheries will certainly be at least indirectly affected by the instrument. Finally, Prof. Barnes observed how rare major multilateral oceans treaties are, and this may be our "moment in time."

Recognizing that the key argument against inclusion of fisheries in the BBNJ agreement is that it might undermine the existing framework for fisheries management, Prof. Barnes proposed some options to reconcile the divergent views. First, the agreement could clarify that its general principles apply to all activities, including fishing. This would not threaten existing arrangements because most general principles identified in the PrepCom are already incorporated into regional fisheries management agreements (RFMAs). Second, there could be a focus on enhanced cooperation amongst new and existing institutions and governance regimes. For example, the BBNJ agreement could either establish a single ABNJ management authority, in the mold of the International Seabed Authority, or instead provide a mechanism for structured coordination and revised obligations for existing sectoral management organizations, without prejudice to their existing mandates. Finally, the agreement could contain a conflicts and compatibility clause, modeled along the lines of articles 4 and 7 of the 1995 UN Fish Stocks Agreement.

Prof. Barnes also offered a "reality check" for the BBNJ instrument: it is not a panacea, he said. The world still is grappling with the destructive fishing practices, overfishing, pollution, subsidies and governance gaps.

Following the presentations, the panelists responded to a number of questions from the audience. Prof. Barnes offered his observations on the fact that although there already is a global legal framework authorizing RFMOs to manage fisheries, there is not a comparable framework authorizing regional environment organizations to establish MPAs: for him, this illustrates why coordination amongst existing institutions is needed. He suggested that a BBNJ instrument could include an explicit directive and measurable commitments for conservation.

Another questioner challenged Mr. Härkönen regarding Greenpeace's advocacy for a strong inclusion of MPAs in the eventual BBNJ instrument, suggesting that it would be contrary to the dual goals of conservation and sustainable use of BBNJ, insofar as MPAs might impair ability to *use* the resources in a sustainable matter. The panelist responded that RFMOs would continue to exist after a BBNJ instrument goes into effect, and even with the suggested NGO targets for ocean MPA coverage, the majority of the high seas would remain set aside for sustainable use.

The moderator asked each of the panelists if they might imagine a combination amongst the different approaches she identified in her introduction. For Prof. De Lucia, an idealistic combination is the ecosystem governance approach. Prof. Barnes favored the idea of strengthening transboundary institutions, with a mechanism that engages all relevant actors. Mr. Härkönen felt that the BBNJ instrument is a chance to create clear framework of how different mechanisms will work together.

Panel 1: Marine Biological Diversity of Areas Beyond National Jurisdiction I: Marine Genetic Resources

The next panel was Panel 1: Marine Biological Diversity of Areas Beyond National Jurisdiction I: Marine Genetic Resources.

Mr. Eden Charles, the former Ambassador of Trinidad and Tobago to the United Nations—who served as the first Chair of the PrepCom—gave a general introduction to the panel.

Ms. Sophie Arnaud-Haond of **Ifremer** provided a scientific introduction regarding marine genetic resources (MGRs)—the genetic material of marine plants, animals or micro-organisms—in ABNJ. They are the fastest growing category of patented genes. MGRs have many medical, cosmetic, and biological/industrial applications. Obtaining just one MGR through bioprospecting[3] is a time- and effort-intensive endeavor. As a result, ownership of patents to MGRs is unequally distributed: in 2011, 10 countries owned 90% of MGR patent claims, with 3 owning 70%. To support more equitable access to MGRs and the sharing of benefits from their utilization, Ms. Arnaud-Haond suggested that the BBNJ instrument could take lessons from the experience of the Nagoya Protocol to the CBD and ensure that the

[3] Ms. Arnaud-Haond distinguished this from pure marine scientific research aimed at conservation.

BBNJ instrument does not deter research on biodiversity (in contrast to commercial bioprospecting), and promotes the sustainable use of resources, as well as the fair and equitable sharing of their benefits.

Mr. Konrad Jan Marciniak of the **Ministry of Foreign Affairs of Poland** shared his views and potential options regarding the legal status of MGRs in a BBNJ instrument.[4] A major question is whether MGRs are considered part of the "Area and its resources" under article 136 of UNCLOS, in which case they would be considered the common heritage of mankind, or if they are considered part of the high seas, in which case the high seas regime would apply to them. Other UNCLOS regimes that could apply to aspects of MGRs include Part XII (relating to the protection and preservation of the marine environment), Part XIII (regarding marine scientific research (MSR)) and Part XIV (regarding the development and transfer of marine technology).

To resolve the key issue of whether the common heritage of mankind principle applies to MGRs, Mr. Marciniak proposed applying the treaty interpretation methodology established by the Vienna Convention. He observed that reasonable arguments exist on both sides. A plain reading of the Convention excludes MGRs from the resources of the Area—article 133(a) defines "resources" narrowly as "mineral resources." However, taking into account the object and purpose of UNCLOS, there is an argument for a disjunctive reading of "[t]he Area and its resources," under which, in addition to the Area's "mineral resources," everything else in it, including MGRs, is also the common heritage of mankind. Under this interpretation, certain parts of Part XI would apply to MGRs, although those articles that exclusively refer to the "resources of the Area" (such as art. 137(2)) would not. In some sense, he observed, it is ironic that much effort was put into the well-developed regime for the Area's mineral resources—which are not yet being exploited—whereas there is no comparable regime for MGRs, even though they have great current present commercial value.

The panelist identified the following various issues that intersect with the question of what legal regime applies to MGRs as a general matter: (1) whether fish as a commodity are

[4] He also noted that outside the BBNJ process, the legal status of genetic resources is of interest under the CBD's processes, the World Intellectual Property Organization's processes, and the Food and Agriculture Organization's 2001 treaty on plant genetic resources.

subject to a different regime than when fish are used for their genetic resources, (2) whether a search for MGRs is classified as MSR or bioprospecting, and (3) whether the existence of MGRs *ex situ* (in a lab) or *in silico* (digitally) has any effect on the applicable legal regime. Mr. Marciniak also observed that issues related to access, the subsequent use of MGRs, and benefit sharing had to be addressed.

Ms. Fernanda Millicay, Argentina's **National Director for the Antarctic,** presented on the intellectual property (IP) rights aspect of MGRs. The mandate for the intergovernmental conference to develop a BBNJ instrument refers to the "package agreed in 2011," which includes the question of sharing of benefits of MGRs. In the MGR context, benefit-sharing bears some resemblance to the principle of the common heritage of mankind as expressed in the Convention, in that the benefits derived from the exploitation of MGRs should be shared with developing countries, many of which are unable to conduct MGR research on their own.

Ms. Millicay first explained the general nature of patent rights under the 1994 Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), which entitle the patent-holder to the exclusive right of exploitation for a minimum of 20 years and the payment of royalties. The TRIPS Agreement establishes three requirements for an invention to be patentable: 1) it must be novel (i.e., not publicly known), 2) an inventive step (e.g., a product of the mind), and 3) capable of industrial application. The TRIPS Agreement permits States to exclude plants and animals from the scope of patentable inventions, but not microorganisms. MGRs can be patentable resources and many have already been patented, but account must be taken that the three requirements of patentable subject matter established by the TRIPS Agreement apply.

The question of patentability of MGRs found in ABNJ raises a number of issues, in part because the global IP regime was not negotiated with the law of the sea in mind. A key issue is the place of origin of the source of MGRs, which is relevant to determining the applicable legal regime. One suggestion is that the law establish the *juris tantum* presumption that the source of an MGR is ABNJ unless proven otherwise. Then, it might make sense to condition the enforcement of patent rights on the disclosure of origin of the MGR. This would enable the application of an eventual legal regime governing IP rights to MGRs in ABNJ to those MGRs that originate in ABNJ. The regime would need to develop a mechanism to identify the origin of MGRs discovered where there are superjacent high seas to a continental shelf

(i.e., the water column above a State's extended continental shelf), in order not to impinge upon the rights of coastal States.

Ms. Millicay identified two sections of UNCLOS that might already govern aspects of the IP regime for MGRs. First is the regime applying to marine scientific research (MSR) on the high seas, under which MSR activities may not be used as a legal claim for any part of marine resources, thus excluding MGRs obtained from MSR on the high seas from the scope of patentable material. The other is the regime pertaining to MSR in the Area, which requires MSR in that maritime area to be carried out for the benefit of mankind as a whole (with no limitation as to the kind of resources).

The presentation concluded by pondering whether an IP regime for BBNJ is possible and what that might look like. The dissemination of knowledge from MSR in ABNJ could be undermined by permitting patents. From the panelist's prospective, an IP regime for BBNJ should consider the following elements: (1) a specific patent regime for MGRs in ABNJ; (2) how to address the question of distinguishing MGRs from fish; (3) the need for a mandatory disclosure of the geographic origin of MGRs; (4) the possibility of some scheme of compulsory licensing of MGRs from ABNJ; and (5) gene pools as an additional means of non-monetary benefit sharing. Her conclusion is that nothing either in UNCLOS or in the TRIPS Agreement prevents the negotiators from drawing up specific IP rules for MGRs of ABNJ.

To conclude the panel, **Ms. Natalie Morris-Sharma**, Director of the International Legal Division of the **Ministry of Law, Singapore**, focused on possible workable modalities of benefit sharing of MGRs in ABNJ.

Ms. Morris-Sharma identified two key tensions in the BBNJ negotiations regarding sharing benefits derived from research involving MGRs. The first is a fear of the rich getting richer, and the resulting need to strike a balance in the conservation and sustainable use of MGRs while sharing the benefits from the exploitation of MGRs with everyone. The second is the need for coherence with the existing UNCLOS regimes that apply to areas beyond national jurisdiction; pure and resolute adherence to either Part XI (The Area) or Part VII (High Seas) may result in incoherence with respect to the governance of MGRs. This is because UNCLOS establishes a network of spatial property rules—and we do not yet know how to

determine where MGRs originate. Further, MGRs do not follow the presumptions that the value of the resource is realized when it is harvested and that the value is proportionate to quantity harvested.

The panelist then identified legal principles and modalities that could be practically applied to benefit sharing of MGRs. With respect to the former, she offered two key suggestions for a practical solution: (i) not taking an ideological approach; and (ii) taking into account the interests at play. She noted that there have been attempts to articulate a possible "middle-ground" approach. One such suggestion is to apply the idea of the "common concern of mankind" (which is a feature of many environmental treaties) to MGRs, which might address some broader concerns but would not likely concretely address the various interests at play, because it does not have any bearing on the property-related elements of MGRs. Another idea is to further operationalize Part XIII of the Convention (on MSR), which could focus on the non-monetary aspects of a benefit-sharing regime.

She also shared a number of ideas for the modalities of benefit sharing. For instance, a BBNJ instrument could establish a benefit-sharing fund to which the private sector would contribute to enable less-developed countries derive from sort of monetary benefit from the exploitation of MGRs in ABNJ. It could also establish an information clearinghouse to enable less-developed countries to access research results and derive benefits from them. However, many questions remain about how it would function in practice.

Panel 3: Continental Shelf I: Disputes concerning the Delimitation and Delineation of the Continental Shelf Beyond 200 M

Vladimir Golitsyn, the former President of **ITLOS** and the panel's moderator, gave a general overview of delimitation disputes involving the outer continental shelf beyond 200 M ("OCS") and introduced the panelists.

Prof. Clive Schofield of the **Global Ocean Institute** of the **World Maritime University** gave a primer on the types of disputes about the delimitation of the OCS and then identified examples of how those disputes have been resolved in State practice and by international courts and tribunals.

There are four main types of disputes over the continental shelf implicating questions of delimitation. The first is the existence of rights over the continental shelf, at all. This dilemma is well-illustrated by Japan's claim of continental shelf rights from Okinotorishima, a small islet that is Japan's southernmost territory. Second is delimitation disputes between adjacent States, and third is disputes between opposite States with allegedly distinct continental margins. The fourth type of dispute is when an OCS claim penetrates another State's EEZ and continental shelf within 200 M.

Prof. Schofield then proceeded to survey State practice with respect to continental shelf boundary agreements beyond 200 M. The first known agreement is the 1973 Canada/Denmark (Greenland) agreement, the first point of which is 25 M beyond intersection of the parties' EEZs. Next is a 1982 agreement between Australia and France, where the parties fixed a boundary 40 M beyond the 200 M limit, based more or less on equidistance. The 2004 Australia/New Zealand agreement looks favourable to New Zealand, indicating that geophysical factors may have had a role in the negotiation: to the north of New Zealand, New Zealand maintained its entitlement to Three Kings Ridge, which is a natural prolongation of the New Zealand island system. It is also possible that Australia recognized that the features on which it based its OCS claim were relatively isolated and therefore entitled to less weight than the features New Zealand relied on to generate its claim.

With regard to the jurisprudence, the delimitation of the OCS was first addressed by ITLOS in the *Bay of Bengal* case. There, it applied the standard 3-stage approach and found that Bangladesh's concavity merited an adjustment of the provisional equidistance line; geophysical factors played no role. In delimiting a single maritime boundary, the Tribunal created a "gray area" where the OCS awarded to Bangladesh fell within 200 M of Myanmar. More recently, a Special Chamber of ITLOS delimited a single maritime boundary between Ghana and Côte d'Ivoire using the 3-stage approach. The jurisprudence thus far demonstrates that the same rules apply within and beyond 200 M and that geophysical factors are not compelling.

However, courts and tribunals have only been faced with straightforward cases so far. **Mr. Leonardo Bernard** of the **Australian National Centre for Ocean Resources and Security** at the **University of Wollongong** opined that the dispute pending before the ICJ in the *Question of the Delimitation of the Continental Shelf between Nicaragua and Colombia*

beyond 200 nautical miles from the Nicaraguan Coast raised difficult issues. He observed that the fact that the CLCS had not issued recommendations on Nicaragua's OCS claim was found to not be a bar to the Court's hearing the parties' delimitation dispute in the area beyond 200 M; and stated that this ruling might affect the practice of States.

Prof. Sean Murphy of **George Washington University** and Member of the **International Law Commission** next discussed States' obligations in a disputed continental shelf area. In his view, international law, including UNCLOS as treaty law and as reflective of customary international law, establishes 8 basic rules. First, there is an obligation upon States to act in good faith (UNCLOS article 300). As an illustration of the importance of acting in good faith, Prof. Murphy posited that such actions, even if taken on a part of the continental shelf ultimately awarded to the other State, are unlikely to generate State responsibility. The hardest case is presented when actions are taken not in good faith, yet on a part of the continental shelf ultimately awarded to the actor.

Second, there is an obligation to negotiate toward a final agreement of the dispute to achieve an equitable solution (article 83(1)). Pending that final agreement, States are, third, to enter into "provisional arrangements of a practical nature," which are without prejudice to the final delimitation, and fourth, to not jeopardize or hamper the reaching of a final agreement (article 83(3)).

Fifth, States are to abide by any order on interim measures, and sixth, to take only permissible countermeasures, e.g., those that are reversible and proportionate. Seventh, no State should use or threaten to use force in violation of the UN Charter. And finally, States should not knowingly assist another State acting wrongfully with respect to a disputed area of the continental shelf.

Prof. Vasco Becker-Weinberg of **New University of Lisbon** presented on joint development in areas beyond 200 M. This refers to the cooperative development by two or more States of mineral resources that straddle a delimited boundary or that are found in areas subject to overlapping OCS claims.

According to the presenter, interim agreements pending delimitation should aim to foster economic activity. In this regard they should exhibit the following characteristics: permit

resource-efficiency, provide all participating parties access to resources that would otherwise be off-limits, reinforce the capabilities of the parties, and demonstrate to the parties the economic value of delimitation. When engaging in joint development, parties should bear in mind the obligations to cooperate, negotiate in good faith and exercise mutual restraint, share information, and have due regard for the rights and freedoms of third States.

Issues for States to consider in entering into joint development agreements include how to carry out the unitization of the resources and whether to include a mineral resource clause, which tend to require States to cooperate regarding straddling resources.

One particular issue that arises in dealing with joint development in areas beyond 200 M is the applicability of different legal regimes. For example, the water column above the OCS where joint development is likely to be is high seas. Or, a resource might be found both on the OCS and in the Area, raising the question of how to balance or integrate the different applicable regimes. These issues highlight the importance of regional cooperation. Current unsettled issues that will effect joint development beyond 200 M include the future BBNJ instrument and the future development of the Area.

The panelist concluded by stating that cooperation is essential to efficiently develop resources on the continental shelf beyond 200 M. States should do so, even though there is no obligation to develop offshore common hydrocarbons. It is also important to consider the role played by private entities in joint development.

Next, **Ms. Signe Busch** of the **K.G. Jebsen Centre for the Law of the Sea** gave a presentation regarding disputes over the delineation of the OCS. She focused on the implementation of the saving clauses in the Convention (art. 76(10) and Annex II, art. 9) and their relationship to the requirement that delineation of the OCS not prejudice questions of delimitation. Rule 46 of the Rules of Procedure of the Commission on the Limits of the Continental Shelf (CLCS), and Annex I to the Rules of Procedure, are the main implementing mechanism.

In the view of the presenter, Rule 46 broadens the scope of the saving clauses in the Convention and the scope of disputes to which they apply. Rule 46 applies to disputes involving both delimitation and "other cases of unresolved land or maritime disputes."

Paragraph 5(a) of Annex I to the Rules of Procedure establishes a procedure for avoiding prejudice (non-consideration of submissions) and changes the types of disputes that would not prejudice. Some commentators feel this undermines the role of CLCS and has caused a counterproductive delay in its work. The panelist agreed with this: in her view, art. 76(10) only establishes that recommendations issued by the CLCS are made without prejudice to the ultimate delimitation. Paragraph 5(a) of Annex I goes beyond this, assuming that a CLCS recommendation would have a prejudicial effect on delimitation disputes, but this is not necessarily the case.

In practice, consideration of 19 submissions are currently blocked by operation of Rule 46. The largest category of blocked disputes is unresolved delimitations, followed by title to territory. Questions of other treaty obligations, e.g., the Antarctic Treaty, have caused the non-consideration of 4 submissions. Disputes involving the interpretation of certain UNCLOS provisions, such as article 121, have resulted in the non-consideration of 3 submissions.

Future challenges for the CLCS, said Ms. Busch, include identifying what constitutes a dispute over delimitation, determining the appropriate scope of Rule 46 disputes, and establishing a uniform procedure for handling disputes outside of the scope of Rule 46.

Following the presentations, in response to questions from the audience, Prof. Murphy spoke about impacts for State responsibility stemming from the Special Chamber of ITLOS's decision in *Ghana v. Côte d'Ivoire* that a delimitation decision is constitutive, not declarative, of the continental shelf. He also was asked about the concept of unjust enrichment in State responsibility for activities in disputed areas. With regard to the first question, Prof. Murphy indicated that this further underlines his point that if a State acts in good faith on what ultimately is the wrong side of line, it likely has not committed a wrongful act against other State's sovereign rights, especially in light of the fact that a delimitation decision is constitutive of rights over the continental shelf. With respect to the concept of unjust enrichment, it may line up well with the scenario Prof. Murphy put forward of a State acting in bad faith in an undelimited area—reparation may be ordered, for a State would have been unjustly enriching itself.

Judge Paik offered a comment elaborating on the Special Chamber's decision in *Ghana v. Côte* d'Ivoire. The case presented two distinct issues regarding State responsibility: (1) the alleged violation of Côte d'Ivoire's sovereign rights and (2) a violation of article 83(3). The latter can take place regardless of to which State the continental shelf is ultimately allocated, but the analysis of the former may be affected by the identity of the State to which the continental shelf is ultimately awarded. The wrongful nature of an act is determined when it is committed; when a State carries out exploration in an area to be delimited, it is difficult to see it as internationally wrongful because of the constitutive nature of a delimitation decision. The situation with land boundaries is different; activities in disputed areas on land are more likely to be found internationally wrongful when they take place on the "wrong side of the line."

In response to another question, Ms. Busch stated that, although a land dispute could be a Rule 46 dispute permitting the CLCS to refrain from making a recommendation on a certain submission, not every dispute that could be related to delimitation should fall within the Rule's scope. The amount of power given to other States to object needs to be balanced with State's legitimate interest in having the CLCS consider its OCS claim. There is a danger in giving the CLCS the power to determine the existence of a dispute that would allow a State to object to the consideration of a submission. In this regard, perhaps the Meeting of States Parties to the Convention could provide an interpretation of Rule 46.

Panel 4: Continental Shelf II: Seafloor Highs

The moderator, **Mr. Harald Brekke** of the Norwegian Petroleum Directorate and a former member of the **CLCS**, identified three types of seafloor highs. The first is the oceanic ridges of the deep ocean floor: article 76(3) defines the continental margin as "the shelf, the slope, and the rise" and excludes the "deep ocean floor with its oceanic ridges." Article 76(6) then identifies two other types of seafloor highs: submarine ridges and submarine elevations: It provides that "on submarine ridges, the outer limit of the continental shelf shall not exceed 350 nautical miles," but that this constraint "does not apply to submarine elevations that are natural components of the continental margin, such as its plateaux, rises, caps, banks and spurs." To those, the maximum distance a State can claim is either 350 M from its baseline or 100 M from the 2500 m isobath (art. 76(5)). For the purpose of delineating the outer limits of the continental shelf, interpreting this provision is crucial.

Mr. Walter Roest of Ifremer and a former member of the **CLCS** provided a scientific introduction on seafloor highs and explained his view of article 76(6). He explained that because few details about seafloor elevations and ridges were known when UNCLOS was being developed, none of the 3 types of seafloor highs mentioned in article 76 are well-defined. The technology has improved vastly since then, and we consequently know much more about the seafloor. For example, we now know that seafloor ridges are formed by many different processes.

The way article 76 is drafted presents difficulties for the CLCS's work delineating the OCS. In particular, can a deep seafloor oceanic ridge be considered a submarine ridge such that it can form part of a State's OCS? If so, might it be considered a "natural component[] of the continental margin" such that either constraint in article 76(5) applies to it? With respect to the first question, the panelist's position was that an oceanic ridge could form part of an OCS claim if it lies within the continental margin. It can also be a natural component of the continental margin, if it shares significant geological characteristics with the landmass, such as the Reykjanes Ridge, which was formed by the same processes as the Icelandic land territory.

Mr. Kevin Baumert, Legal Counsel for the U.S. Extended Continental Shelf Project, **United States Department of State**, presented three options for interpreting article 76(6)'s application to seafloor highs. Article 76(4) establishes two ways to identify the outer edge of the continental margin. Article 76(5) then places constraints on the outer limit: it must either be no more 350 M from coastal baselines, or 100 M from the 2500 meter isobath. States may apply the more favourable constraint, unless article 76(6), which addresses certain seafloor highs, requires the use of the 350 M constraint.

There are three potential interpretations of article 76(6). The first interpretation is the most straightforward: the second sentence of article 76(6) clarifies its first sentence. Under this interpretation, only submarine ridges are required to use the 350 M constraint; all other submarine elevations may use either constraint. This is not favourable to some States attempting to define a large continental shelf. In contrast, the second interpretation views the second sentence of article 76(6) as an exception to the first. Here, some submarine ridges may be regarded as submarine elevations to which either constraint can be applied because

they are "natural components of the continental margin," i.e., morphologically and geologically related to continental margin. The third approach is to ignore whether the submarine elevation in question is a submarine ridge and consider only whether it is a "natural component" of the continental margin. If it is, then either constraint may be used; if it is not, the 350 M constraint must be used. This interpretation fails to give "submarine ridges" its *effet utile*, rendering the interpretation legally problematic. Yet, this is the common approach of the CLCS.

Ms. Helga Guðmundsdóttir of **Van Bael & Bellis** gave a presentation on Iceland's submission to the CLCS, with a particular focus on how the CLCS treated the Reykjanes Ridge. The Reykjanes Ridge is found where the Iceland hotspot & Mid-Atlantic Ridge come together. It is a 1000 km long and 500 km wide V-shaped area that is distinguishable and abnormally shallow, compared to the Mid-Atlantic Ridge. It formed part of Iceland's OCS submission.

Applying the prevailing CLCS interpretation of article 76(6), the CLCS Subcommission that reviewed the submission issued recommendations in February 2014 accepting that the Reykjanes Ridge was a natural component of the continental margin of Iceland, and thus subject to either constraint. However, in 2016, the full Commission amended the Subcommission's recommendations on the basis that it found the evidence inconclusive as to whether the Reykjanes Ridge was a natural component of the continental margin of Iceland; Iceland disputes this amendment. In both Iceland's and the panelist's view, there is a strong case that the Reykjanes Ridge is both geomorphologically and geologically connected to Iceland, and distinguished from the Mid-Atlantic Ridge, and therefore it should be subject to either constraint.

Given the CLCS's action, Ms. Guðmundsdóttir suggested four courses of action for Iceland. Its first option is to present a new and revised submission, attempting to resolve the Commission's doubts that led it to not accept the Subcommission's recommendations. However, because Iceland does not know the Commission's reasoning, preparation of a new submission may be futile. Iceland's second option is to unilaterally establish OCS boundaries in accordance with the Subcommission's recommendations. The third option is to argue that the Commission acted *ultra vires* by changing the Subcommission's recommendations and therefore its amendment is null and void. Article 6 of Annex II to the CLCS's Rules of

Procedure provides the basis for this argument: under it, the Commission's competence is limited to approving or rejecting recommendations of a Subcommission, not to amending them. Iceland's final option is to seek, in cooperation with other interested States, an Advisory Opinion from ITLOS on the interpretation of article 76(6) and apply it to the Reykjanes Ridge.

Mr. Bjørn Kunoy of the **Ministry of Foreign Affairs and Trade** of the **Faroe Islands** gave a presentation of the seafloor highs in the Central Arctic Ocean.

The first is the Gakkel Ridge, which is partially included in Greenland's OCS submission. The Gakkel Ridge is an active oceanic spreading ridge: Some would argue that it is a prime example of an oceanic ridge of the deep ocean floor within the meaning of paragraph 3 of article 76. It follows from the publically available information that Greenland has classified this seafloor high a submarine ridge subject to the 350 M constraint. Were Norway to set forth a competing claim, the panelist observed, it would appear that this would require Norway to cross the delimitation boundary in order to place foot-of-the-slope points within 200 M of Greenland, which is not permissible.

The next high is the Lomonosov Ridge, which is part of the OCS claims of both Russia and Greenland. Both States consider it to be a submarine elevation that is a natural component of the continental margin, and therefore subject to either the 350 M or the 2500m isobath + 100 M constraint. This raises a legal question of whether, under article 76(6), a ridge-like feature can constitute a submarine elevation that is a natural component of the continental margin. From Mr. Kunoy's point of view, there is no geometric requirement under the second sentence of paragraph 6, which just refers in general to "natural components of the continental margin." If a ridge-like feature is a natural component, then either constraint is applicable.

The third high is the Alpha-Mendeelev Rise, which is a volcanic plateau. It is not clear whether it sits on continental or oceanic crust; the response of which would have a saying for its classification. The Mendeelev Rise can be considered a "rise" within the meaning of the second sentence of paragraph 6. Yet, it would still have to be determined whether it is a submarine elevation that is a natural component of the continental margin of the submitting coastal State in order not to fall within the ambit of the first sentence of paragraph 6. This

arises because of the use of the possessive pronoun "its" in the second sentence of paragraph 6, which makes the classification of any seafloor high contingent upon the requirement that it is a "natural component [] of the continental margin" of the submitting coastal State and therefore subject to either constraint under article 76(6).

Mr. Kunoy also discussed bridging lines between fixed OCS points, which is permitted by article 76(7). Russia employed these in its revised CLCS submission, indicating that it might have adopted an interpretation that subparagraph 7 permits any point along the 200 M continental shelf to serve as a "fixed point" for drawing 60 M bridges. The panellist suggested this might not be legally defensive, as article 76(1) introduces a disjuncture between the continental shelf that is the "outer edge of the continental margin" and one that is 200 M from the coastal State's baseline.

After the presentations, there were a number of questions regarding the Reykjanes Ridge. In response to a comment, Ms. Guðmundsdóttir acknowledged that her suggestion that Iceland unilaterally establish the outer limits of its continental shelf might be controversial and not reconcilable with article 76(8), which provides: "The Commission shall make recommendations to coastal States on matters related to the establishment of the outer limits of their continental shelf. The limits of the shelf established by a coastal State on the basis of these recommendations shall be final and binding." Mr. Roest was asked if anything in the geological characteristics of the Reykjanes Ridge should prevent it from being classified as a submarine ridge; he responded that it did not fit within the classical definition of a ridge.

Day 2 (29 June 2018): Introduction

The second day began with an address by **Prof. Guðmundur Eiríksson** of **Jindal Global Law School** and former Judge of **ITLOS**, reflecting on the past and looking to the future of the law of the sea.

In his view, the Convention has led to the enhanced welfare and sustainable use of marine resources. This was possible because of the "spirit of the law of the sea," a produce of the Third UN Conference on the Law of the Sea participants' close connection with each other and shared desire to accommodate diverse interests in one consensus instrument. It also benefited from the negotiation innovation of delegating the preparation of texts to individual

people, which was possible because of the bonds of respect and trust developed through the negotiating process.

He identified four eras in the history of UNCLOS leading to the current era of more intense activity: (1) the elaboration of the Convention; (2) a decade of reckoning with the shortcomings the Convention, which saw the elaboration of implementing agreements, (3) a decade that saw the institutionalization of ITLOS, the ISA and the CLCS; (4) a less active period lasting until around 2012.

The current period is defined by 4 key developments: the ISA's laying the groundwork for deep seabed mining, including the ITLOS Seabed Disputes Chambers' 2011 Advisory Opinion; increased activity in maritime boundary delimitation decision-making, including the 2012 *Bay of Bengal* case and the 2017 *Ghana/Côte d'Ivoire* case; ITLOS's 2015 Advisory Opinion on illegal, unregulated and unreported fishing; and the recent compulsory conciliation between Australia and Timor-Leste.

Looking toward the future, Judge Eiríksson shared his feeling that the Convention fell short with regard to safeguarding the common heritage of mankind, and appealed to the audience to redouble efforts to make it a reality.

Panel 5: Deep Seabed Mineral Resources

Mr. Albert Hoffmann, **Judge** and President of the **Seabed Disputes Chamber of ITLOS**, moderated this panel. He observed that there is renewed interest in the mineral resources of the Area. Deep seabed mining (DSM) still faces challenges and difficulties. Part XI of the Convention and the 1994 Implementing Agreement reflect outdated knowledge. The International Seabed Authority (ISA) needs to carry out its mandate for MSR and capacity building. And vigilance is needed in the potential for conflict between contractors and researchers over MSR in exploration areas. Importantly, in the transition from exploration to exploitation, the ISA and sponsoring States need to ensure protection of the marine environment; ITLOS's 2011 Advisory Opinion underlines the importance of this.

Mr. Michael Lodge, the Secretary-General of the **ISA**, provided a high-level overview of the state of affairs of DSM.

There is a high demand for various minerals found on the seafloor. As a result, DSM is closer to reality now than it has been at any time in past 25 years, yet it is still a long way off. In the past seven years, the pace of exploration has rapidly increased; the ISA has awarded 29 exploration contracts and mining companies are at advanced stages of exploration and equipment tests.

Mr. Lodge sought to clarify that he does not consider the ISA to be promoter of DSM. From his perspective, whether it takes place is a commercial matter. The ISA is a regulator and guardian of the Area on behalf of States Parties. States have the right to conduct mining, but only for the benefit of mankind as a whole.

To the extent DSM is commercially viable, then, a key question for the ISA is how to facilitate a transition from exploration of minerals to their exploitation. A major barrier to this transition is the lack of specific regulations defining terms and conditions for exploitation of minerals. Though the basic legal framework is set, the ISA is currently conducting stakeholder consultations to elaborate an exploitation code. Another barrier, according to Mr. Lodge, is the public perception, heavily promoted by some marine environmental NGOs, that DSM is destructive to the marine environment. He believes that their claim that DSM will inevitably cause ecosystem collapse and damage is overstated; rather, he said, DSM is much less impactful than mining on land, and the ISA takes environmental protection very seriously. In this regard, it is important to articulate a monitoring regime and include provisions to prevent and mitigate impacts in exploitation contracts. Because DSM continues to face scientific uncertainty, there is a need for continued data collection and analysis, and to apply the precautionary approach, rigorous EIA and risk mitigation measures. There are also political concerns, including the impact of mineral production on economies of mineral producing countries and the operationalization of the Enterprise.

Mr. Lodge provided some thoughts on the development of the BBNJ instrument from the perspective of the experience of the ISA. UNCLOS Part XI provides well-developed platform for capacity building, demonstrating real results providing a model for a benefit sharing

system under a BBNJ instrument. In developing the BBNJ instrument, States should take care that any new arrangements must not undermine existing regimes.

Mr. Georgy Cherkashov of **VNIIOkeangeologia** presented a case study on the exploration of the Mid-Atlantic Ridge for mineral resources. Mid-oceanic ridges contain polymetallic sulphides (with copper, zinc and gold), whereas seamounts have ferromanganese crusts and the abyssal plain has manganese nodules. Globally, the Area is home to approximately 55% of mineral deposits whereas 45% of mineral deposits are located within national jurisdiction on the continental shelf.

The Atlantic seafloor is notable for its high concentration of seafloor massive sulphides (SMSs), containing a high concentration of copper and gold. These deposits are in an early stage of exploration; there are only three exploration contracts, pertaining to Russia, France and Poland. The Atlantic SMSs can be quite large; the Semyenov deposit, for example, has an estimated 42 million tons of mineral resources, which is approximately the same size as an ultra-large land mineral deposit.

Mr. Cherkashov next explained that exploration was carried out through a combination of geophysical and geological methods. Increasingly, drilling is becoming a critical method. New methods are also being employed, including those that especially help to identify "blind deposits" located below the sediments.

Exploration has increased the level of geological confidence in knowledge about deep seabed mineral resources, but we are still in the exploration stage. One key finding is that in inactive deposits, no life has been discovered. Therefore, some have suggested that exploration and exploitation of deep seabed mineral resources should be focused on inactive sites; a concentrated effort on finding inactive sites is needed. Exploration has identified that there are many more resources of cobalt, nickel, manganese and molybdenum on the seabed than on land.

Mr. Matthias Haeckel of **GEOMAR** gave a presentation on the potential environmental impacts of DSM with a focus on harvesting of polymetallic nodules. Nodule mining entails removing sediment from the surface of the seafloor, creating a sediment plume and discharging sediment waste. Studies show that dredging the top 10 cm of the seafloor, as is

expected in DSM, removes 100% of life that is there (only deeper living microbes remain). It causes a loss of habitat, diversity, ecosystem structure and functions, and changes the characteristics of the surface of the seafloor. As a consequence, ecosystem recovery from DSM is a slow process, if it happens at all.

In light of this, the panelist suggested that regulations need to be updated in light of new technologies and better parameters/indicators to assess impacts. Conservation areas are needed that match the characteristics of areas that will be mined in order to preserve biodiversity and indigenous ecosystems. The ISA should think more about spatial management in addressing environmental impacts of DSM and consider how to address impact outside of DSM license areas. A transparent mechanism for the independent scientific assessment of impact—as opposed to solely contractor's studies and monitoring—is very important.

The panelists made various comments in response to the audience's questions. Regarding environmental impacts, Mr. Haeckel acknowledged that the portion of the Area impacted by DSM for currently known marine resources amounts to less than 1% of it, but emphasized that the size of the area that will ultimately be impacted is unknown, and that a global spatial management plan will be important to ensuring environmental protection. He also allowed for the possibility that there might be a risk that strong environmental regulations by the ISA may encourage the DSM industry to move to areas under national jurisdiction with less stringent regulations where there is no ISA regulation. That said, the developing regime for the Area could serve as a benchmark for States. With regard to transparent, independent assessments of environmental impacts, Mr. Haeckel suggested that, realistically speaking, the most likely way to carry them out would be to employ a mixed team using the mining contractors' and researchers technical capabilities, whereas Mr. Lodge indicated he thought this might be an appropriate role of the sponsoring State.

Mr. Lodge, in response to a question about the relationship between the ISA and the BBNJ process, explained that it is not clear how the two will interact. That said, he believed that the ISA can serve as an example with regard to benefit sharing, a global process for EIA, and environmental management and protection.

Panel 6: Dispute Settlement in the Law of the Sea: the Next Frontier?

Mr. Philippe Gautier, Registrar of **ITLOS**, moderated this panel. He explained that its focus was the limits of Part XV of the Convention. In that context, he stated that there has been an increase in law of the sea cases submitted to international courts and tribunals: 54 since 1994, 33 of which based on Part XV.

Prof. Danae Azaria of the **University College London** delivered a presentation on the use of "extraneous rules of international law" by international courts and tribunals constituted under section 2 of Part XV of UNCLOS. Although they lack jurisdiction over general questions of international law, in practice they have referred to other rules of international law in carrying out their function to interpret or apply the Convention. She identified three types of approaches.

The first approach taken by Part XV, section 2 courts and tribunals is to incorporate extraneous rules of international law into the Convention. The Convention itself has 30 references to "international law" and 33 to "international rules." This reference might permit the incorporation of certain rules of international law, thereby extending the jurisdiction of the court or tribunal beyond the Convention's text, but the content and scope of the extension is a matter of interpretation of each provision. For example, in the *ARA Libertad* case, the parties to the dispute disagreed about whether article 32 of the Convention incorporated the customary international law on warship immunities. Although ITLOS did not address this point in its provisional measures order, some judges in their separate opinion considered this issue. In *Chagos Marine Protected Area* the arbitral tribunal found that article 2(3) incorporated some general rules of international law, and in *South China Sea* the arbitral tribunal extended the findings of *Chagos Marine Protected Area*: article 2(3) includes all primary obligations of the coastal State. Following this reasoning, Prof. Azaria observed that this interpretation of article 2(3) may allow obligations under human rights, trade and investment treaties to be incorporated in UNCLOS and thus find their way before an UNCLOS tribunal.

A second approach is to view other rules as part of the applicable law within the meaning of article 293(1). In this regard, courts and tribunals have applied secondary rules on State

responsibility and treaty interpretation in deciding disputes under the Convention. Some courts and tribunals have also applied extraneous primary rules. For example, in the *M/V Saiga 2* and *Guyana v. Suriname* cases, both ITLOS and the ad hoc arbitral tribunal made dispositive findings regarding the breach of the rules about the threat and use of force. The *South China Sea* ad hoc arbitral tribunal ruled on China's alleged breach of the duty of non-aggravation under international law. However, this approach can be dangerous in that it extend courts' and tribunals' jurisdiction in an unlimited matter. The *Arctic Sunrise* and *Dugzit Integrity* cases demonstrate that some UNCLOS tribunals have been cautious in this respect and have not applied human rights merely on the basis of article 293.

Third, courts and tribunals look to extraneous rules of international law to interpret the Convention. This exercise is distinct from applying those rules as the applicable law: in applying the extraneous rules of international law, tribunals will apply them to the facts, whereas in using extraneous rules as interpretative aids, tribunals apply the Convention to the facts. In the *Dugzit Integrity* arbitration, for example, the tribunal found that the coastal State's exercise of enforcement powers was governed by rules of general international law that require enforcement activities to be carried out in a reasonable manner. In this case, the tribunal applied extraneous rules of international law (it did not use them in order to interpret UNCLOS), even though the tribunal had declined to apply primary rules of international law, such as human rights.

Tribunals may use extraneous rules to interpret the Convention to identify the ordinary meaning of a term in UNCLOS, as in the *South China Sea* case, where the tribunal looked to the Convention on Biological Diversity to define the term "ecosystem." Prof. Azaria also argued that article 31(3)(c) of the Vienna Convention may justify the use of extraneous rules to interpret UNCLOS. In the *Arctic Sunrise* arbitration, the Tribunal interpreted articles 58 and 87 as requiring the respect of the freedom of expression and assembly, as recognized in human rights instruments to which the Netherlands and Russia are parties. The *South China Sea* arbitral tribunal used CITES, which had near-universal adherence by UNCLOS Parties, to interpret articles 192 and 194. The tribunals' reasoning in both cases implies that they perceive article 31(3)(c)'s reference to "the parties" as referring only to "the parties" to the particular dispute, and not parties to UNCLOS; this interpretation of article 31(3)(c) could conceivably result in different interpretations of the same provisions of UNCLOS.

Next, **Mr. Choi Jee-hyun** of the **Korea Maritime Institute** gave a presentation of how courts and tribunals handle mixed disputes, i.e., those involving maritime issues and disputes over land territory. It is clear from article 288(1) that a territorial dispute itself cannot be submitted to an UNCLOS tribunal. To what extent may an UNCLOS tribunal determine issues of disputed land sovereignty, then?

There have been two cases to address this question so far. Both indicate that the determinative factor in a court or tribunal's assessment of whether to exercise jurisdiction over a mixed dispute or a particular submission in a mixed dispute is how the court or tribunal characterizes the dispute in the first instance. First, in the *Chagos Marine Protected Area* arbitration, the tribunal found that Mauritius' first submission—relating to the UK's status as a coastal State—presented a dispute relating to land sovereignty, and was therefore inadmissible. It went on, however, to observe that if an UNCLOS dispute presented minor and ancillary issues of territorial sovereignty, the tribunal could exercise jurisdiction under article 288. Second, in the *South China Sea* arbitration, China claimed the essence of many of the Philippines' submissions was territorial sovereignty. However, the tribunal did not agree with this objection, finding that the questions presented by the Philippines' submissions did not concern sovereignty over the maritime features.

The presenter then suggested that, instead of relying on the characterization of the dispute, a court or tribunal might analyse how deeply it can deal with the dispute. This, he thought, might be a better tool for determining if a tribunal can exercise jurisdiction over a mixed dispute consistently with article 288. For him, the key consideration is the legally binding force of the resolution of the land dispute. If a tribunal can make that determination in dicta, then, he suggested perhaps it can deal with the mixed dispute. But a situation like this is hard to imagine. It was impossible in the *South China Sea* arbitration because the Philippines did not request sovereignty determinations, nor were they needed for the tribunal to make its decisions. Similarly, in the *Chagos Marine Protected Area* case, the resolution of the first submission would have required the determination of title to territory and was therefore outside of the scope of the tribunal's jurisdiction. However, the panelist speculated, a determination that the UK could establish the MPA, after confirming it is a coastal State, might be permissible because the status of the UK as a coastal State might be considered dicta.

Ms. Kate Parlett of **20 Essex Street Chambers** presented her views on certain selected issues regarding the future of UNCLOS dispute settlement in light of the *South China Sea* award.

First, she discussed the legal and practical consequences of a party's non-appearance. Article 9 of Annex VII to and article 288(4) of the Convention make clear that non-appearance is not a bar to proceedings or issuing an award. China accepted this much in a statement on 12 May 2016. Though this is not the first instance of non-appearance in an international judicial or arbitral proceeding, the panelist felt that the tribunal went further than in other cases to keep China apprised of the developments of the case and to seek its input. Indeed, although it did not formally appear, China published a position paper and corresponded with members of the tribunal.

Next, the panelist made observations regarding the scope of the *South China Sea* tribunal's jurisdiction under Part XV of the Convention. She observed that the Philippines carefully crafted its submissions, which permitted the tribunal to focus specifically on the submissions themselves, without needing to view them in the context of the broader dispute. She then identified three categories of submissions made by the Philippines: (1) questions regarding China's maritime claims and entitlements in the South China Sea; (2) the characterization of various features and their corresponding entitlements; and (3) violations of the Philippines' rights and China's obligations under UNCLOS. Although there was an extant land sovereignty dispute, it did not automatically follow that that dispute was before the tribunal, because the Philippines' submissions did not require an implicit or express decision on sovereignty. Similarly, the tribunal rejected the premise that the case presented impermissible questions of delimitation; it instead ruled entitlements are distinct from delimitation.

Third, Ms. Parlett offered her views on the broader significance of the *South China Sea* award for the effectiveness of dispute resolution under UNCLOS. While the decision is final and binding under article 296(1), China refused to accept it, and the Philippines ultimately stated it would "take the back seat" in bilateral negotiations. These attitudes may reflect a broader trend of claimant-oriented strategic litigation being used to gain an advantage in bilateral negotiations; the award may have increased the likelihood of the Philippines's obtaining a more advantageous bilateral agreement with China.

Finally, the panelist discussed the extent to which the tribunal's decision regarding article 121(3) is likely to be followed. Although Part XV, section 2 decisions are binding on the parties, there is no system of precedent. That said, the ICJ has observed there is need to achieve clarity and consistency of the law; for example, the 3-step methodology has been characterized as an *acquis judiciare* under Article 38(1)(d) of the ICJ Statute. Not all decisions can acquire this characteristic. Here, certain commentators have criticized aspects of the tribunal's decision on article 121(3), including that the interpretative method did not follow the Vienna Convention and its inconsistency with State practice. As a result, there is a risk it will not be followed in other decisions and State practice.

Mr. Marco Benatar of the **Max Planck Institute Luxembourg for Procedural Law** shared his thoughts on the jurisdictional decision by the ICJ in the *Somalia v. Kenya* maritime delimitation dispute. In his view, the outcome (holding that the Court had jurisdiction over the dispute) was desirable, but he expressed reservations about the Court's reasoning.

In that case, Somalia argued the ICJ had jurisdiction based upon both Parties' converging declarations under Article 36(2) of the ICJ Statute ("optional clause declarations"). However, Kenya's optional clause declaration excluded disputes where the parties agreed "to have recourse to some other method or methods of settlement." In Kenya's view, the "other method" was Part XV of UNCLOS, under which the parties would have been deemed to have selected arbitration under Annex VII.

The Court concluded that Kenya's reservation could not deprive the ICJ of jurisdiction based upon the parties' converging optional clause declarations. The panelist identified two key facets of the ICJ's approach. First, it stated that the ordinary meaning of article 282 of the Convention was broad enough to include optional clause declarations, thereby excluding the procedures of Part XV. The *travaux préparatoires* of UNCLOS demonstrate that a reservation like Kenya's would not exclude the ICJ's jurisdiction based upon optional clause declarations and article 282 because most optional clause declarations at the time UNCLOS was negotiated included reservations like Kenya's. Second, the Court expressed concerns about the potential of a denial of justice—if the ICJ could not exercise jurisdiction, it was unclear if there would be a tribunal that had jurisdiction over the dispute, given that shortly before the judgment was issued, Kenya issued an article 298(1)(a)(i) declaration excluding

maritime delimitation from the scope of disputes to which it agrees may be submitted for compulsory dispute resolution.

Mr. Benatar then offered some observations on the likely impact of the judgment. First, reservations of the type included in Kenya's optional clause declaration are common. Does the judgment mean that they will not be given effect, at least in an UNCLOS proceeding? This might create an incentive for States to clarify and revise their optional clause declarations. It also presents an issue for other tribunals—would ITLOS, for example, have refused to hear this case under article 282? Finally, Mr. Benatar observed, the decision flipped the logic of Part XV on its head: at UNCLOS III, arbitration was chosen as the default mechanism by consensus, yet the logic of this decision may give primacy back to the ICJ.

Prof. Ronán Long of the **Global Ocean Institute, World Maritime University** concluded the panel by discussing prospects for compensating environmental damage in law of sea disputes in light of the ICJ's compensation decision in *Certain Activities carried out by Nicaragua in the Border Area (Costa Rica v. Nicaragua)*. He first provided a brief history of the proceedings, observing that Nicaragua incurred an obligation to make reparation for damage caused by unlawful activities in breach of Costa Rica's sovereignty. Nicaragua was to pay Costa Rica compensation for material damage caused.

Following a finding on liability in 2015, the Court held proceedings on the narrow questions of compensation and the methodology to be applied. In light of the difficulty of proving a causal nexus, the Court exercised judicial discretion in deciding whether a causal nexus between the act and the injury suffered had been sufficiently shown. It decided that damage to the environment, and the consequent impairment to, or loss of the ability of, the environment to provide goods and services, is compensable under international law. The Court found that payments should include indemnification for loss of environmental goods and services, and payment for restoration of the damaged environment, embracing, if necessary, active restoration. The Court accepted four of Costa Rica's alleged six categories of damage. It then used the ecosystem services approach to evaluate the damage, finding that it better provides an overall assessment of the value of the loss of goods and services, in contrast to the replacement cost, as argued by Nicaragua.

Prof. Long then offered some thoughts on the implications of the decision for environmental protection and the law of the sea. From the point of view of environmental protection, the decision affirms international norms related to the protection and preservation of the environment. The Court employed a flexible approach to valuation methodologies, looking to achieve an overall assessment of the ecosystem's value. For UNCLOS and its implementing agreements, the decision is in line with an already-existing bias in favour of restoration, including the ITLOS advisory jurisprudence in the seabed mining and the sub regional fisheries commission cases. In the context of negotiations for an instrument regarding BBNJ, ecological restoration as a principle can be reflected in many aspects of the agreement: provisions on liability and compliance, capacity building and technology transfer, impact assessments, ABMTs and cross-sectoral management approaches.

Panel 7: Climate Change and the Legal Effects of Sea Level Rise

Rüdiger Wolfrum, a former President of **ITLOS**, introduced the panel and made brief observations regarding climate change.

Prof. Larry Mayer of the **University of New Hampshire** provided a basic scientific overview of climate change and sea level rise. Sea levels have been changing for millions of years, he said, but these are due to glacial/interglacial cycles, which occur over hundreds of thousands of years. To the contrary, for the last 100-150 years, sea levels have been rising much more quickly than they would have according to the glacial/interglacial cycles. This is due to a remarkable increase in global average temperatures. Indeed, 9 of the 10 hottest years on record have occurred in the past 13 years.

The increase in global average temperatures is directly related to the increase in carbon dioxide in the atmosphere. The current level of 409.84 ppm is the highest level of atmospheric carbon dioxide in the last 800,000 years. This is due to human input: because of isotopic differences between carbon dioxide produced by burning fossil fuels and atmospheric carbon dioxide, it is possible to measure humanity's massive contribution.

The emissions of carbon dioxide contribute to a global greenhouse effect, wherein solar radiation is trapped by atmospheric gases, increasing temperatures. The greenhouse gas effect is also responsible for the speeding up of the rate of increase in global temperatures. This

increase translates to an increase in sea level rise. A heating earth causes oceans to expand and glaciers and ice caps to melt, adding additional water to ocean. The rate of sea level rises is also increasing; from 1902-1990, it rose at an average of 1.5mm/year, whereas from 1993-2010, the rate was 3.2mm/year.

While it may be possible to stop the thermal expansion of the oceans, it is much more difficult to reverse or stop the effects of melting glaciers and ice caps. The Intergovernmental Panel on Climate Change's current worst-case scenarios predict average sea level rise by 2100 to be between 0.53 and 0.98 meters. Impacts will not be felt uniformly globally; in Bangladesh, for example, where the worst-case scenario envisions a 1.5 m rise by 2100, 17 million people will be directly affected.

Alfred Soons, Emeritus Professor of **Utrecht University**, gave a presentation on the relationship between sea level rise and baselines, and the consequent potential for loss or diminution of a State's entitlement to maritime zones. It is well-established that the coastal baseline under article 5 can shift as a result of natural conditions of the coastline; the limits of maritime zones are therefore ambulatory (there is an exception: the outer limit of the continental shelf, as provided for in article 76(9)).

Receding baselines translate to receding limits of maritime zones. The magnitude of the recession differs according to gradient of coastal area (for example, rising sea levels may have no effect on a steep coast, but a huge effect on a low coast). Considering that article 121(1) establishes that islands also generate maritime zones as measured from their baseline, and article 13 establishes that low-tide elevations (LTEs) can serve as baselines if they are within 12 M of the coast, a State can lose huge amounts of maritime space due to the conversion of islands into rocks or the disappearance of LTEs. This is likely to result from sea level rise.

These possibilities implicate interests of coastal States and navigating States. For coastal States, the consequences include losing sovereign rights over natural resources and jurisdiction over other activities in large areas, as well as limiting their jurisdiction over archaeological and historical objects. For other States, they may be impacted by a change in the navigation regime from innocent passage (which applies within the territorial sea) to freedom of navigation.

Prof. Soons then provided options to confront this situation. A generally accepted and common means of doing so is to artificially conserve baselines (e.g., through coastal defences). This could be too expensive, especially for small States who have not contributed to the causes of sea level rise.

As a legal alternative, the International Law Association has proposed maintaining the extent of maritime zones once they are determined in accordance with UNCLOS; Pacific State practice is already doing this.

In this regard, there are three main options for permanently fixing baselines or outer limits of maritime zones: (1) the baseline can be frozen, so landward waters would become internal waters; (2) the outer limit of the territorial sea could be frozen, so the territorial sea expands beyond 12 M; or (3) the outer limit of the EEZ could be frozen, so the EEZ expands beyond 200 M. Fixing baselines might also create territorial sea enclaves emanating from high-tide features that will soon be submerged.

In Prof. Soons' view, permanently fixing baselines or outer limits could be seen as constituting a tacit modification of UNCLOS. Maintaining the outer limits of maritime zones is both the least intrusive on the current legal regime and suffices for the purpose of protecting the economic interests of coastal States.

Next, **Ms. Snjólaug Árnadóttir** of the **University of Edinburgh** presented on the effects of sea level rise on bilateral maritime limits fixed by treaties or judgments.

With respect to delimited maritime boundaries, the panelist explained how maritime boundary delimitation could account for changing coastlines. The jurisprudence indicates that coastal instability might have some bearing on maritime delimitation. Coastal instability, for example, was important to the decision in the *Nicaragua v. Honduras* case, but both the *Black Sea* and *Bangladesh v. India* cases indicated that the delimitation would be carried out without respect to the potential changes in the future due to climate change.

The panelist identified four ways courts and tribunals might address sea level rise in the delimitation process. First, they may show a preference for more stable baselines by choosing

coastal baselines, and not those on LTEs in constructing the provisional equidistance line. Second, insignificant features that are unstable may be given less than full weight when the court or tribunal proceeds to adjust the provisional equidistance line. Third, coastal instability may justify the use of a different delimitation methodology, such as the angle-bisector method, as in *Nicaragua v. Honduras*. Finally, sea level changes may result in the use of a fluctuating boundary if the boundary refers to a fluctuating baseline, median or equidistance line, instead of fixed coordinates.

Regarding settled maritime boundaries, Ms. Árnadóttir suggested that, under the principle of *rebus sic stantibus*, sea level rise might constitute a fundamental change permitting the termination or suspension of a treaty. However, article 62 of the Vienna Convention prohibits invoking fundamental changes with regard to a boundary treaty. The panelist offered an argument that this exclusion may relate only to territorial boundaries, which could exclude EEZ and continental shelf boundaries. Yet *obiter dictum* in the *Aegean Sea Continental Shelf* case indicates that this is a meritless distinction. Moreover, it could be argued that sea level rise was foreseeable when many boundary agreements were struck, rendering it a less than a fundamental change. Even if sea level rise is not a fundamental change permitting the revision of a treaty, it might nonetheless prompt the mutual revision of maritime boundaries.

Ms. Christina Hioureas and **Ms. Alejandra Torres Camprubí** of **Foley Hoag LLP** offered legal and political considerations regarding the possibility of the disappearance of States due to sea level rise.

Ms. Hioureas addressed the first issue: whether the principles applying to the creation of States apply to their extinction. Sea level rise could cause the de-territorialisation or de-population of a State, depriving it of one or more criteria for Statehood under the Montevideo Convention. However, international law's bias towards stability and considerations of equity motivate speculation about how a State might maintain its Statehood even once it loses its territory and/or population.

Ms. Hioureas then offered four non-mutually exclusive options that have been raised in academic literature for preserving Statehood and entitlements to maritime zones based on existing territory. She outlined the pros and cons of each option. Option one is based on preserving existing territory through engineering structures such as sea walls and also

through maintaining legal structures fir preserving maritime entitlements. Entitlements can be maintained by negotiating maritime delimitation treaties that fix boundaries, seeking a judicial determination of boundaries, or taking unilateral action to freeze existing entitlements.

A second option for a State to maintain its Statehood is to acquire new territory. The obvious means is acquisition of territory elsewhere, as Kiribati has done in Fiji. But this method raises the question of whether the State could maintain its existing entitlements when it relocates; permitting this seems to contravene the principle that the land dominates the sea. Another means is to construct territory through, for example, the floating islands environmentally friendly technology that is being developed. But article 60 provides that an artificial island does not generate maritime entitlements. However, the purpose of that article was to prevent States from expanding their territory artificially. But what about deterritorialized island-States that merely want to replace their territory, which they have lost as a result of the effects of greenhouse gas emissions for which they are not primarily responsible?

A third option is to integrate a deterritorialized State into another State. Under this theory, a State would use entitlements it was able to maintain through a delimitation agreement as leverage in a negotiation to persuade a host State to accept its population and allow it to form a constituent government within a larger government. However, this could create political instability, including the perverse incentive on larger States to refrain from taking action against sea level rise, in the hope that they would be able to absorb other States and their entitlements.

Finally, Ms. Hioureas suggested that international law might do well to recognize a de-territorialized form of State. She observed that because there are States that have lost a government yet maintained their Statehood, it might be possible for a State to maintain its Statehood without a territory. However, the question is whether it might be more beneficial for States to allow State practice to develop in this regard, rather than pushing for a legal conclusion on the matter at present.

Following Ms. Hioureas's presentation, **Alejandra Torres Camprubí** presented on political issues involving small island States in the Pacific. She noted that decolonization was a long and difficult process and that UN membership was not immediately forthcoming for 'micro-

States', including those located in the Pacific. Yet, once those States were admitted, the UN came closer to achieving its goal of universality and reinforcing international law as a value system.

Small island States have characterised the impacts of climate change on them following three main narratives, presented before different UN organs and institutions. The first presents climate change as an international security issue. The disparate impacts of climate change on small island States also reveal a North/South divide and the concomitant need to address related injustices. Third, the challenge also implicates human rights and intergenerational justice.

Ms. Torres Camprubí shared some thoughts on the way forward. One consideration is whether the General Assembly will adopt a resolution recognizing the continuity of small island States after sea levels rise above them. A *sui generis* status for non-territorial States might come out of this resolution. The General Assembly may also consider creating a specialized UN agency to provide help to these States as they transition due to climate change. Legally speaking, there are two important potential battlefields: one is for the ILC to consider the question of the consequences of sea level rise and another is in the courtroom, where States might bring claims stemming from sea level rise.

Certain panelists made a number of comments in response to questions from the audience. Ms. Árnadóttir allowed that permanently fixing maritime boundaries could only be done when it is consistent with international law; thus, in a situation where the parties are 400 M apart, permanently fixing their EEZ boundary may work an appropriation of the high seas and therefore be impermissible. It is important to consider the effect on third States of bilateral delimitation agreements that fix limits of maritime zones. Prof. Soons agreed with a questioner that article 76(9) might be interpreted to permit States to permanently fix their continental shelf boundaries, but it does not necessarily mean forever; States could change the outer limits of maritime zones in the future, but the change must be in accordance with the Convention. Ms. Hioureas responded to a questioner's challenge the Montevideo Convention's compatibility with her idea about "de-territorialized" States by emphasizing that she is suggesting there may be a need to rethink the framework for statehood (in this regard, she referred to the Order of Malta to illustrate the law's flexibility in this regard). Yet another questioner suggested this might be a non-starter because under general international

law, a State must exercise public authority, which is not possible when a State lacks a territory.

Panel 8: The Central Arctic Ocean Fisheries Agreement

Prof. Aðalheiður Jóhannsdóttir of the **Faculty of Law** of the **University of Iceland** introduced the panel. She explained that climate change will certainly affect the Central Arctic Ocean, a place where commercial fishing has never taken place.

Mr. David Balton of the **Woodrow Wilson Center**, former Deputy Assistant Secretary for Oceans and Fisheries in the US Department of State, provided an overview of the Central Arctic Ocean Fisheries Agreement (CAOFA), the negotiations of which he had chaired. To put it in context, he observed that the oceans are not healthy due to threats including pollution, overfishing, and the effects of climate change (e.g., sea level rise, ocean acidification).

Five States exercise fisheries jurisdiction bordering the high seas area of the Central Arctic Ocean: Canada, Denmark (Greenland), Norway, Russia and the United States. The CAO's high seas area is already subject to some regulation: parts are regulated by the North-East Atlantic Fisheries Commission (NEAFC) and a Russia-Norway bilateral Fisheries Commission in the Barents Sea. While there is currently little to no commercial fishing in the CAO, there is concern that fishing in the high seas may be carried out in an unregulated way—to address this, Arctic States came together to prevent unregulated fishing.

The first step towards the CAOFA was the 2015 Oslo Declaration, where the five Arctic States committed to not authorizing vessels to fish in the high seas area of the CAO until there was adequate scientific information to manage the fisheries and some type of international agreement establishing a regulatory mechanism. From 2015-2017, the five States, as well as Iceland, the EU, China, Japan and the Republic of Korea, negotiated the CAOFA.

The CAOFA has the following key elements: it covers the high seas area of the CAO; it prohibits unregulated commercial fishing; it envisions the possibility of exploratory fishing; it

establishes a joint program of scientific research and monitoring; it requires the parties to meet regularly; it is based on consensus; it includes Arctic indigenous peoples; it is not expected to be permanent; and it requires all parties to deposit their instrument of ratification for it to enter into force.

Looking forward, the signature of the CAOFA is anticipated in October. Once that happens, a scientific research program and rules for exploratory fishing will need to be developed. The CAOFA demonstrates the rapidity with which the Arctic region has become the subject of binding agreements: in less than a decade, 3 have already been developed. It also provides a lesson for the BBNJ process, for this is an example of an ABNJ being dealt with in a profound way.

Mr. Jóhann Sigurjónsson of the **Ministry for Foreign Affairs of Iceland** followed to explain Iceland's views on the CAOFA and the agreement's science-based framework for future fisheries management in the CAO. Although there is no fishing now, once ice retreats as predicted, the area can open quickly to fishing.

Although Iceland does not have an EEZ that abuts the high seas area of the CAO, it welcomed being included in the discussions leading to the CAOFA, as it considered itself to be an Arctic State with real coastal interests. For Iceland, the important considerations for a CAO fisheries regime were that it (1) must comply with UNCLOS and the UNFSA; (2) must respect the competence of NEAFC; and (3) treat all parties to the agreement equally. Iceland also did not want the agreement to be casted as a de facto moratorium on fishing, but rather as an interim step towards a sustainable harvest regime, including a trigger for initiating fishing activities or negotiations for an RFMO. Iceland also felt that the agreement should include a platform for scientific cooperation and monitoring, combined with a program for exploratory fishing under agreed rules and procedures; this would help collect necessary information to allow for proper decision-making.

Scientific consultations regarding fish stocks in the CAO have taken place from 2011 to 2017. At this point, a mapping and monitoring program has been designed. The CAOFA envisions a Joint Program of Scientific Research and Monitoring, which provides a fully-fledged platform for scientific research and generating scientific advice for managing CAO fisheries. This program will manage exploratory fishing and provide a road to future

arrangements for sustainable harvesting when needed. Ultimately, the CAOFA can be considered an RFMA in accordance with UNFSA.

Prof. Erik Molenaar of the **Netherlands Institute for the Law of the Sea** and the **K.G. Jebsen Centre for the Law of the Sea** highlighted the key issues of international fisheries law implicated by the CAOFA.

The agreement is notable for many reasons. First is its inclusivity: it includes both coastal States and high seas fishing States. In the former category are the five States with 200 nm zones abutting the CAO high seas area. In the latter category are China, the EU, Iceland, Japan and the Republic of Korea; while noting that Iceland regards itself as an Arctic Ocean coastal State, and that the EU also represented 3 Arctic States (mainland Denmark, Finland and Sweden).

The CAOFA is also notable because it determines conditions for a future high seas fishery, even though commercial fishing has not yet taken place. The agreement incorporates the two key elements from the Oslo Declaration signed by the Arctic Five: covering only the high seas portion of the CAO and introducing a qualified and temporary abstention from high seas fishing.

The qualified abstention from high seas fishing in the CAOFA brings into relief the diverging interests of the coastal States and the high seas fishing States. While coastal States may also be interested in high seas fishing, the exclusive high seas fishing States are more inclined to favour a more rapid commencement of high seas fishing. Coastal States' support for high seas fishing will be dependent on whether the stock to be fished is already authorized to be fished in the coastal States' EEZs (i.e., whether it interferes with the coastal States' ability to exploit their own EEZs) or whether coastal States have taken a conservation-oriented approach to fishing in their own EEZs. On the other hand, high seas fishing States were concerned about "creeping coastal State jurisdiction" in the BBNJ process, as well as their inferior status in the Arctic Council.

The CAOFA represents a package deal aimed at striking a balance between these interests. Quite uniquely in international fisheries law, it requires all participants to submit their instruments of ratification for it to enter into force. The agreement includes a sunset clause,

which was also a critical factor in the CCAMLR's decision to establish an MPA in the Ross Sea in 2016, so it was seen as a viable option for the Arctic as well. Finally, it acknowledges the special responsibilities and interests of the coastal States.

To conclude, Prof. Molenaar felt that the CAOFA is a landmark agreement in that it applies a precautionary approach on an unparalleled scale and manner of precaution. It signals an important step in the gradual transformation of the concept of the freedom of the high seas now that prior approval of participants will be needed to permit commercial fishing. The CAOFA also demonstrates that there is a strong potential for precautionary and ecosystem-based fisheries management. For it to be successful, all participants need to recognize each other's interests and cooperate in good faith.

To conclude, **Ms. Eom Seon-hee** of the **Korea Maritime Institute** provided an Asian perspective on the CAOFA. From her perspective, the three key concepts embedded in the agreement are the right to fish on the high seas, the precautionary approach, and the need to prevent unregulated fishing. She compared the CAOFA with the Convention on the Conservation and Management of Pollock Resources in the Central Being Sea, the International Convention for the Regulation of Whaling, and CCAMLR. Of these, only CCAMLR embodies the precautionary approach.

From an Asian perspective, the CAOFA is a welcome development in that it envisions the responsible development and conservation of CAO fisheries. It does this through scientific monitoring and research, as well as cooperation amongst stakeholders. However, there are concerns. Will there be a bias toward certain methodologies? There could be many different ways to estimate impacts of fishing on Arctic fish stocks. Given the importance of fishing to Asian economies, Asian countries will have a strong interest in the socio-economic effects of the CAOFA. She suggested that the agreement could have included adjacent waters to account for straddling or migratory stocks.

Ms. Eom explained that the CAOFA presented new opportunities. To seize these opportunities, the CAOFA should establish a governing body to implement the agreement; the Arctic Council can't do it alone. Scientific methods used to calculate the maximum sustainable yield must be reviewed. And the socio-economic effects of the agreement must be considered at each step of its implementation.

Certain panelists made a number of comments in response to questions from the audience.

Mr. Balton gave additional insight into the CAOFA negotiations. He acknowledged that the CAOFA's lack of opposability to third States is an issue of fisheries law generally, but he does not think it is a particular concern for the CAOFA because all States with a real interest in the CAO were at the table, and it is unlikely that third States would attempt to undermine it. Moreover, there is a possibility that other States could be invited to join.

With respect to the inclusion of indigenous peoples in the process and the agreement, he said that at least three delegations brought indigenous peoples representatives as members. Because there is very little knowledge about CAO fisheries, there were not many difficulties in incorporating traditional knowledge. He noted that the agreement recognizes indigenous peoples in its preamble and that the Meeting of Parties can establish bodies permitting direct participation of indigenous peoples in them.

Prof. Molenaar responded to a question about adjacent coastal States' rights in the CAO by explaining that there were concerns that, in negotiating the CAOFA, the Arctic 5 might claim special rights and roles, which they might bring to the BBNJ process. He was, however, heartened by the fact that the agreement makes no distinction between coastal and non-coastal States and that it includes the notion of "real interest."

Conclusion

In his closing remarks, the Chairman of the Conference, **Tomas Heidar**, said he was overwhelmed by the quality of the presentations made during the Conference and thanked all panelists for their great contribution. He also thanked the audience for its active participation in the discussions and the Conference secretariat, CP Reykjavík, and the volunteers for their valuable assistance. Finally, he expressed his thanks to the Board of the Law of the Sea Institute of Iceland and reiterated his thanks to the co-host, the Korea Maritime Institute, and the associate sponsors.

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