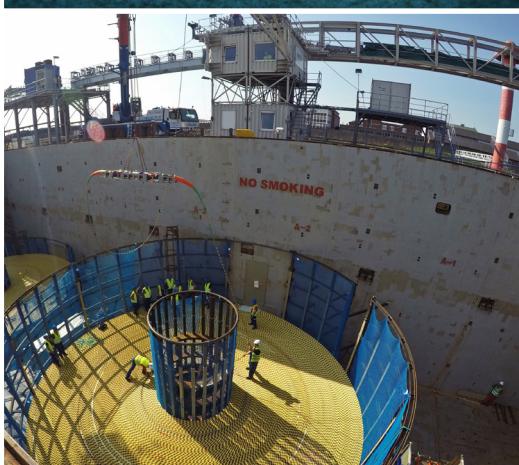
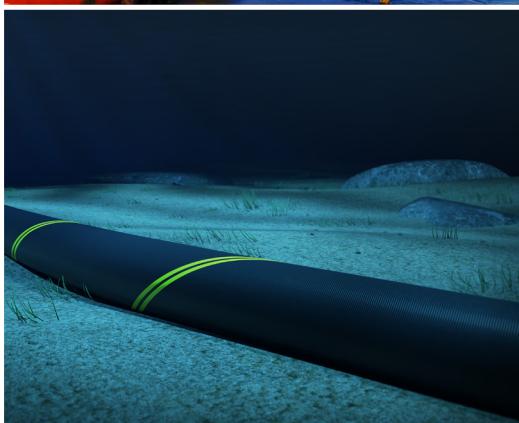




ISA TECHNICAL STUDY NO. 24



Deep Seabed Mining and Submarine Cables: Developing Practical Options for the Implementation of the 'Due Regard' and 'Reasonable Regard' Obligations under UNCLOS



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Deep Seabed Mining and Submarine Cables: Developing Practical Options for the Implementation of the 'Due Regard' and 'Reasonable Regard' Obligations under UNCLOS

Report of the Second Workshop



Bangkok, 29-30 October 2018

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International Seabed Authority
14-20 Port Royal Street
Kingston, Jamaica
Tel: +1 876 922-9105
Website: www.isa.org.jm

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ACRONYMS AND ABBREVIATIONS

AIS	Automatic Identification Systems
AUV	Autonomous Underwater Vehicle
BBNJ	Marine biological diversity of areas beyond national jurisdiction
CAGR	Compound Annual Growth Rate
CCZ	Clarion Clipperton Fracture Zone
COMRA	China Ocean Mineral Resources Research and Development Association
CP	Closure Plan
EEZ	Exclusive economic zone
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement
EMMP	Environmental Management and Monitoring Plan
ESCA	European Submarine Cables Association
GSR	Global Sea Mineral Resources NV
HOV	Human Occupied Vehicle
HR	High Resolution
ICJ	International Court of Justice
ICPC	International Cable Protection Committee
IHO	International Hydrographic Organization
IMMS	International Marine Minerals Society
IODP	International Ocean Discovery Programme
ISA	International Seabed Authority
ITLOS	International Tribunal for the Law of the Sea
LTC	Legal and Technical Commission
NASCA	North American Submarine Cable Association
NOAA	National Oceanic and Atmospheric Administration
OFPC	Oregon Fishermen's Cable Committee
OOS	Out-of-service
ROV	Remote Operated Vehicle
RPL	Route Position List
SAFE	South Africa Far East
SRFC	Sub-Regional Fisheries Commission
UKSRL	UK Seabed Resources Ltd
UNCLOS	United Nations Convention on the Law of the Sea ('the Convention')
UNESCO	United Nations Educational, Scientific and Cultural Organization

I. FOREWORD

In today's world where ocean-related activities are incessantly on the rise, the need for maritime industries to work together to find practical ways in which to accommodate one another's activities is critical. The conduct of mineral-related activities in the Area, which are governed by Part XI of the 1982 United Nations Convention on the Law of the Sea (UNCLOS) and laying of submarine cables across the high seas are a case in point.

In this connection, one of the key, and probably one of the most intriguing, obligations in the law of the sea is the duty of States to exercise 'due regard'/'reasonable regard' for the interests of third parties in different parts of the vast ocean space.

The reciprocal obligation of 'due regard' must be observed by all States at all times in the exercise of their rights under the Convention. This obligation has been categorized as an "organizing principle" which runs across the entire spectrum of the UNCLOS. This cross-cutting notion plays a critical role in accommodating maritime activities in time and space promoting the peaceful use of the seas and oceans.

Part XI of the Convention dealing with the regime of the Area, and Part VII on the high seas are inextricably and dynamically linked by the 'due regard'/'reasonable regard' obligation. Accordingly, any use of the Area must be conducted with 'reasonable regard' for other uses of the marine environment, and other uses of the marine environment must be conducted



with 'reasonable regard' for activities in the Area.

It is within this framework that it is my great pleasure to present the proceedings of the Second Workshop on Seabed Mining and Submarine Cables: developing practical options for the implementation of the 'due regard' and 'reasonable regard', organized by the International Seabed Authority (ISA) in collaboration with the Ministry of Foreign Affairs of the Government of Thailand and the International Cable Protection Committee (ICPC) and which was held on 29 and 30 October 2018 in the premises of the United Nations Conference Centre in Bangkok, Thailand.

This event was organized in response to the call formulated at the first joint ISA/ICPC workshop held in 2015 at which it was suggested to organize a second workshop to review mutual progress. Moreover, the Bangkok workshop constituted yet another

illustration of the ongoing constructive dialogue between the Authority and the ICPC, as well as an expression of the successful implementation of the 2011 Memorandum of Understanding concluded between both entities to increase their mutual cooperation with a view to exchange relevant information and facilitate direct liaison among the relevant deep seabed operators.

When compared to its first edition, the Bangkok workshop demonstrated the growing momentum and interest in this subject as it gathered participants from the submarine cable industry, contractors with the Authority, representatives from sponsoring States, judges of international courts and tribunals, members of the LTC of the Authority, a former member of the Commission on the Limits of the Continental Shelf, renowned academics and other stakeholders.

The workshop was equally successful in achieving its objectives since it promoted constructive dialogue, identification of opportunities for mutual cooperation and exchange of information between contractors and cable operators. Significantly, it also substantially advanced the identification of the elements of a kit of potential and practical tools to coordinate the activities of contractors in the Area and those of the submarine cables operators under the framework of the Convention. In this connection, the identification of elements for a toolkit of practical measures constituted the main outcome of the Bangkok workshop.

This second event also proved to be significant in highlighting the key role that States have in implementing the 'due

regard' obligation as well as the major role that a fluid communication among operators of both maritime sectors play in finding tailor-made and constructive solutions for each situation.

As the proceedings reflected in this volume show, there are still some aspects in which more work and industry-to-industry dialogue is needed as there are still differences of opinion on the most appropriate approaches as to how to move forward.

It is my perspective that regulatory approaches not only run the risk from departing from the text and intent of the existing legal framework applicable to the activities in the Area, but, even more broadly, also risks undermining the core function of the 'due regard' obligation in the UNCLOS in which no activity has either priority or a veto over the other.

In the view of the Secretariat of the Authority, the preferred approaches should stay on the path towards promoting the development of practical options and measures to facilitate early industry-to-industry engagement and consultation in the quest to find the most appropriate practical solutions to accommodate the needs of each sector depending on the particular circumstances of each case. In our opinion, these pragmatic approaches offer the best way to maximize the opportunities for realizing the 'due regard' obligation in the UNCLOS. This is, in my view, where the future lies.

Michael W. Lodge
Secretary-General
International Seabed Authority

II. BACKGROUND PAPER. Advancing the practical implementation of the 'due regard' / 'reasonable regard' obligations: The applicable legal framework and practical options for its implementation

Judge Tullio Treves

Introduction

In preparing the present background paper, I have been well aware that this is the second workshop on Deep Seabed Mining and Submarine Cables, so that the questions of accommodation, compatibility and coexistence between activities in the Area (exploration and exploitation of mineral resources on the seabed beyond the limits of national jurisdiction) and the laying, operation etc. of submarine cables are the main concerns of most of the participants. I have also been well aware that the previous workshop in 2015 made considerable steps forward on the specific issues of cables.¹

Nonetheless, the task entrusted to me by the Authority is not limited to cables. It encompasses an analysis of the legal framework regulating the coexistence of various activities in the seas, with particular reference to activities in the Area in their relationship with other activities.

Consequently, I will, firstly, address the rules of the UNCLOS concerning coexistence between different activities in the marine environment, focusing on those that may be relevant for deep seabed mining, and taking into account the contributions made by international courts and tribunals. In doing so, I will, secondly, focus on those rules that provide for obligations of reciprocal 'due regard' (with whatever terms expressed), namely those that apply to the two activities whose coexistence is under consideration.

This will provide the legal framework for considering, thirdly, practical options for implementing the reciprocal 'due regard' obligations, with specific focus on those applicable to activities in the Area and the laying of cables. A specific aspect of the practical options involves the examination of the possible roles of the Authority, the contractor, the sponsoring States, as well of submarine cable owners. Finally, I will look at the possible role of available disputes-settlement mechanisms and of the advisory opinions of the Seabed Disputes Chamber.

¹ *Submarine Cables and Deep Seabed Mining, Advancing Common Interests and Addressing UNCLOS 'due regard's Obligations*, ISA Technical Study No.14, ISA, Kingston, 2015, 52 p.

I. The Legal Framework

I will start with a review of the provisions of the Convention (as well as of the Authority's Regulations) in which the notion of 'due regard' and similar notions are used. We will see that, although these provisions are relatively numerous, they fail to specify the content of the obligation or obligations they impose on States. However, some decisions of international courts and tribunals make an important contribution in clarifying, at least to a certain extent, such content.

A. Provisions in the UNCLOS

The Convention contains a number of provisions aimed at accommodating the coexistence of different activities in the same maritime area. From the viewpoint of the present paper the most important are Articles 87 (2) and 147 (1 and 3).

Article 87, in paragraph 1 states that the freedom of the high seas "is exercised under the conditions laid down by this Convention and by other rules of international law" and sets out a non-exhaustive list of the freedoms comprised in this freedom. Paragraph 2 states:

These freedoms shall be exercised by all States with 'due regard' for the interests of other States in their exercise of the freedom of the high seas, and also with 'due regard' for the rights under this Convention with respect to activities in the Area.

This provision repeats, with some changes, the last paragraph of Article 2 of the 1958 Geneva Convention on the High Seas. The only change of substance is the addition of the mention of the rights with respect to activities in the Area.²

Article 147, entitled "Accommodation of activities in the Area and in the marine environment", states in paragraphs 1 and 3:

Para 1. Activities in the Area shall be carried out with "reasonable regard" for other activities in the marine environment.

Para 3. Other activities in the marine environment shall be conducted with 'reasonable regard' for activities in the Area.

A terminological clarification of these two articles is needed. The fact that Article 87 speaks of 'due regard' and Article 147 of 'reasonable regard' is due to historical circumstances of the drafting and does not imply any difference of substance. This point has been persuasively argued in various writings by Professor Bernard Oxman,³ and it may be safely assumed that in the Convention 'reasonable regard' is equivalent to 'due regard'.

The view that the "standard of 'due regard'" is less ambulatory and open textured than the standard of 'reasonable regard' in the counterpart Article 2 of the High Seas Convention⁴ has been held. It seems doubtful, however, that the difference in terms used justifies this conclusion in light of the above which recalled drafting

2 The last paragraph of the Geneva Convention on the High Sea is as follows: "These freedoms, and others which are recognized by the general principles of international law, shall be exercised by all States with 'reasonable regard' to the interests of other States in their exercise of the freedom of the high seas."

3 See in particular B. H. Oxman, "The Régime of Warships under the United Nations Convention on the Law of the Sea", in *24 Virginia Journal of International Law*, 1984, p. 827 n. 52. The difference of terminology in the Convention depends on the fact that in Article 2 of the 1958 Convention on the High Sea the Spanish equivalent of 'reasonable regard' was "debida consideración" and the original draft of the Convention Article 87 was based on a retranslation from the Spanish text of Article 2 of the Geneva Convention, while that of Article 147 was based on the English text of the same article.

4 Judge Laing Separate Opinion, *M/V Saiga No. 2, Saint Vincent and the Grenadines v. Guinea*, Judgment, ITLOS Reports 1999, p. 10 at p. 175, paragraph 32. Similarly, J. Gaunce, "The Interpretation of the general duty of 'due regard's 32 Ocean Yearbook, 2018, 27-9, espec. 47-50.

history and of the following passage of the ICJ judgement of 1974 in the *Fisheries Jurisdiction (United Kingdom v. Iceland)* cases, where the equivalence between 'reasonable regard' and 'due regard' is evident:

The principle of 'reasonable regard' for the interests of other States enshrined in Article 2 of the Geneva Convention on the High Seas of 1958 requires Iceland and the United Kingdom to have 'due regard' for each other's interests, and for the interests of other States, to these resources.⁵

Another important instance in which the Convention refers to the notion of 'due regard' is in Articles 56 (2) and 58 (3) concerning the coexistence in the Exclusive Economic Zone (EEZ) of rights of the coastal State and of freedoms of the other States.

Article 56 (2) reads as follows:

In exercising its rights and performing its duties under this Convention in the exclusive economic zone, the coastal State shall have 'due regard' to the rights and duties of other States and shall act in a manner compatible with the provisions of this Convention.

Article 58 (3) states:

In exercising their rights and performing their duties under this Convention in the exclusive economic zone, States shall have 'due regard' to the rights and duties of the coastal State and shall comply with the laws and regulations adopted by the coastal State in accordance with the provisions of this Convention and other rules of international law in so far as they are not incompatible with this Part.

'Due regard' is mentioned in various other provisions of the Convention. The most notable are Articles 60 (3), 66 (3a), 79 (5).

Article 60 (3) concerns the conditions to be observed for removing disused or abandoned installations in the EEZ. It states in its relevant part:

(...) Any installations or structures which are abandoned or disused shall be removed to ensure safety of navigation, taking into account any generally accepted international standards established in this regard by the competent international organization. Such removal shall also have 'due regard' to fishing, the protection of the marine environment and the rights and duties of other States. (...)

Article 66 (3a) concerns requirements for fishing for anadromous stocks beyond the limits of the EEZ. It states in the relevant part:

(...) With respect to such fishing beyond the outer limits of the exclusive economic zone, States concerned shall maintain consultations with a view to achieving agreement on terms and conditions of such fishing giving 'due regard' to the conservation requirements and the needs of the State of origin in respect of these stocks.

Article 79 (5), concerning the laying of submarine cables or pipelines on the continental shelf, states:

When laying submarine cables or pipelines, States shall have 'due regard' to cables or pipelines already in position. In particular, possibilities of repairing existing cables or pipelines shall not be prejudiced.

⁵ *Fisheries Jurisdiction (merits), United Kingdom v. Iceland*, Judgment of 25 July 1974, ICJ Reports, 1974, paragraph 68. Emphasis supplied.

The notion of 'due regard' is also utilized, in particular, in Articles 27 (4), on 'due regard' to the interests of navigation in deciding on arresting a vessel, and 234 on 'due regard' to navigation and the protection of the environment in the adoption by the coastal State of laws and regulations on pollution from vessels in ice-covered areas.

In some provisions, the Convention addresses coexistence of activities in a maritime zone prescribing that "unjustifiable interference" must be avoided.

So, Article 78 (2), concerning the relationship between the rights of the coastal State and the rights and freedoms of other States on the continental shelf, provides that:

The exercise of the rights of the coastal State over the continental shelf must not infringe or result in any unjustifiable interference with navigation and other rights and freedoms of other States as provided for in this Convention.

Similarly Article 194 (4) states that, in taking measures to prevent, reduce and control pollution:

States shall refrain from unjustifiable interference with activities carried out by other States in the exercise of their rights and in pursuance of their duties in conformity with this Convention.

This expression is used also to describe the conduct of marine scientific research in

its relationship with other activities. Article 240 (c), states that:

marine scientific research shall not unjustifiably interfere with other legitimate uses of the sea compatible with this Convention and shall be duly respected in the course of such uses.

Article 246 (8) specifies - without, it would seem, adding substance to what is already in Article 240(c) - that, when scientific research activities are conducted in the EEZ or on the continental shelf, they:

[...]shall not unjustifiably interfere with activities undertaken by coastal States in the exercise of their sovereign rights and jurisdiction provided for in this Convention.

It may be debated whether the criterion of avoiding unjustifiable interference is equivalent to that of 'due regard' or whether it is more permissive, admitting interference provided that it is justifiable. The Arbitral Tribunal in its award of 18 March 2015 on the *Chagos* case stated that the obligation set out in Article 194 (4) to "refrain from unjustifiable interference" was "functionally equivalent to the obligation to give 'due regard', set out in Article 56 (2)".⁶

B. International Seabed Authority's Regulations

The Authority's Regulations for Prospecting and Exploration of Polymetallic Nodules, Polymetallic Sulphides, and Cobalt-rich Ferromanganese Crusts⁷ never use the

⁶ *Chagos Protected Area Arbitration, Mauritius v. United Kingdom*, Award of 18 March 2015, paragraph 540, available at www.pca-cpa.org.

⁷ The texts are in documents ISBA/19/A/9 (Regulations on Prospecting and Exploration for Polymetallic Nodules); ISBA/16/A/12 (Regulations on Prospecting and Exploration for Polymetallic Sulphides); ISBA/18/A/11 (Regulations on Prospecting and Exploration for Cobalt-rich Ferromanganese Crusts). They are conveniently reprinted in International Seabed Authority, *Consolidated Regulations and Recommendations on Prospecting and Exploration*, Revised edition, International Seabed Authority, Kingston, 2015.

expression 'due regard' or 'reasonable regard'. They contain, nevertheless, a provision concerning the relationship between prospecting and exploration in the Area and activities on the high seas stating that:

Nothing in these Regulations shall be construed in such a way as to restrict the exercise by States of the freedom of the high seas as reflected in Article 87 of the Convention.⁸

The reference to Article 87 of the Convention includes the 'due regard' obligation set out in paragraph 2 of that article. This is the only provision in the Regulations that may apply to cables, through the reference to Article 87. Other provisions concern the relationship between prospecting and exploration activities and other specific activities: the conduct of scientific research, referring again to Article 87, in addition to Articles 143 and 256,⁹ the establishment of installations,¹⁰ and the finding of objects of archaeological or historical nature.¹¹

It is interesting to note that the provisions just quoted on installations and on objects of archaeological or historical nature go beyond stating a 'due regard' obligation and give priority to the other activity with which exploration in the Area may interfere. So, in regards to installations, the

provisions quoted above state, following Article 147 (2b) of the Convention, that the Authority must determine whether the proposed plan for exploration will ensure that installations are not established where interference may be caused to the use of recognized sea lanes essential to international navigation or in areas of intense fishing activity.

In regard to objects of archaeological or historical nature, the Regulations quoted above – implementing Article 149 of the Convention – oblige the contractors to notify the finding of such objects or of human remains to the Secretary-General of the Authority who must inform the Director-General of UNESCO. Unless, and until, the Council of the Authority decides otherwise, after taking into account the views of the Director General of UNESCO, no further prospecting or exploration shall take place within a reasonable radius.¹²

It seems noteworthy that the Regulations envisage the relationship of prospecting and exploration activities under a proposed plan of work and such activities under an approved plan of work for other resources, providing that the approval of the former plan of work requires "non-interference" with activities under the approved one.¹³

Only the Draft Regulations on Exploitation of Mineral Resources in the Area¹⁴ envisages the problem in its general terms

⁸ Regulations on Prospecting and Exploration for Polymetallic Nodules, Regulation 1 (4); Regulations on Prospecting and Exploration for Polymetallic Sulphides, Regulation 1(4); Regulations on Prospecting and Exploration for Cobalt-rich Ferromanganese Crusts, Regulation 1 (4).

⁹ Regulation 1.4 of each of the three Regulations on Prospecting and Exploration.

¹⁰ Regulations on Prospecting and Exploration for Polymetallic Nodules, Regulation 21 (4c); Regulations on Prospecting and Exploration for Polymetallic Sulphides, Regulation 23 (4c); Regulations on Prospecting and Exploration for Cobalt-rich Ferromanganese Crusts Regulations, Regulation 23 (4c).

¹¹ Regulations on Prospecting and Exploration for Polymetallic Nodules, Regulations 8 and 35; and Regulations 8 and 37 of the Regulations on Prospecting and Exploration for Polymetallic Sulphides and of the Regulations on Prospecting and Exploration for Cobalt-rich Ferromanganese Crusts.

¹² Regulations on Prospecting and Exploration for Polymetallic Nodules, Regulation 35; Regulation 37 of the Regulations on Prospecting and Exploration for Polymetallic Sulphides, and of the Regulations on Prospecting and Exploration for Cobalt-rich Ferromanganese Crusts.

¹³ Regulations on Prospecting and Exploration for Polymetallic Nodules, Regulation 21 (6b); Regulations on Prospecting and Exploration for Polymetallic Sulphides, Regulation 23 (6c); Regulations on Prospecting and Exploration for Cobalt-rich Ferromanganese Crusts, Regulation 23 (6b).

¹⁴ ISBA/24/TLC/WP.1 of 30 April 2018.

in Draft Regulation 33 which repeats and quotes Article 147 (1) of the Convention requiring that exploitation activities in the Area be conducted with 'reasonable regard' for other activities in the marine environment". The obligations toward cables and pipelines are singled out, indicating that:

each contractor shall exercise due diligence to ensure that it does not cause damage to submarine cables and pipelines in the contract area.

C. The contribution made by international courts and tribunals

Judgements of international Courts and Tribunals have made a notable, although preliminary, contribution to the determination of the scope and contents of the notion of 'due regard' (which we can assume, in light of the remarks made above, applies, also, to that of 'reasonable regard').

In the *Fisheries Jurisdiction* judgements of 1974 the International Court of Justice gave some early indications concerning the historical background and scope of the 'due regard' rule, indicated as "one of the advances in international maritime law". Without explicitly referring in this passage to Article 2 of the Geneva Convention on the High Sea quoted above, the Court stated:

The former laissez-faire treatment of the living resources of the sea in the high seas has been replaced by a recognition of a duty to have 'due regard' to the rights of other States and to the needs of conservation for the benefit of all.¹⁵

Other references relate to more recent cases. The case that made the most important contribution addressing the contents of the 'due regard' obligation is the Arbitral Award of 18 March 2015 on the Chagos dispute between Mauritius and the United Kingdom which focussed on Article 56(2) of the Convention.¹⁶

The Award holds, firstly, that the notion of 'due regard' has not an invariable content and states:

The Tribunal declines to find in this formulation ['due regard' in Article 56 (2)] any universal rule of conduct.

Moreover, in the view of the Tribunal, the regard required for the right of one State must be such:

as is called for by the circumstances and by the nature of those rights.

Secondly, according to the Award, the 'due regard' rule does not grant a priority to either of the rights in competition:

The Convention does not impose a uniform obligation to avoid any impairment of Mauritius' rights; nor does it uniformly permit the United Kingdom to proceed as it wishes, merely noting such rights. Rather, the extent of the regard required by the Convention will depend upon the nature of the rights held by Mauritius, their importance, the extent of the anticipated impairment, the nature and importance of the activities contemplated by the United Kingdom, and the availability of alternative approaches¹⁷

¹⁵ *Fisheries Jurisdiction (United Kingdom v. Iceland)* Merits, Judgment, ICJ Reports 1974, 3, paragraph 72; *Fisheries Jurisdiction (Federal Republic of Germany v. Iceland)* Merits, Judgment, ICJ Reports 1974, 175, paragraph 64.

¹⁶ *Chagos Protected Area Arbitration*, Ibid.

¹⁷ *Chagos Protected Area Arbitration*, Award, Ibid., paragraph 519.

Thirdly, the Award describes the procedure for applying the 'due regard' rule, in specific cases, in the sentence that immediately follows the latter quote:

In the majority of cases, this assessment will necessarily involve at least some consultation with the rights-holding State.¹⁸

The Award further elaborates on the consultations the States concerned are to engage in by comparing consultations between the institution of a marine protected area in the Chagos Archipelago, held by the United Kingdom, with the United States and those it held with Mauritius. That discussion underlines that the former had been held "in a timely manner and provided with information" while the latter reminded "the Tribunal of ships passing in the night".¹⁹ Regarding consultations with the United States the record demonstrated:

a conscious balancing of rights and interests, suggestions of compromise and willingness to offer assurances by the United Kingdom, and an understanding of the United States' concerns in connection with the proposed activities. All these elements were noticeably absent in the United Kingdom's approach to Mauritius.²⁰

The Award, thus, specifies that consultations must be timely and informative and that they must include, on the part of each State engaging in them, "a balancing exercise with its own rights and interests", suggestions of compromise and assurances.

In the *Bangladesh v. Myanmar* delimitation judgment of 2012,²¹ the International Tribunal for UNCLOS envisages 'due regard' in the context of so-called "grey zones". Those areas which, because the delimitation line between two States with adjacent coasts deviates from the equidistance line, lie beyond the 200 miles EEZ of one of these States only, but on the continental shelf of both. The judgement states that:

[in] such a situation, pursuant to the principle reflected in the provisions of Articles 56, 58, 78 and 79 and in other provisions of the Convention, each coastal State must exercise its rights and perform its duties with 'due regard' to the rights and duties of the other.²²

The important aspect of this judgement is that the 'due regard' obligations are applied to an area for which there is no express provision in the Convention, by referring to a "principle" (the principle of 'due regard') "reflected" in a number of provisions in which the Convention envisages specific situations. It is particularly noteworthy that one of the provisions quoted, Article 78, speaks of the obligation not to "infringe" or cause "unjustifiable interference" and not of 'due regard'.

In the International Tribunal for the UNCLOS's Advisory Opinion of 2 April 2015 on the Request submitted by the Sub-Regional Fisheries Commission (SRFC)²³ the Tribunal refers to the 'due regard' obligations of coastal and other States in the EEZ:

¹⁸ *Chagos Protected Area Arbitration*, Award, Ibid., paragraph 519.

¹⁹ *Chagos Protected Area Arbitration*, ibid., paragraph 529.

²⁰ *Chagos Protected Area Arbitration*, ibid., paragraph 535.

²¹ *Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal (Bangladesh v. Myanmar)*, Judgment of 14 March 2012, ITLOS Reports, 2012, p. 4.

²² Ibid., paragraph 475.

²³ ITLOS Reports, 2015, p. 4.

The Tribunal notes in this regard that, while the SRFC Member States and other States Parties to the Convention have sovereign rights to explore, exploit, conserve and manage the living resources in their exclusive economic zones, in exercising their rights and performing their duties under the Convention in their respective exclusive economic zones, they must have 'due regard' to the rights and duties of one another.²⁴

In this instance, the Tribunal refers not only to Articles 56 (2) and 58(3) of the Convention but also to:

the States Parties' obligation to protect and preserve the marine environment, a fundamental principle underlined in Articles 192 and 193 of the Convention and referred to in the fourth paragraph of its preamble.²⁵

The Arbitral Award of 12 July 2016 in the South China Sea Arbitration (*Philippines v. China*)²⁶ case refers with approval to the ITLOS Advisory Opinion and contributes to the determination of the content of 'due regard', although only in regards to fisheries, by linking it with the obligation of due diligence. It states:

743. In the context of the duties of a flag State with respect to fishing by its nationals, the International Tribunal for the Law of the Sea interpreted the obligation of 'due regard', when read in conjunction with the obligations directly imposed upon nationals by Article 62(4), to extend to a duty

"to take the necessary measures to ensure that their nationals and vessels flying their flag are not engaged in IUU fishing activities.

744. (...) Given the importance of fisheries to the entire concept of the exclusive economic zone, the degree to which the Convention subordinates fishing within the exclusive economic zone to the control of the coastal State, and the obligations expressly placed on the nationals of other States by Article 62(4) of the Convention, the Tribunal considers that anything less than due diligence by a State in preventing its nationals from unlawfully fishing in the exclusive economic zone of another would fall short of the regard due pursuant to Article 58(3) of the Convention.

757. (...) China has, through the operation of its marine surveillance vessels in tolerating and failing to exercise due diligence to prevent fishing by Chinese flagged vessels at Mischief Reef and Second Thomas Shoal in May 2013, failed to exhibit 'due regard' for the Philippines' sovereign rights with respect to fisheries in its exclusive economic zone. Accordingly, China has breached its obligations under Article 58(3)...²⁷

The Arbitral Award of 14 August 2015 in the Arctic Sunrise case²⁸ makes a relevant contribution to the role of the 'due regard' obligation concerning activities in the EEZ and the continental shelf. Addressing the protest by a Dutch-flagged vessel in the Russian EEZ, and its repercussions on a Russian platform on the Russian

24 ITLOS Reports, 2015, paragraph 216.

25 Ibid., paragraph 216.

26 Available at www.pca-cpa.org

27 See J. Gaunce, "The South China Sea Award and the duty of 'due regard' under the United Nations Law of the Sea Convention", University of Calgary Law Blog, ABlawg.ca, September 8, 2016.

28 *Netherlands v. Russian Federation, Merits award*, available at www.pca-cpa.org

continental shelf, the Award, after having stated that the protection of the sovereign rights of the coastal State is a "legitimate aim" of the coastal State allowing it to take measures for that purpose, observes that

At the same time, the coastal State should tolerate some level of nuisance through civilian protest as long as it does not amount to an "interference with the exercise of its sovereign rights". 'Due regard' must be given to the rights of other States, including the right to allow vessels flying their flag to protest.²⁹

Article 78(2) of the Arctic Sunrise case³⁰ concerning unjustifiable interference of the exercise of sovereign rights on the continental shelf with navigation and other rights and freedoms of all States on the high seas confirms the equivalence of 'due regard' and "avoidance of unjustifiable interference" that, as recalled above, was also, and more explicitly, affirmed in the Award, adopted three days later, on the Chagos dispute.

D. 'Due regard' beyond the Convention

An important question arising from the provisions of the UNCLOS and the decisions of international courts and tribunals examined is whether the obligation of 'due regard' applies only when a specific rule providing for it applies, or whether there is reason to say that this obligation applies also in situations not covered by apposite provisions.

We have seen that the International Tribunal for UNCLOS in its judgement in the *Bay of Bengal* case states that the 'due

regard' obligation applies also to the so-called "grey areas", which are maritime spaces whose regime is not covered by provisions of the Convention. And, we have also seen that the argument put forward by the Tribunal for holding such a view was that 'due regard' is a "principle" "reflected" in various articles of the Convention that mention it and in one that speaks of "unjustifiable interference".

Arguing from the presence in the Convention of provisions setting forth the 'due regard' obligation, and provisions for the avoiding of "unjustifiable interference" and also of those prohibiting "hampering" of navigation, and referring to the *Bay of Bengal* judgement and to the 2015 Advisory Opinion of the International Tribunal for the UNCLOS, Professor Oxman states that the above mentioned provisions "that set forth the underlying rule substantially broaden the circumstances in which the rule of self-restraint is expressly applicable".³¹ In his view the International Tribunal for UNCLOS:

has made two things clear: first, that the specific provisions of the Convention are manifestations of a more general organizing principle of 'due regard' in the law of the sea; and, second, that the underlying duty is not only a negative one, but requires due diligence by a State, including regulatory and enforcement action, to secure compliance by its nationals and vessels with the duty of 'due regard'.³²

I find the arguments supporting the conclusion that the obligation of 'due regard' applies to cases not contemplated by the Convention persuasive for all cases in which there are equally legitimate

29 Ibid., paragraph 328.

30 Ibid., paragraph 331.

31 B. H. Oxman, "The principle of 'due regard', in *International Tribunal for the Law of the Sea, The Contribution of the International Tribunal for the Law of the Sea to the Rule of Law, 1996-2016*, Brill-Nijhoff, Leiden Boston, 2018, pp. 108-116, at 112.

32 Ibidem.

rights in competition in a maritime zone. The "grey zones" envisaged in the Bay of Bengal case are a good example.

We can think also of other examples including the situation arising from the coexistence of activities concerning genetic resources (or other hitherto unregulated activities) in areas beyond national jurisdiction with the exercise of freedoms of the high seas, or of rights concerning activities in the Area.

Another example may be the exercise of a freedom of the high seas in the exercise of the same or another freedom by the same State. Of course, Article 87 (1) does not encompass this situation because it does not concern relations between two or more States. Still, it seems difficult to deny that - lacking precise rules in domestic law - the relationship between, for instance, fishing and navigation on the high seas, or fishing and oil exploitation in the EEZ, by vessels, or installations, of the same State requires some regulating criterion. Additionally, the criterion of 'due regard', to which the State in question is bound in regards to activities of other States, presents advantages, in particular as it ensures uniformity between the exercise of different rights by the same State. As the regulation of relationships between different activities by the same State may have an international dimension, for instance in its repercussions on the safety of navigation on the high seas, it may be argued that the 'due regard' obligation extends to the exercise of equally licit activities by the same State.

As recalled above in the *Bay of Bengal* judgement, the International Tribunal for UNCLOS saw the obligation of 'due regard' as a "principle" "reflected" in the provisions of the Convention utilizing it. For Professor Oxman these provisions are "manifestations" of "a more general organizing principle of 'due regard'. What is the legal nature of such a "principle"? One could argue that the extension to

situations not envisaged by the rules of the Convention providing for 'due regard' is effected by way of analogy, so that there would be a treaty basis to such an extension. Another argument is that the existing rules of 'due regard' reflect a broader customary rule necessarily implied in the need to ensure coexistence between the customary freedoms of the high seas, the rights in the Area, and the rights of coastal States in the EEZ.

E. Reciprocal 'due regard'

The obligation of 'due regard' is set out as reciprocal in key provisions of the Convention. These are the provisions stating that each of the competing activities must be conducted with 'due regard' to the conduct of the other. Reciprocal 'due regard' is clearly provided in Article 87 (2) in regards to the exercise by States of freedoms of the high seas in relation to the exercise by other States of these freedoms. So, for instance, the freedom of navigation shall be exercised with 'due regard' to the freedom of other States to lay cables and pipelines, and the freedom of laying cables and pipelines shall be conducted with 'due regard' for the freedom of navigation of other States. Similarly, under Article 147 (1) and (3) activities in the Area shall be carried out with 'reasonable regard' for other activities in the marine environment and such other activities shall be carried out with 'reasonable regard' to activities in the Area.

The 'due regard' obligation is equally reciprocal in regards to the exercise of rights by coastal States in the EEZ in relation to the exercise of rights (freedoms) recognized for all States in that zone, under Articles 56 (2) and 58 (3). Although with a different wording, Article 240 (c) also provides for a form of reciprocal 'due regard' stating that while marine scientific research shall not "unjustifiably interfere" with other legitimate uses of the sea, it shall be "duly respected" in the course of such uses.

Not all the provisions concerning competition between equally legitimate activities and containing a 'due regard' obligation are, however, couched in reciprocal terms. So, Article 87 (2) states that freedoms of the high seas shall be exercised by all States with 'due regard' for the rights under the Convention with respect to activities in the Area, but does not say that activities in the Area must be exercised with 'due regard' to the exercise by other States of the freedoms of the high seas. Similarly, Article 79 (2) states that the rights of the coastal State over the continental shelf must not "infringe or result in any unjustifiable interference" with navigation and other rights and freedoms of other States, but does not state that the exercise of such other freedoms must not infringe or unjustifiably interfere with the exercise of the coastal States' rights on the continental shelf.

It might be argued that these non-reciprocal obligations of 'due regard' indicate that the activities to which regard is due enjoy some form of preference over those that owe 'due regard'. Article 79 (2) might be read as indicating a preference for the exercise of freedoms of the high seas when in competition with coastal States' rights on the continental shelf. Article 87 (2) might be read as containing a preference for activities in the Area over the exercise of the freedoms of the high seas.

While the lack of reciprocity language in these provisions could encourage the argument that the competing activity to which 'due regard' is owed enjoys a preference - in my opinion, such an argument is not tenable in light of the context. The relevant context, in regards to Article 79 (2) consists in the reciprocal 'due regard' obligations set out in Articles 56 and 58. It would not make sense to put the exercise of sovereign rights of the coastal State on the continental shelf (the bottom of the EEZ) in a position weaker than that

granted to the exercise of sovereign rights and jurisdiction of the coastal State in the water column of the 200 mile zone. In the case of Article 87 (2) the relevant context is Article 147 (1) and (3). The latter quoted provisions envisage a situation overlapping, at least in great part, with that envisaged by the former, namely, competition between activities in the high seas and activities in the Area. Article 87 (2) should be read so as to ensure its consistency with Article 147 (1) and (3). The expression "other activities in the marine environment" must refer to legitimate activities in the marine environment, which in the high sea correspond to the freedoms of the high seas.

The consequence of the above observations is that when the coexistence or competition between two equally legitimate activities is envisaged, the obligation of 'due regard' is always reciprocal, notwithstanding the sometimes non-reciprocal formulation of the relevant provisions. This conclusion is strengthened by the point made above that the 'due regard' obligation is more general than the sum of the provisions mentioning it. It is a general rule whose existence results from the presence of numerous provisions in the Convention on specific aspects. The key role of reciprocity of 'due regard' in these provisions supports the view that reciprocity applies even to situations envisaged in provisions not reciprocally drafted.

F. 'Due regard' and expression of preference for one of the competing activities

Provisions setting forth reciprocal 'due regard' obligations are sometimes accompanied by provisions which establish exceptions to such reciprocal 'due regard'. The main example is Article 147 of the Convention. While establishing in paragraphs 1 and 3 an obligation of reciprocal 'due regard' as between

activities in the Area and other activities in the marine environment, in paragraph 2 this article states that in certain circumstances navigation and fishing prevail on certain activities in the Area.

In fact, under Article 147 (2b), the activity in the Area consisting in establishing installations may not be conducted when "interference may be caused" to navigation when navigation uses essential recognized sea lanes or fishing when it is conducted intensively.

The Authority's Regulations on Polymetallic Nodules, Polymetallic Sulphides and Cobalt-rich Ferromanganese Crusts implement Article 147 (2b) in stating that a requirement whose existence has to be verified by the Legal and Technical Commission (LTC) of the Authority before recommending approval of a plan of work is that the plan of work "ensure that installations are not established where interference may be caused to the use of recognized sea lanes essential to international navigation or in areas of intense fishing activity".³³

The position and content of Article 147 (2b) indicates that giving priority to one of the competing activities requires a specific provision and that this provision must envisage a narrowly-described situation: not fishing in general but "intense fishing activity", not navigation in general but navigation through "recognized sea lanes essential for international navigation". Moreover, as this provision is an exception to the treaty-based 'due regard' obligation, it must be of the same rank. A further consequence is that, in the absence of such specific a provision, the application of the reciprocal 'due regard' obligations must strive not to give priority to either of the competing activities.

II. Cables and activities in the area under the Convention

A. General observations

The relationship between the exercise of the freedom to lay cables and the rights relating to activities in the Area must be envisaged in light of Articles 87 (2) and 147 (1) and (3). As remarked above, notwithstanding the non-reciprocal drafting of Article 87 (2), rights under the Convention with respect to activities in the Area must be exercised with 'due regard' to the exercise of the freedom to lay cables, as the latter freedom must be exercised with 'due regard' to the rights relating to activities in the Area.

In determining how to implement the reciprocal 'due regard' obligation, the option of introducing in the Authority's Regulations a provision giving priority either to the rights relating to activities in the Area or to the exercise of the freedom to lay cables must be discarded because of its incompatibility with the Convention. Article 147 demonstrates that such priority, being an exception to the reciprocal 'due regard' obligation, requires specific provisions of the same rank as those providing for such reciprocal obligation, and that such specific provisions, being exceptions to the general 'due regard' rule are to be aimed at specific narrow aspects of the exercise of the rights and freedom under consideration.

Consequently, the implementation of the 'due regard' obligation must be sought through practical arrangements which should take into account the contributions made by international courts and tribunals.

³³ Regulations on Prospecting and Exploration for Polymetallic Nodules, Regulation 21 (4c); Regulations on Prospecting and Exploration for Polymetallic Sulphides, Regulation 23 (4c); Regulations on Prospecting and Exploration for Cobalt-rich Ferromanganese Crusts, Regulation 23 (4c).

B. The subjects that owe and are owed 'due regard'

Before considering the implementation of the 'due regard' obligation in the relationship between the exercise of the freedom of laying cables and of rights under the Convention with respect to activities in the Area, the subjects that owe and are owed 'due regard' had to be considered.

In regards to activities in the Area, the subject that owes 'due regard' is the sponsoring State - whose responsibilities for the conduct of activities in the Area by contractors sponsored by it was clarified by the Seabed Disputes Chamber of the International Tribunal for the UNCLOS in its 2011 Advisory Opinion.³⁴

In regards to the laying of cables, Article 87 (1) is clear in stating that the freedom to lay submarine cables is comprised in the "freedom of the high seas" both for "coastal and land-locked States". In other words, it is a right of States. This is consistent with the fact that the Convention is a treaty binding States (and the European Union). But which State, in exercising the freedom to lay cables, is responsible for complying with the 'due regard' obligation?

An answer to this question could be based on analogy to the exercise of the freedoms of navigation and of fishing where there is no doubt that such freedoms are exercised by States through vessels flying their flag. The State exercising the freedom of laying cables would thus be the State whose vessel laid, or repaired, the cable.

While certainly the flag State of the vessel laying the cable has rights and obligations under Article 87, it seems difficult to maintain that this State is the only State having rights and obligations connected

to the freedom of laying cables - including those of 'due regard'. Furthermore, the State under whose jurisdiction the owners of the submarine cable fall can be considered to be a State enjoying the freedom of laying cables and pipelines and having the corresponding obligation of 'due regard', as well as the corresponding claim that other States exercising freedoms of the high seas, or rights concerning activities in the Area, pay 'due regard' to its exercise of the freedom to lay cables.

The Convention establishes an obligation of the States under whose jurisdiction are the owners of the cable in Article 114. This obligation is that of adopting laws and regulations under which the cable owners, under that State's jurisdiction, "shall bear the cost of repairs". This provision is important because it establishes a connection between the international obligations, including that of 'due regard', of the State party to the Convention under whose jurisdiction is the cable-owner and the conduct of the cable owner. The State party complies with its obligation through the adoption of appropriate domestic laws and regulations. The position of sponsoring States is described in Article 139, and, as clarified by the Seabed Disputes Chamber in its Advisory Opinion of 2011, is similar.

C. Practical options

In order to consider options for the practical implementation of the 'due regard' reciprocal obligation as between the exercise of the freedom of laying cables on the high sea and the exercise of rights under the Convention with respect to activities in the Area, it seems necessary to recall the procedural and substantive requirements of the 'due regard' obligation as they have been identified by the jurisprudence of international courts and tribunals and to elaborate upon them.

³⁴ Responsibilities and obligations of States with respect to activities in the Area, Advisory Opinion, 1 February 2011, ITLOS Reports 2011, p. 10.

In regards to the procedural requirements, the key one is that of consultation as clearly indicated in the *Chagos Award*. Consultation, according to the Award, must be timely and include the reciprocal communication of the appropriate information. Timeliness means that gathering of information and the starting of consultations should be made as early as possible. Additionally, efficient consultations require that each party makes the other aware as soon as possible of the person or entity to be notified. Through consultation, each State involved must seek to obtain a balancing of rights and interests and show its willingness to offer assurances to the other party and demonstrate understanding of the other party's concerns.

As far as the substantive requirements are concerned, the most important one, according to the *Chagos Award*, but, as seen above, also emerging from an analysis of Article 147 of the Convention, is that the reciprocal 'due regard' obligation should not be implemented by giving a preference to one or the other of the competing activities. The nature of the activities and of the anticipated impairment must be considered so that the manner through which the 'due regard' reciprocal obligations are implemented depends on the circumstances.

In order to implement the 'due regard' obligation in practice and with consistency, with the admittedly vague requirements just mentioned, it is important to recognize that the applicability of the 'due regard' obligation may emerge in different circumstances:

- (a) First, when activities in the Area are planned, when for instance prospecting has started or when a draft contract is being prepared or is under discussion in the LTC of the Authority, and there are cables in existence in the part of the Area for which the activities are

envisioned. The presence of inactive or abandoned cables should also be considered.

- (b) Second, when it is planned to lay a cable in a zone in which activities in the Area are being carried out under a contract with the Authority. Also, zones in which activities in the Area have been conducted and are no longer active should be considered.
- (c) Third, when the laying of a cable is envisaged or planned in a zone of the deep seabed for which no activities in the Area are being carried out or planned.
- (d) Fourth, when no cables exist or are planned in a zone in which activities in the Area are envisaged or planned.

In the first case, both the sponsoring State of the prospective contractor and the State to which the cable owner belongs (being its national or under its control) should implement their duty of 'due regard' by adopting laws and regulations and taking measures, firstly, to obtain that, respectively, the prospective sponsored entity and the cable owner act with due diligence to obtain information as to possible competing activities. The prospective contractor must seek information about the existence and course of the cable. The cable owner must keep abreast of developments in the Authority and in the industry in order not to be taken by surprise when a contract for activities in the Area is awarded.

The sponsoring State and the State of the cable-owner should, secondly, adopt laws and regulations to ensure that on the basis of the information so gathered, the two entities conduct consultations aimed at determining whether the activities can coexist and what action is to be taken to ensure such coexistence. The determination of the costs involved for each party would be a relevant circumstance, as would be the need to avoid, as far as possible, the interruption of the service of the existing cable.

The process to be followed in the second case is similar. First, due diligence must be employed by the cable owner in order to gather information about the existing activities in the Area and by the contractor in regards to the planned laying of cables in the contract zones of the Area. Second, consultations are to be held on the conditions for coexistence of the two activities and the action to be taken to ensure it. Costs as well as the need not to disrupt the existing activities in the Area are relevant considerations.

The third and fourth cases involve a planned activity in a part of the high seas where no other activity exists or is being planned. In such an event, where only one State is involved, it is difficult to speak of reciprocal 'due regard'. It seems reasonable that in planning the laying of a cable or the conduct of activities in the Area in a certain part of the bed of the high seas, the possibility of the future exercise of the other activity should be considered. Appropriate tools for preventing conflicts, and for making available data to be used in negotiation for implementing the 'due regard' obligation once one or both the activities start, might involve: (i) a study as to whether the zone envisaged for laying a cable is one of those which, particularly because of known or suspected presence of resources, is a possible object of contracts to be awarded by the Authority; and (ii) a study by the prospective contractor as to whether the zone selected for its activities in the Area is considered as a likely location for new cables.

Among practical measures that may be taken in order to facilitate consultation, or as a result of consultations, the following may be envisaged:

- (a) Improving the mapping of cables and of existing activities in the Area.

Cartographic institutions should be notified of the location of cables and of areas for which contracts for activities in the Area have been awarded or have been requested and published by sponsoring States of cable owner States.

- (b) The establishment of backup cables in areas where cables may be damaged by activities in the Area (or by other seabed activities such as bottom fishing).
- (c) Extending the practice of the burial of cables at up to 1,000 meters deep to avoid interference with or by fishing to deeper areas in which the risk of interference with or by activities in the Area exists.

It must be underlined that consultations and the adoption of practical measures may be made difficult or impossible when the cables involved are laid for military purposes and covered by secrecy. In this case it may be suggested that States responsible for these cables adopt, unilaterally, measures aimed at avoiding or remedying interference with activities in the Area (as well as with the exercise of other freedoms of the high seas).³⁵

There is no doubt that accommodation through the implementation of the reciprocal 'due regard' obligation of the exercise of the freedom of laying cables and of the rights under the Convention with respect to activities in the Area has attracted attention during the last few years, due, especially, to the proactive approach of the ICPC and of the Authority. This has resulted inter alia in the convening of the present workshop and of its predecessor. It must, nonetheless, be kept in mind that the laying of cables is not the only freedom of the high seas which requires the application of the 'due regard' obligation.

³⁵ On the military uses of cables, A. Roach, "Military Cables", in D. R. Burnett, R. C. Beckman, T. M. Davenport (eds), *Submarine Cables, The Handbook of Law and Policy*, M. Nijhoff, 2014, pp. 339-349.

There is also a need to accommodate the exercise of rights with respect to activities in the Area with the exercise, *inter alia*, of the freedoms of navigation, fishing, laying of pipelines listed in Article 87 (1), as well with the other freedoms which are covered by the reference in Article 87 (1) that the freedoms mentioned are some "among others" (*inter alia*).

Similarly, activities in the Area are, for the time being, the only activities on the bed of the high seas for which a special regime is envisaged and to which it will be necessary to apply reciprocal 'due regard' obligations. The current negotiations for a binding instrument on BBNJ which would include specially protected areas in the high seas show that these concerns are real.³⁶

Moreover, it must not be forgotten that the 'due regard' obligation concerns also, and historically firstly, the relationship between the exercise of freedoms of the high seas by one State and such exercise by other States.

D. The role of the International Seabed Authority

The Authority may play a relevant role in regards to the implementation of the 'due regard' obligations. This role may be exercised in the elaboration and adoption of Regulations as well as in being a forum for the States sitting in its organs to discuss questions concerning activities in the Area. We have already quoted some provisions of Regulations already adopted or, as the exploitation Regulations, presently under discussion. These provisions introduce requirements for the contracts to be concluded which, by incorporating the need that the contractor abides by the

'due regard' obligation, facilitates such compliance and implements the role of the Authority as custodian of the rules of the Convention on deep seabed mining.

It must, nevertheless, be underscored that the Authority has no jurisdiction over the States which, through the activities of cable owners and cable laying vessels, exercise the freedom of laying cables. The Regulations the Authority may adopt can bind only the sponsoring States and the contractor. Consequently, their role in regulating the implementation of a reciprocal obligation is relevant, but limited.

The organs of the Authority may be used by States parties to the Convention as fora for discussing subjects which, although connected with deep seabed mining, are not entirely part of the regulation of activities in the Area, such as the relationship between such activities and the freedom of laying cables.

Moreover, the Secretariat of the Authority may conduct studies and develop contacts with other international organizations, as well as with non-governmental organizations, in order to foster the better implementation by the Authority of its functions. The present Workshop is a manifestation of such activity, as is the conclusion of the Memorandum of Understanding concluded between the ICPC and the Authority.³⁷ The agreement set out in the Memorandum to consult "on issues of mutual interest" may contribute to the reciprocal understanding by the cable and deep seabed mining industries and of the States which have interest in them. The action by these States in the organs of the Authority will thus be more informed and result in better action by the Authority.

36 A. Oude Elferink, "Coastal States and marine protected areas in areas beyond national jurisdiction: ensuring consistency with the United Nations Convention on the Law of the Sea", *The International Journal of Marine and Coastal Law*, vol. 22, 2018, pp. 427-466.

37 Annex A of the ISA Technical Study No. 14, quoted above, see footnote 1.

III. Settlement of disputes

A. Disputes between States

As the 'due regard' obligation is couched in the Convention as an obligation of States, disputes between States concerning the failure to comply, or less than complete compliance, with this obligation are disputes concerning the interpretation or application of the Convention. The provisions of the Convention concerning the settlement of disputes apply to them.

The question may be raised as to whether the general dispute-settlement provisions of Part XV covering disputes concerning the interpretation or application of the Convention, or the specific provisions of section 5 of Part XI covering *inter alia* disputes between States Parties relating to the interpretation of Part XI and its Annexes (Annex III and IV)³⁸ would apply.

If the claim of non-compliance is based on Article 87, Part XV would apply while, if it relies on Article 147, which is in Part XI, the provisions of Section 5 of that Part would be applicable. The main difference would be that under Part XV the competent adjudicating body - according to the well-known mechanism involving the expression, real or presumptive, of preferences by the parties³⁹ - would be either the International Tribunal for UNCLOS, the International Court of Justice or an arbitral Tribunal established in accordance with Annex VII. Under section 5 of Part XI, the adjudicating body would be the Seabed Disputes Chamber, or, in some cases, a Special Chamber of the International Tribunal for UNCLOS or an ad hoc Chamber of the Seabed Disputes Chamber.⁴⁰

The States involved in the dispute - be it related to Article 87 or to Article 147 - would be the sponsoring State of the contractor and the State of the cable owner. The dispute would have to relate to the alleged non-compliance with the 'due regard' obligation of the States.

This does not include the violation of such obligations by the contractor or by the cable owner, unless such a violation is the consequence of the State's disregard of its due diligence obligation to prevent such violation by the contractor or by the cable operator. The Seabed Disputes Chamber, in its 2011 Advisory Opinion states that, in regards to the obligations and liability of the sponsoring State for the conduct of the sponsored contractor:

not every violation of an obligation by a sponsored contractor automatically gives rise to the liability of the sponsoring State. Such liability is limited to the State's failure to meet its obligation to "ensure" compliance by the sponsored contractor...

and that

The sponsoring State's obligation "to ensure" is not an obligation to achieve, in each and every case, the result that the sponsored contractor complies with the aforementioned obligations. Rather, it is an obligation to deploy adequate means, to exercise best possible efforts, to do the utmost, to obtain this result.⁴¹

The position under international law of the State to which the cable owner belongs is not as clearly defined as that of the sponsoring

³⁸ Article 187 (a) of the Convention.

³⁹ Article 287 of the Convention.

⁴⁰ Article 188 (1) of the Convention.

⁴¹ *Responsibilities and obligations of States with respect to activities in the Area*, Advisory Opinion, 1 February 2011, ITLOS Reports 2011, p. 10 at paragraphs 109 and 110.

State. As, however, the obligation of 'due regard' by those exercising the freedom of laying cables is an obligation of States, the State party to the dispute will be the State of the cable owner unless, in a specific case, such State can be held to be the flag State of the cable-laying vessel. The above recalled reasoning of the Seabed Disputes Chamber in regards to the obligations and liability of sponsoring States seems to be applicable also to the State of the cable-owner.

The position under international law of the State to which the cable owner belongs is not as clearly defined as that of the Sponsoring State. As, however, the obligation of 'due regard' by those exercising the freedom of laying cables is an obligation of States, the State party to the dispute will be the State of the cable owner unless, in a specific case, such State can be held to be the flag State of the cable-laying vessel. The above recalled reasoning of the Seabed Disputes Chamber in regards to the obligations and liability of sponsoring States seems to be applicable also to the State of the cable-owner.

B. Disputes before domestic courts or arbitral tribunals

The restraints on disputes between States concerning 'due regard', as indicated above, make it interesting to look at possibilities to institute disputes outside the framework of the Convention such as proceedings before domestic courts and international commercial arbitration. These disputes would involve contractors and cable owners.

In order to pursue a dispute concerning 'due regard' before a domestic court it must first of all be determined whether such a court has jurisdiction. The rules on the subject vary from State to State and in most cases the courts of the State where the

respondent has its seat or is incorporated would recognize their competence.

Then there would be the question of the applicable law. This would depend on the conflicts of law rules of the State of the court seized. If the conflicts rule indicates as the applicable law the *lex loci delicti* to apply it to conduct on the bottom of the high seas would be problematic. An interpretation of the domestic law implementing the Convention according to which the Convention, including part XI, is part of domestic law could make the 'due regard' rule applicable to domestic law subjects. This possibility would, however, be dependent on the mechanisms for implementation of treaties in the domestic legal system of the forum State.

International commercial arbitration may offer a suitable means to settle a dispute. It requires, however, the consent of both parties which could be withheld especially when the dispute has started.

Contractors and cable owners should consider at the very beginning of their consultations to agree on submission to an arbitration tribunal of a possible dispute, specifying the applicable law. This could also function as a means to encourage compliance with the 'due regard' obligation.

C. Advisory opinions of the Seabed Disputes Chamber

A request for an Advisory Opinion to the Seabed Disputes Chamber of the International Tribunal for UNCLOS may also be considered. The possibility of submitting such request is, however, limited. The Assembly and the Council of the International Seabed Authority enjoy the right of making such a submission and only for "*legal questions arising from the scope of their activities*" (Article 191 of the Convention). Moreover the Assembly

may request an Advisory Opinion on the conformity with the Convention of a proposal before the Assembly.⁴²

The interpretation of Article 147 and of Regulations concerning the 'due regard' obligations, or the conformity of proposed Regulations with Article 147, could be the subjects for such requests.

While an Advisory Opinion of Seabed Disputes Chamber is not binding, it may have an important function in clarifying

the rights and obligations set out in the relevant provisions. All States parties to the Convention, including, obviously, sponsoring States and States to which the cable owners belong would be entitled to submit their views in written and oral pleadings. ICPC and other industrial associations would have the possibility to make their views known by submitting amici briefs which would be made available through the International Tribunal for UNCLOS website to the judges, the Authority and the States Parties.⁴³

42 See also Article 159 (10) of the Convention.

43 T. Treves, "Non-Governmental Organizations Before the International Tribunal for the Law of the Sea: the Advisory Opinion of 1 February 2011", in *Le 90ème anniversaire de Boutros Boutros-Ghali, Hommage du Curatorium à son Président*, Hague Academy of International Law, 2012, pp. 255-262.

III. OPENING SESSION AND KEYNOTE PRESENTATION

A. Welcome statements

Alfonso Ascencio-Herrera, Legal Counsel of the International Seabed Authority Deputy to the Secretary-General

Thank you, Judge Kriangsak.

Sawadee Kap!

Good morning to everybody!

It is a pleasure to be allowed the privilege of co-hosting the "Second Workshop on Seabed Mining and Submarine Cables" in collaboration with the Ministry of Foreign

Affairs of the Government of Thailand and the ICPC.

My appreciation goes to ICPC's Chairman Graham Evans. I also wish to express my gratitude to Thailand and its people for the outstanding hospitality of the magnificent and historical city of Bangkok or, as the Thai people call it, "Krung Thep."

My introductory remarks would not be complete without acknowledging the presence of Shawn Stanley from the Division of Ocean Affairs and the Law of the Sea of the Office of Legal Affairs of the United Nations (DOALOS).



1. Background and rationale for the Second Workshop

In 2011, the Authority and the ICPC concluded a Memorandum of Understanding to increase their cooperation in the exchange of information and facilitating direct liaison with the owners of international cable systems. Additionally, the Memorandum of Understanding sought to promote joint cooperative schemes to conduct seminars and studies.

In 2015, the ICPC and the Authority held the first workshop with a view to advancing common interests and to addressing the 'due regard' obligation in the Convention.

The workshop fostered mutual understanding between the main actors involved and emphasized the need to continue cooperation. It recommended a number of actions such as the review of techniques of risk-reduction by engineers from both sectors as well as the organization of a follow-up workshop to review mutual progress on recommended actions.

The organization of this second workshop responds directly to that call. Please note that the proceedings of the first workshop are documented in Technical Study 14, which is available at the entrance of the room.

I must say that, in the interim, the Authority and the ICPC have been actively implementing the joint Memorandum of Understanding by intensifying their bilateral dialogue through several meetings during the Authority's main sessions in 2017 and in the 2018 session. We also met informally in New York, including at the sidelines of major ocean-related meetings, like the biodiversity in areas beyond national jurisdiction (BBNJ) process.

This second workshop aims at continuing the dialogue started in 2015. We hope to further advance mutual understanding between both sectors by exchanging information and elaborating practical measures to avoid interference between legitimate activities and thus implement the 'due regard' obligation under the Convention. The task of this workshop is to identify the elements of a practical toolkit to facilitate effective coordination among legitimate users of the high seas and activities in the Area. The Area has been defined by the Convention as the seabed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction and which has been also designated as the Common Heritage of Mankind.

2. 'Due regard'

While not defined by the Convention, the notion of 'due regard' is a powerful one. This is due to its adaptability to specific situations. Its practical implementation follows a case-by-case approach as the 'regard' required to address the circumstances of the nature of the rights in question.

As a general rule, 'due regard' does not and cannot establish priority for one activity over another, nor can it have the effect of imposing a veto over one activity to the exclusion of another. The intent of 'due regard' is to find accommodation between different activities in the ocean space. In this sense, both cable owners and operators and contractors with the Authority, as well as the States that sponsor or authorize such activities, are required to exercise 'due regard' for each other. It is a reciprocal obligation. Judge Treves will speak in more detail on the notion of 'due regard' in the context of UNCLOS.

This workshop provides an excellent platform for participants from both

sectors to enhance their dialogue by understanding each other's industry and by providing answers to important questions. For instance: How their operations work? How they are planned? What is the role of States, in particular the sponsoring State and the State of the cable-owner? and, How to reach a common understanding of what information is publicly available in order to facilitate the implementation of practical tools which will allow both activities to coexist in time and space?

The quest for practical options has been promoted by the existing Memorandum of Understanding between the ICPC and the Authority. In this regard, the Memorandum of Understanding calls for the exchange of information on cable routings and on prospecting and exploration areas subject to confidentiality requirements. It also calls for the exchange of standardized information and data.

Moreover, industry to industry dialogue and engagement is an effective tool in building trust and finding lasting solutions.

Finding the right solution to the specific and particular circumstances for each situation might not be easy, and, sometimes, may even appear elusive.

That is why 'due regard' requires vigorous and continuous consultation among the parties involved in the quest for practical solutions. With this in mind, this workshop is confined to identifying ways to enhance that dialogue by developing a kit of practical tools to inspire appropriate solutions for both sectors depending on the particular circumstances of each case.

3. Scope and main outcome of the second workshop

Therefore, and in order to ensure the success of this workshop, it is required that all of us remain focused on the main task of developing a kit of tools aimed at giving

practical effect to the obligation of 'due regard'.

We need to bear in mind the limited mandate of the workshop. We should not be diverted from our main objective by trying to address other issues that are being discussed in other fora or where there is already an established platform within the formal organs of the Authority to advance ideas and proposals related to ongoing processes at the Authority.

I invite all participants to seize the golden opportunity for enhancing dialogue and mutual trust between these two sectors as it is the first time that actors from the submarine cable industry, the contractors with the Authority, representatives from sponsoring States, judges of international courts and tribunals, members of the LTC of the Authority, former members of the Commission on the Limits of the Continental Shelf, renown academics and other stakeholders, are all gathered under one roof.

Today's attendance illustrates significant progress in relation to the importance and growing interest on the subject when compared to the attendance of the first workshop, which counted 16 participants.

In concluding, I convey regrets on behalf of the Secretary-General of the International Seabed Authority, Michael Lodge, for not having been able to travel to Bangkok and pass on his wishes for two successful and productive days of work.

Welcome statement

Graham Evans, Chairman of the International Cable Protection Committee

Thank you Alfonso; on behalf of the ICPC I would also like to welcome you and add my thanks and gratitude to our Thai hosts and to the UN ESCAP administration for

their kind support that has been key to making this second ISA/ICPC Workshop possible; I would also like to thank the Secretariat of the Authority and you personally for the organizational support during the planning and lead up to this event. Of course, thanks must also go to all workshop participants for your time and for your attendance without which the workshop would not be possible.

As mentioned by Alfonso, this workshop is the second to be held by the Authority and ICPC and marks a further step along the path to achieving the objectives of the Memorandum of Understanding.

Our last workshop had 14 participants with only one contractor; it is encouraging that for this workshop we have 40 participants with numerous contractors and submarine cable operators.

Our first workshop was held soon after the signing of our Memorandum of Understanding. It focused more on the nature of the treaty obligations. With this second workshop, ICPC seeks to build upon that earlier work to address the following points.

First, we seek to enhance understanding of each industry by the other regarding their objectives, planning processes, efforts to identify and de-conflict activities with other marine industries, and the exercise of rights and observance of obligations under the Convention.

Second, we seek to facilitate direct contact between submarine cable operators and mining contractors, as submarine cable operators have long done with other marine industries.

Third, we seek to identify information resources and practical tools that could be used to enhance consultation and coordination at the earliest stages of project planning and thereby reduce

conflicts between the two industries. These objectives cannot be achieved without the willingness of both industries to consult as early as possible, to coordinate, and to compromise.

I should also caution that ICPC does not view these workshops and industry-to-industry engagement as a substitute for any procedural mechanisms to be adopted in the forthcoming Authority's Regulations on Exploitation or in much-needed amendments to the three sets of the Authority's Regulations on Prospecting and Exploration. Such mechanisms will ensure the effective application of tools developed here. The substance of those regulations, however, is not the focus of this workshop.

The ICPC members and leadership participating in this workshop represent all segments of the submarine cable industry: cable owners, including three participants representing two systems transiting contract areas for exploration; submarine cable manufacturers, installers, and maintainers; and marine survey companies. We look forward to sharing more about our activities and answering your questions about them. We are also here to improve our understanding of, and contacts with, the deep seabed mining industry.

We are here not just to represent our member country interests, but also to ensure protection of critical infrastructure on which everyone in this room greatly depends for staying connected to our families and colleagues by social media, e-mails, video streaming, and voice; using internet search engines; credit card and ATM use; telemedicine; distance learning; and engaging with our governments.

With this critical infrastructure responsible for carrying in excess of 3.5 petabytes of data per minute, over four million YouTube views and 400 minutes of video uploaded

every minute; not to mention approaching four million Facebook posts per minute; it should be apparent that protecting this infrastructure from all threats to its integrity is paramount.

I would like to join Alfonso, and wish all a successful workshop.

Thanks you, Kob Kun Krab.

B. Keynote presentation

Judge Tullio Treves

In his keynote presentation, Judge Tullio Treves delivered the background paper contained in Part II above. The background paper was distributed to participants prior to the workshop.



IV. TECHNICAL FRAMEWORK

A. Processing applications for the approval of plans of work for exploration: role of the LTC and the Council

Dr. Elie Jarmache, LTC

Good morning and thank you Chair,

It is a pleasure to be here in Bangkok, and I convey my thanks to the organizers for this opportunity. I must confess, however, that it is quite a challenge indeed to speak after Professor Treves. However when you are on duty, you have to take your responsibilities and speak. I therefore seek your indulgence as I speak.

Thanks to Graham, this is a very strategic question. How individually and collectively we depend on the welfare of this industry. Really impressed by the colleagues in the audience, contractors, experts in the cable industry and colleagues from the LTC are here also to back me which I undoubtedly need.

After Professor Tullio Treves' presentation we climbed into the mountains. Allow me to bring you back to the ground and even to visit the engine room where the core of the process takes place, the LTC. My intention is not to talk on behalf of the Commission but rather as a member of the Commission with practical experience on what we are doing, how we are processing applications, and to see how we can at some point in time shift into the practical options presented by Professor Tullio

Treves this morning in the final part of his presentation.

To remind those of you who are not familiar with the Commission, it is the subsidiary body of the Council. This being said at the outset, one can understand that the flexibility and the margin of manoeuvre are not so global, so total as one sometimes wishes.

To have an idea of the scope of the work of the Commission, I refer you to Article 165, paragraph 2, and particularly (b) which deals with approvals of plans of work. In approving the proposed plans of work, the Commission shall base its recommendations solely (every word is important) on the grounds stated in Annex III which will be highlighted later. Article 165 includes a list of six subparagraphs following (b) which focus on marine environmental issues, stressing the importance for stakeholders to appreciate the issues that the Commission took into consideration in dealing with marine environmental protection.

While the Commission has a broad scope in doing its job, there is a large number of specific issues to be considered. The best example of the broad scope associated with specific issues is illustrated in Article 17 of Annex III, which devotes two or three pages to describing on one hand the range of the scope and on the other hand how detailed the issues to be considered are. I invite you to keep this in mind as well and remember that at the outset I said that we were in the engine room.

Let us start with the prospecting phase, which is sometimes forgotten but is viewed in the Regulations as the first phase of deep sea mineral exploitation and exploration in the Area. The prospecting phase does not involve the Commission. It is the cooperation between the prospector and the Secretary-General which involves the processing of notification, correspondence etc. There is no need for a sponsoring State at this stage. This does not mean that there is no State of flag or State of jurisdiction, but while in the context of activities in the Area the sponsoring State is a very important player, no sponsorship is necessary for prospecting.

Equally, a prospector has no rights and even faces the possibility of competition in the same area with other prospectors. No right is granted so it is open to other prospectors. However, because it is an activity which may one day lead the prospector to exploration, and later to exploitation - a level of confidentiality is granted mainly in regard to the coordinates of the area in which prospecting is being carried out.

There is no direct relevance to the issue of laying cables in the context of prospecting (in the context of the Commission). However, I draw your attention to some words used in Regulation 5 (1) and to the equivalence of terms as mentioned by Professor Treves earlier: "[...] each prospector shall minimize or eliminate: [...] (b) Actual or potential conflicts or interference with existing or planned marine scientific research activities, in accordance with the relevant future guidelines in this regard."

The wording is very similar in spirit to 'due regard'. It is an invitation to avoid potential conflict or interference on one hand, and there is an indication of a very specific protected activity - the marine scientific research. While much has been discussed regarding navigation, special lanes, fishing, intense activity of fishing,

the marine scientific research has not been referred to during the exploration phase. It appears only in the prospecting phase. The reason for this may be that the low intensity of the level of prospecting is very close to the conduct of marine scientific activities. The slight difference is that prospecting falls under notification to the Secretary-General of the Authority and marine scientific research is under the umbrella of the freedom of activities. However, the activities carried out are almost the same. Many applicants for exploration come to the LTC without having undertaken any explicit prospecting activity, thus avoiding the notification phase. They generally include the results of marine scientific research. The important words are "void or minimize potential conflict or interference" which embody the concept of 'due regard'. The focus is on one specific activity - marine scientific research - but there is nothing about the laying of cables.

Now let us deal with the processing of an application in the context of exploration, deliberately sidestepping the exploitation phase as exploitation falls under drafting in the Authority. The draft regulations is open for public consultation so we are not yet in the middle of the exercise as we have until 2020, maybe, to have exploitation Regulations adopted. A lot of text remains to be drafted.

The processing of an application is the responsibility of the Commission until the last step which is the Council's decision to approve or not. The mandate of the Commission is very well defined in the Regulations. The processing is described in Part III of the Regulations and is also well defined in Annex II of the same Regulations. Section 2 outlines information relating to the area under the application, and comprises a binding list of criteria for the LTC. One cannot change the list of criteria owing to some debate in the Commission, or because a member has raised his/her hands and said "oh look I have a specific issue here although it is not in the list of

criteria in Annex II maybe you should consider that". I emphasize that there is no legal basis on which to introduce new conditions, new criteria and this is not a problem of will or of understanding. The problem is that, at one point in time, a member can be blamed. This may happen during the course of our deliberations, bearing in mind that the Commission takes its decisions by consensus. Even if a member of the Commission does not agree, there is no way to push for a vote on an issue which has no legal basis. So it is wise to stick to the list of criteria and remind all stakeholders, in and outside, that the Commission is bound by this list of criteria.

There are two main issues to be borne in mind while considering the matter of processing an application for exploration. On one hand, there is the issue of the economy of minerals which leads the Commission to look at the approval of the plans of work. The Commission considers the broad meaning of the economy of minerals - meaning the value, abundance and the location etc. - all elements of what comprises the budget for the plan of work. For instance, this is illustrated when an applicant has submitted two sites of equal estimated commercial value and the Commission has to determine whether to recommend approval or not. This phase is mainly about the economy of minerals.

The subject of technology may raise some questions during the processing of the application and the applicant may be asked questions for information purposes such as: What is the technology? How are you going to conduct your five or fifteen years of exploration under the plan of work with that technology? How are you going to develop that?

The second major issue, the protection of the marine environment, was mentioned earlier in my presentation. In addition

to the paragraphs referred to, there is a treaty-based provision - Article 145 - which deals expressly with the protection of marine environment during the contract period and during activities in the Area. My insistence on the issue of marine protection is to introduce participants to the idea that the Commission may have some flexibility to improve the way the processing is conducted. While the protection of marine environment is bound by specific criteria, the Commission has some flexibility in raising some questions relating to the protection of marine environment during the application process.

For instance, at one point during the presentation, one member of the Commission raised the question regarding the team that would be ensuring compliance with environmental requirements. The member of the Commission asked if the applicant had experts in environmental protection. If yes, what were the reputation and the level of expertise of the team? While not stated in the Regulations, this line of questioning was allowed because of the interpretation of the issue of marine protection. It was generally allowed and accepted although it led to a debate among members of the Commission with some of them saying "we may go even further" and others saying no we were going too far already because the point is not mentioned in the Regulations. This is to show that there may be a window for some degree of flexibility but always within the framework of what is drafted in the Regulations.

The role of the Council is of great importance in keeping with its status as the leading organ in the framework combining law and policy and being pivotal in this framework. It is a 36-member organ, structured according to Section 3 of the 1994 Agreement (see paragraph 15). The Commission, despite the broad scope and the detailed specific issues etc., is still a subsidiary body.

The approval of the plan of work, based on the recommendations by the Commission, is in the hands of the Council and both organs are bound by the Convention, the 1994 Agreement and the Regulations of the Authority. They are not free to introduce their own interpretation, or even to add new criteria and conditions. The Council decides to approve in principle and no approval is the exception: 2/3 majority including a majority in each of the (5) chambers of the Council. The discussion in the Council may lead to questions, to seek clarification is from the Commission or from the sponsoring State. While the option of non-approval exists for a plan of work, it is really very difficult in practice. Convention, Annex III, Article 6 has been changed by the 1994 Agreement, making non-approval by the Council more difficult. The trend is distinctly in favour of approval rather than giving the Council more liberty to disapprove. And, if the decision leans toward disapproval, it requires meeting the qualified majority.

I am really convinced as a member of the Commission and even as a citizen of the importance of this industry. I stress that it is important that, collectively, practical solutions are taken into consideration. The needs of this industry are common concerns, requiring everyone to make an effort to reach practical solutions. It is in keeping with the common heritage of mankind in the sense of the Convention. In concluding, I emphasize that the Commission has to deal with its constraints while being open to finding practical solutions without breaching the Law.

B. Information resources, data management and confidentiality in the context of exploration for mineral resources in the Area

Pr. Pedro Madureira, LTC

Following the development of the telegraph communication by Samuel

Morse in 1832, the first telegraph line across the Atlantic was completed in 1858. The cable operated for only three weeks, but the project proved that the communications between Europe and Americas could be drastically improved, changing the course of the history of communications. The need to increase the knowledge on oceanic basins in order to foster the communication between continents was one of the main drivers for the Royal Society of London to support the Challenger Expedition, onboard the HMS *Challenger*, from 1872 to 1876. Polymetallic nodules were found to occur in most oceanic basins during the *Challenger* Expedition and the economic interest in these resources was the precursor to the creation of the International Seabed Authority within the framework of the 1982 United Nations Convention on the Law of the Sea and the 1994 Agreement.

There are 29 contracts of exploration signed with the Authority for three types of mineral resources, polymetallic nodules, polymetallic sulphides and cobalt-rich ferromanganese crusts, that can play an important and strategic role in the development of future societies based on low carbon emissions. The areas allocated to exploration are different for distinct categories of mineral resources, but after the relinquishment obligations, they can extend to a maximum of 75,000 km² in the case of polymetallic nodules (after the eighth year of contract), 2,500 km² for polymetallic sulphides and 1,000 km² for cobalt-rich ferromanganese crusts (after the tenth year of contract for both sulphides and crusts).

Under the Regulations, activities of exploration are those related to the search for mineral deposits, including its analysis. It may involve: the test of recovery systems and equipment and studies carried out on the environment; technical, economic and commercial factors; and other factors that must be taken into account in exploitation.

The required data and information to be submitted for the approval of the plan of work for exploration includes a general description and schedule of the programme of exploration and a schedule of anticipated yearly expenditures. But, most data are focused on the marine environment.

This results from the obligation stated in Article 145 of the Convention to take necessary measures to ensure the effective protection of the marine environment from harmful effects which may arise from activities in the Area. This obligation is also reflected in the regulations for exploration, namely in Part V related to the protection and preservation of the marine environment. Particularly, under Regulation 32 (in the case of polymetallic nodules) or 34 (in the case of polymetallic sulphides and cobalt-rich ferromanganese crusts), contractors must ensure the collection of environmental baseline data to assess the effects of its activities on the marine environment and the establishment of a programme to monitor such effects. Also, the contractor must report, annually, on the implementation and results of the monitoring programme. It is also expected that in the case of the existence of a submarine cable crossing an area under a contract of exploration with the Authority, its location could be detected in the course of the exploration activities.

In respect of the confidentiality of the data submitted to the Authority, only environmental data is considered to be not confidential. Confidential data and information may be used by the Secretary-General, staff of the Secretariat and by members of the LTC in performing their duties. Nevertheless, ten years after the date of submission of confidential data and information to the Authority or the expiration of the contract for exploration, whichever is the later, and every five years thereafter, the Secretary-General and the contractor shall review such data and

information to determine whether they should remain confidential.

The LTC has been making an effort to help the Secretariat to develop a strategy for the implementation of a modern digital database that would foster effective data management and sharing of public data. Recommendations for the guidance of contractors on the content, format and structure of annual reports, as well as excel table templates to data submission, were issued by the Commission in 2015 (ISBA/21/LTC/15). Also, the data management strategy of the Authority has led to the update of the Authority's repository hardware and the completion of the project is scheduled for the end of the first quarter of 2019.

This data and information is also certainly valuable for the submarine cable operators to determine the best routes and to ensure the maximum safety in regard to the exploration and future exploitation activities in the Area.

The Authority can thus serve as the platform of communication between both industries (cable operators and ISA contractors) promoting the application of the 'due regard' principle in the Area.

Question and answer session

Participant

My comment is directed towards the panellist's presentation regarding the location of the cable. I must note that submarine cable operators actually have a very good idea of where their cables are in the seabed it is not some big mystery, and I think it is important to distinguish between the issue of charting, and the issue of location data.

With charting, the IHO, itself, historically has not provided for the charting of cables

at our ocean depths so that's why, as you saw with that slide, the limitation was the 2,000 metre mark. That is because, historically, the IHO has focused on the safety of life at sea. That has changed. This afternoon, we are going to talk about our pilot projects for the IHO in terms of what is to be public. With that said, some cables, even now, are charted at all ocean depths, including the 2k volts that currently traverse contract areas - the Honotua cable in the Pacific Ocean and the SAFE cable in the Indian Ocean. So, there is public charting data on the location of those routes.

The location data, which is not necessarily reflected on all nautical charts, is collected by submarine cable operators and their contractors during the installation process. This gives them a very good sense with a limited margin of error, which we will talk more about the location of the cables in the afternoon. So, I think it is important to understand that just because something is not on a nautical chart, does not mean that an owner in the industry does not have information about where its infrastructure is.

My question for both of our panellists pertains to the LTC and the Authority's Regulations on prospecting and exploration. Each of you noted, given the limitations in the Authority's Regulations on prospecting and exploration, some of the limitations of the LTC with respect to plans of work and review criteria, etc. My question is, given that the Convention provides that plans of work must be in conformity with the Convention as a whole and not only with environmental aspects which are also obviously of concern, doesn't this raise the question of whether or not the Regulations on prospecting and exploration themselves should be revised in order to facilitate, as a procedural matter, realization of the 'due regard' and 'reasonable regard' provisions in the Convention.

Panellist

At this time, I would like to focus on the purpose of the workshop, which is, precisely, the development of techniques and mechanisms that may guide us to go along those ways. In the meantime, how we bring the issue of 'due regard' down from the clouds, as described by Professor Treves, to 7,000 meters down to the seabed and subsoil is going to be the function of several other presentations.

I would like to open the floor for my colleagues to address the issue if they wish to do so. I believe that the question at this time, inasmuch as there may be several other presentations which will address in full the norms of 'due regard' vis-à-vis several users.

I need to emphasize one aspect that Tullio Treves brought up. Seabed miners and cable operators are not the only users of the seabed and subsoil. Taking into consideration whatever protocol or regulations are implemented in practice in order to fulfil 'due regard' is needed.

Participant

Thanks for your very important and interesting comment about charting and what the cable operators know about the location and the route of a cable. This is very important for us to know. Thank you also for your question, but the main point of your question is the timing of the Regulation. The point is, can we revise the Regulation without revising the Convention and the 1994 Agreement? You are a lawyer and you know the hierarchy of norms. The assumption here is that where the three sets of regulations for nodules, sulphides and crusts were adopted, they were adopted on the backdrop that they were in conformity with the Convention; otherwise we are making a big, big mistake here.

Then, again, is it time for a revision of the regulation, maybe, it is a necessity. Maybe someone needs to make a case that we really are at the point where we need a revision of the regulation. I wish good luck to anyone who takes up the case in the context of where we are already; trying to elaborate and draft an exploitation code. So maybe using a window to draft an exploitation code, it could be an appropriate time to introduce something along the lines which you suggest, which is not revolutionary i.e. not changing the whole thing, but focusing on one specific need of a specific industry. We know how important this industry is to globalization. I can support that.

But, in the meantime, you have been to Kingston many times and have seen the complexity of the machinery. It is formal, it takes time, it is one session a year. Where there are two sessions the first one is for just one week with only five working days. Things do not move so quickly and you have to repeat your case many times for the day, regionally, small group by group. The idea can be presented in some nicely worded form so as not to frighten the other users.

There are other users of the seabed and the ocean in general. I understand your idea. I think it is legitimate, but this is my own opinion and not that of the LTC or any government I may have links with. But, it started in the middle of the eighteenth century so the legitimacy is there, it speaks for itself. Now, two century centuries or one century and a half after I think it is time to consider it.

Participant

If I can make one further comment; we, in coming as a group to this event, did not want to have an extended discussion about either set of Regulations, that's not the purpose here. We didn't realize there was going to be this discussion

of the Regulations on prospecting and exploration. We simply wanted to know that maybe they should be taken as an absolute. There may be the need in another forum to address that but that is not our focus here today.

Participant

Thank you very much, Mr. Chair, just to add and to stress again the LTC's advisory role vis-à-vis the Council. So if the Council at some time decides that we should revise the Regulations it won't be the Commission saying something about it but, again, as my predecessor just mentioned, it would be at the Council level, it may be still premature or it will be difficult because the Council itself is framed by the Convention and the environment and the submarine cables issues are addressed there. This would be a matter for the Assembly but, necessarily, the discussion on that would be in the Council.

Also, I would like to add that in fact, yes, if you are looking for the exploitation regulations within the Convention at this level it is difficult. I think that the problem starts during the exploration phase, because this occurs first. The risk of damage to submarine cables exists at the exploration phase. So it is better for the industry to know the exact location of the cable because it would then be very easy to prevent damage.

Of course, there may be problems of confidentiality so we should also discuss this to see alternative options. But, if we know the location of the cables this will prevent damage during the exploration phase and, as a consequence, during the exploitation in the future. The problem is not in the exploitation phase, the exploitation is based on what you get from the exploration phase. So the problem is what you get under the exploration phase, which is now.

Panellist

Any other questions?

Well one issue that has been referred to by several speakers is the issue of confidentiality. One reason to maintain confidentiality in the cable industry is precisely for security reasons. Perhaps the cable operators know where the cables are because they need to repair them and Grant does that quite well with his members, so it doesn't matter what the depth is. Sometimes there are anthropomorphic and sometimes there are natural causes for the rupture of cables. They need to be repaired and they are repaired routinely. So we acknowledge that they are there.

Who needs to know when and how is the issue that I would like the group to think about and pose to us - the panel. Do we want this information to go into the public domain? Or should this information be funnelled through the Authority to the players in any given case in order to address the issue? How are we going to establish the dialogue and confidentiality of the dialogue between the miner and the contractor, for example?

Those are some of the issues I would like to bring to your attention because cables may become a target and have been a target in the past, for deliberate damage by several governments and armed forces. I believe this is a legitimate question for you to consider and pose to the speakers if you feel that is necessary.

Participant

It is just a comment. If the cable operators know the location of these cables, in developing a toolkit this will need to be taken into account in order to develop practical solutions to facilitate the communication between these two sectors to cooperate and find solutions on the ground. I think this is an excellent topic for tomorrow's roundtable to revisit

and see how this issue could be further developed to improve the current mutual communication.

Panellist

I think that I have one last comment with regard to the suggestions being made to look at the Regulations on prospecting and exploration not at this time but in the future. There was also another point in the presentation made by Tullio Treves. This is going to be a blind test because several of us released our presentations without the benefit of seeing each other's final product, but one of the issues on which the presentations by Tullio and myself (tomorrow) coincide is that of reciprocity.

So far, the suggestion made by cable operators to introduce regulations on behalf of the Authority does not seem to correspond with regulations the other way around; the Authority being an organization created by the Convention with a specific mandate to look after the common heritage of humankind and the ICPC, a private organization, mostly formed by non-governmental organizations. How are the responsibilities of the two going to be delivered? Is it the ICPC or the Authority responsible for doing that? Or are the parties themselves, on a case by case basis, the ones that should deliver the measures and the two bodies at the top simply act as the communication channels to pass the information to the users themselves?

This is the kind of mechanism that I think we need to truly think about. What is the reciprocity in the measures? What are the obligations created by the ICPC to the cable operators? And, what are the obligations of the Authority within this long chain of command? You heard two presentations of how things go all the way to the Assembly of the Authority, to the Council through the LTC.

The Assembly is going to ask us a very simple question - how many cables

have been cut as a result of exploration activities, and we will tell them none. Then they are going to ask, why do we need regulations? Just as a potential measure in the future? How many cables have been cut, on what basis and at what precise time will the future of the internet and our ATMs, YouTube and Facebook communications be at stake if one cable gets cut; and if not, under what conditions can we truly avoid those expenses and liabilities that can affect both sides?

Those are truly the questions that we need to think about in considering this topic during the next couple of days, and I encourage us to truly participate. Don't be afraid of asking questions that's why we are here.

Participant

I think Judge Treves also laid out something that was very important; the different scenarios between where you have existing cables, like the two mentioned just now, versus where there are no cables and there are licensed areas. I think those are two very different scenarios that we need to talk about.

I think, sir, your point of mutual 'due regard' is very important in a variety of those scenarios, and I look forward to that discussion and hearing more from the cable operators in terms of where there aren't cables, how do they plan? Because our information is readily available, presumably as planning is going on now in the minds of many operators. So I would like to have that dialogue at some point between today and tomorrow.

Panellist

I would go one step further to give you material for discussion and food for thought for tomorrow. One of the issues that was contemplated in the previous meeting with 16 members, was the following.

What part of the framework has to do with contemporaneity, in other words who arrives first? Forgive me I am going to be a troublemaker by saying I do not think it makes any difference whatsoever. The rights of one user do not prevail over the rights of another user simply because it got to that position first. So if a cable operator arrives in one location, it does not mean that the Authority could not, in principle, award a mining contract in that area and vice versa. The fact that the Authority awarded one area to one contractor does not make that contractor relieved of its 'due regard' responsibility for the rights of the cable operators to lay a cable in that location. So we have to get together. We cannot use contemporaneity as an argument in order to prevail over the rights of another.

We have a great opportunity here, as opposed to adversarial conversation. The questions and interventions have emphasized the need for cooperation and that is what we need to do. But we have been dealing with this issue in areas under national jurisdiction and it doesn't have to be a miner vis-à-vis a cable operator. You have been able to deal with this issue among cable operators yourselves. The rights of one does not prevail over the rights of another one to lay a cable on top of the previous one. You have already sorted that out.

We have pipelines; they are not represented in these meetings. Most international pipelines, whether they are water, oil or gas are on areas of national jurisdiction. There are other players, scientific research, several others that will be described tomorrow that also have something to say about this. I would argue that the vast majority of problems of cable security are not located in the Area but in areas under national jurisdiction at a depth of less than 5,000 meters, at threat from natural and anthropomorphic causes, as will be shown tomorrow. The opportunity that we have

now is to, basically, produce a protocol; a set of measures of cooperation that does not only pay 'due regard' to the obligations among the two communities represented in this meeting but amongst the myriad of users that have the opportunity and access to the seabed both under national jurisdiction and beyond areas of national jurisdiction.

There are some governments, like Indonesia, that have already established some kind of legislation in relation to various uses of the seabed. I believe that this opportunity can be grasped by those two communities in order to set an example as to how future legislations can adopt measures for multiple users of the ocean.

The problem is not serious. We have only two known instances and I was surprised by the second one on polymetallic sulphides because if anyone is familiar with the geology of that, the temperature and the hostility of the environment, I wouldn't put a cable anywhere near where those minerals are created. The temperature will simply melt them. So, quite frankly, I believe that the problem is avoidable and is more of an opportunity for all of us than an opportunity for competition and I will encourage everybody to bring the best that they can. Not to argue over who can prevail over whom, or over the importance of one activity over the other because a fisherman that breaks a cable is fishing for himself, he is a single user and has as much right to the use of that seabed in that space where he is fishing as any one of us.

The issue is, what are the measures that we will take in order to pay 'due regard' in accordance with international law in general and the specific provisions of the seabed and subsoil.

Panellist

Thank you, just to echo what you just said about no activity prevailing over another one in the same area, even in the same area as delimited by contract. We had an experience where, this French contractor, two years ago had a contract for the exploration in the mid-ridge Atlantic, on the top of the contract was the exclusive right for exploration. At the same time, two scientific cruises were within the area allocated to the French contractor. Why was that? It was because the scientific community considered the area where the French contract was located very valuable from a biodiversity perspective. It is what they call a hotspot. And at that time, I remember we were members already, when the French application came to the LTC, where we heard some voice within the Commission, scientists within the Commission, colleagues saying oh, we should have pushed the French applicant to modify the area to preserve the hotspot on biodiversity. It didn't happen; the contract was allocated and approved, signed with the original coordinates. Two years later, there was this "conflict" of interest between the scientific community and the contractor's exclusive right. And as one participant said, no activity has to prevail because the first on the scene is the first in terms of the exclusive right.

How did we solve that? It was by consultation. I remember that this issue went high up in the channels of the French Administration and they decided to contact the two States involved in the scientific activity and had at least three or four rounds of discussion in a short period of time. It was easy because both States were European States and there are rules relating to all those activities and this was solved in that way. Scientific activity may take place provided that we share the information gathered by the scientific

activity with the contractor. The deal was negotiated on this basis.

To confirm what a participant said, no activity can prevail over any other. It is a matter of finding a common ground for them to co-exist in the best spirit. Make the ambiguity constructive in the interpretation of the rule, that's my point.

Panellist

The other issue I have is – if somebody challenged me and I were a former member of the LTC and I had advised the ICPC to try to develop practical measures and regulations of some sort, I would have to begin to ask the question – for what? Because all the minerals that were listed by my colleagues obey different regimes; it is not even the method of mining in the case of polymetallic nodules which sweeps the ocean floor like a vacuum cleaner. But, in the case of cobalt crusts, you wouldn't even put a cable in that location because it is on the side of a guyot. And then you have sulphides that have high temperatures. It would not be only useful but safe to find an alternative route for that cable. It is very site specific, whereas, polymetallic nodules are widely extended and have kilometres of coverage, sulphides on the other hand are localized. And so re-routing a cable is the easiest and safest route for a cable operator; whereas if you look at the case in the Pacific Ocean for polymetallic nodules and also in the Indian Ocean, the solution can be different.

So what regulations are we talking about? Are we talking about a fiber optic cable or a power cable? I think that at this point in time we really need to bring it down from the clouds and talk about what specific cable, what operator, in what region, vis-à-vis what miner and for what mineral resource. Any attempt at generalizing the need to have regulations, can perhaps even be seen as counterproductive.

There is a lot of data to be shared between the Parties and how this is shared is becoming more important. Eventually, we will all be aware of the fact that without specific information, safety and negative impacts can occur. So how? What is the role that the Authority and, if any, the ICPC will have in facilitating the communication between a cable operator and owner and one specific mining contractor.

I don't see how even for liability purposes, the options Judge Treves addressed in that regard, could be taken by the ICPC and the Authority. Ultimately, it is going to come down to the flag of the ship that lays the cable and the owner of the contracting agency doing the mining who will be liable against one another. Nobody is going to pursue a case against the ICPC or the Authority. So if those two are the ones that are to potentially face the court do we need to go along that path or can we develop other ways?

We haven't spoken about the resolution of controversies here short of going to court and the potential scenarios as described by Judge Treves. According to the Charter of the United Nations there are many avenues, there are good offices, mediation, and conciliation. And in regard to conciliation, I am not talking about compulsory conciliation. By the way, my predecessor in this seat, Judge Kriangsak is one of the conciliators in one of the compulsory conciliation proceedings of the Convention. I am not suggesting to Judge Treves that this type of dispute can be part of the compulsory conciliation. What can happen is for the ICPC and the Authority to facilitate the dialogue, and if the two parties find it difficult, at times, to find the solution to appoint a group of experts that facilitate the agreement by minimizing the expenses for either side. There are no reasons why that could not happen by agreement among all the parties. I think that that is the direction I would like, as a

moderator, to lead the discussion in the future i.e. - how to facilitate the dialogue and prevent these types of accidents by making effective consultations and the negotiations that will follow after that. This is where I think we should focus our energy in the future.

I wanted to follow up on previous comments about what I had originally characterized as the prior cable and prior mining scenarios, because I do think we are interested in exploring the particular issues in those scenarios, not because one activity is privileged over the other but if we look at the *Chagos Award* in terms of the way that the tribunal was looking at the nature of 'due regard'. In terms of the nature, the rights held their importance. The extent of the anticipated impairment, the nature and importance of the activities contemplated, and the availability of alternative approaches. The question of who is already operating in an area and what costs are already recognized; what costs are associated with making changes, we do get into issues of contemporaneity and we do want to explore that because we think that it does raise issues in terms of what the planner of a new activity can do, versus what the operator of an existing activity can do and we want to make sure that we are accounting for all that. We will get into this with the mining and cable presentations. I want to make sure that we are not over anticipating conclusions from that.

Panellist

I believe that from a logistical perspective, there are differences, if one is before the other, there would be different kinds of consultations. But I think we must concur with Judge Treves, considering that these two activities, and not just these two, are legitimate activities that have equal rights under international law. With that in mind I think that I have fulfilled my duty.

C. ISA contractors' panel

Deep seabed activities in the Area: objectives and planning; tools and methods for activities in the Area

1. China Ocean Mineral Resources Research and Development Association (COMRA)

Deep seabed activities in the area: objectives and planning

Zhang Dan, China Institute for Marine Affairs (CIMS)

The Authority is authorized by the Convention to act to guard the rights in the resources of the Area on behalf of mankind as a whole and its principal responsibility is to organize and manage the resources of the Area. Annex, Section 1, paragraph 1 of the 1994 Agreement provides that the Authority is the organization through which States Parties to the Convention shall organize and control activities in the Area, particularly with a view to administering the resources of the Area.

The plan of work for exploration or exploitation is the fundamental document by which the contractors, including COMRA, sets out the objectives of its proposed exploration or exploitation programme. Pursuant to the Exploration Regulations, the plan of work for exploration comprises: a general description and a schedule of the proposed exploration programme including the programme of activities for the immediate five-year period, a description of a programme for oceanographic and environmental baseline studies taking into account any recommendations issued by the LTC; a preliminary environmental impact assessment (EIA) of the proposed exploration activities and a schedule of expected yearly expenditure in respect of the programme of activities.

Under the contract for exploration, the contractor is required to submit an annual report to the Secretary-General within

90 days of the end of each calendar year covering its programme of activities in the exploration area. The contractor is required to adhere to the time schedule stipulated in its programme of activities and to spend no less than the amount specified in the programme in each contract year. The programme of activities, including expenditure, may be modified by a contractor with the consent of the Authority. The contractor and the Secretary-General shall jointly undertake a review of the implementation of the plan of work for exploration. Following the review, the contractor is required to make any necessary adjustments to the plan of work and to indicate the programme of activities for the following five years, including a revised schedule of expected yearly expenditure.

COMRA plans its voyages, missions, and seafloor activities based on the proposed exploration programmes approved by the Authority. For instance, COMRA conducted its activities during 2017 for implementing the programme of activities set forth in the working programme in the extended five-year period specified in the Application for Extension of the Contract for Exploration of Polymetallic Nodules submitted by COMRA on 19 November 2015 and approved by the Authority on 18 July 2016. It submitted the annual report covering its programme of activities for 2017 to the Secretary-General. COMRA actually carried out and finished its proposed exploration programmes approved by the Authority, and no adjustment was made to the programme of activities for 2017.

Contractors enjoy the exclusive rights to explore and exploit in their contracted area in accordance with the Convention and the regulations adopted by the Authority. When planning and conducting its activities, COMRA uses the best available data and technology to identify and assess other marine activities and infrastructures. The Exploration Regulations provide

that when considering applications for approval of plans of work for exploration, the LTC shall determine whether the proposed plan of work for exploration will ensure that installations are not established where interference may be caused to the use of recognized sea lanes essential to international navigation or in areas of intense fishing activity. Provisions of the Convention, such as Articles 87, 147 and 240, respectively, emphasize the principle and spirit of giving 'due regard' or 'reasonable regard', which is fundamental to coordinating different marine activities on high seas and in the Area. COMRA, like other entities engaging marine scientific research in its area under contract, has effectively dealt with situations which may impact its exploration activities through frank communication and exchanges with all relevant entities regarding the transmission frequency of relevant equipment.

The Convention is fundamental to the coordination of different marine activities. Dialogue, cooperation and exchange of information are important. It is suggested that the Authority play a more important role in the coordination of such matters with other international organizations in light of mutual understanding and relevant principles of the Convention so as to secure and protect the interests of the contractors. Lessons and experiences from the cable industry and other industries may be helpful to address this issue.

Means, tools and methods for exploration and exploitation in the deep seabed

Guan Yutang, COMRA

This presentation consisted of three main sections. It contained background introduction, COMRA's means, tools and methods for exploration in the deep seabed and Chinese Deep-Sea Mining Programmes.

The first section briefly introduced the three major mineral resources in the deep seabed: polymetallic nodules, cobalt-rich ferromanganese crusts and polymetallic sulphides. They each have different distribution depths and characteristics. The regulations on prospecting and exploration relating to these three resources have been crafted by the Authority. Draft Regulations on the Exploitation of Mineral Resources, a top priority for the next few years, is being developed by the Authority.

The second part introduced COMRA's main tools and methods for the exploration of the deep seabed. The scientific research ship was presented as the foundation and most indispensable tool for exploration. COMRA has advanced research ships, such as Dayang Yi Hao, Haiyang Liu Hao, etc. Also highlighted were equipment used for resource investigation, such as sediment trappers, cameras and video, rock drill, towed trailer, TV grab, multicorer and remote operated vehicle (ROV). Some of these devices can also be used to conduct environmental baseline and biological surveys. Finally, emphasis was laid on autonomous underwater vehicles (AUVs) which can navigate with stable speed, accurate height control and minimal attitude change. COMRA has three types of AUVs for different types of mineral resources. This is considered appropriate for the investigation of submarine topography and geomorphology, submarine optical image and hydrological parameters.

The third part focused on the Chinese deep-sea mining programmes. China started to do the polymetallic nodule lake test in 2001. After years of effort and massive investment of capital and manpower in recent years, the Kun Long polymetallic nodule collecting subsystem, which was designed to operate at a depth of 6,000 metres, was developed. The sea trial in South China Sea, which involved 500 metres of walking and collecting,

was successfully completed in June 2018. Meanwhile, the 2,000 meter cobalt-rich ferromanganese crust crushing and collecting subsystem was developed as a sea trial in South China Sea in April 2018.

Finally, the future of the technology and equipment for deep seabed exploration and exploitation is explored. Several options were introduced to operate underwater, on land, on the surface of the water and on the seabed:

- (i) A systematic and integrated system including external water space, water surface and underwater.
- (ii) A command and information transmission system which would be based mainly at the land support centre and the satellite in the sky.
- (iii) A surface support system which would be based on a variety of functional ships (including survey ships, drilling ships, etc.).
- (iv) An operational equipment system which is mainly based on AUV, ROV, HOV, glider, drill, mining machines or other equipment underwater.

2. UK Seabed Resources Ltd. (UKSRL) Presentation

Jennifer Warren, UKSRL

UKSRL participated on the contractors' panel and presented on "Transparency in Deep Seabed Activities in the Area." The presentation focused on two aspects of transparency – regulatory and data – to ensure a common understanding of what types of deep seabed mineral contractor information were already in the public domain and the timing of the availability of that information, for purposes of cable planning and coordination with deep seabed mining planned activity.

The initial focus of the presentation was to highlight the high degree of transparency in the existing regulatory processes governing seabed mineral exploration

applications and contracts, beginning with an overview of the respective roles and responsibilities of both national and Authority's regulatory authorities as set forth in public laws, regulations and treaties. In particular, UKSRL noted the recently updated UK public law, the Deep Seabed Mining Act, which governs the UK process for a national exploration licence; it also noted the role of the UK as the State Party to the Convention and sponsoring State. UKSRL also depicted the Convention and the designated role of the Authority, in which 168 State Parties have visibility through the Council and/or the Assembly. The role of the Authority extends through the implementation of the current exploration code and contract management to the development of the exploitation code - which includes a transparent, public consultative process. Using the UKSRL application experience as a case study, UKSRL reviewed the timing of the Authority's publication of the geographic coordinates received in an application and the subsequent review and approval processes.

In the context of the current exploration code, UKSRL provided an overview of the types of contractor data that is public, whether published by the Authority (e.g., geographic coordinates, applicant overview and application description) or by the contractor through various methods, such as workshops, conferences, and scientific team publications. For example, UKSRL has presented its cruise plans and results in over 31 public settings, including industry conferences and workshops, and has funded the publication, by an international team of scientists (11 institutions from 6 countries), of environmental research and sampling data in over 53 open source journals and seminars. UKSRL also noted the Authority's database that is under development, which is expected to be yet another source of readily-accessible data for the stakeholder community.

In the context of the anticipated exploitation application requirements, UKSRL reviewed the types of data and processes that would be public. In particular, UKSRL discussed the transparency of the Environmental Impact Statement (EIS), the Environmental Management Plan (EMP) and the Closure Plan (CP), based on the draft Exploitation Code provision. UKSRL then reviewed the transparency of the anticipated exploitation contract requirements, focusing on the contract and schedules to be published in the mining register, an EMP performance assessment report and findings to be publicly available every two years, and the five-year review findings and recommendations to be publicly available.

UKSRL concluded with a discussion on the existing public data sharing practices by contractors, at least by the commercial contractor community, that were already in practice. These practices encompass a wide-range of methods and forums, including sponsored workshops by the Authority, multi-stakeholder events sponsored by non-governmental organizations (e.g., Pew Trusts), State Parties, and others, and a myriad scientific publications. UKSRL then posed the question of whether cross-sectoral data sharing needed to be pursued to put into effect the requirement for mutual 'due regard'. The Authority's regulatory process for exploration applications provides an early indication of intent - a quasi-public notice to the world - of an entity's intent to pursue specific geographic coordinates for exploration, and if approved and a contract entered into, to secure a right of first refusal for the exploitation of that same geographic area; there is no analogous regulatory oversight, or industry process, in place for the submarine cable operators to provide that same global notice of plans at the same early stage of the process. Therefore, UKSRL suggested that an industry-to-industry data sharing framework may be worth exploring. Some

topics for exploration included how to enable direct communications between ICPC, the industry association, and the community of contractors - a peer to peer approach, how to identify data needed and timing of such data for planning, how to ensure protection of submarine cable planning data and any relevant non-public contractor data, whether a peer industry group needed to be established?

3. Global Sea Mineral Resources NV (GSR) presentation

Meeting increased metal demand in a responsible manner

Daniel Rincon, Global Sea Mineral Resources NV

In the framework of the Second Workshop on Deep Seabed Mining and Submarine Cables, Bangkok, 29-30 October 2018, GSR presented "Meeting increased metal demand in a responsible manner", as part of the contractors' panel. GSR gave a general overview of the technical framework encompassing the harvesting of polymetallic nodules in the Clarion Clipperton Fracture Zone (CCZ) in the North Pacific, including the objectives and planning of deep sea mining activities, as well as the tools and methods for exploration and exploitation.

GSR started with a general overview of the DEME Group along with the establishment of its in-house marine resource harvesting specialist, GSR, and the group's vision towards a sustainable future, by offering solutions for global worldwide challenges, such as rising sea levels, climate change, the transition towards renewable energy, etc. In line with that vision, GSR touched upon the main drivers of demand for mineral resources, including rapidly increasing population, urbanization, rise in renewable energy infrastructure and storage.

GSR expanded on its approach to responsible deep sea mining from five main considerations: geological, technological, environmental, economic and regulatory considerations.

Geological considerations focused on resource definition activities, including the collection of high resolution (HR) geophysical data in selected locations; boxcore samples to determine nodule abundance; calibration of the geophysical data; and correlation and extrapolation of the HR studies to lower resolution. As to the technological component, GSR elaborated on the collection of in-situ geotechnical data of the soil's strength; the performance of its tracked soil testing device (Patania I) to collect data on soil performance; the design of environmental mitigation techniques; and the design, construction and testing of the pre-prototype collecting device (Patania II). The environmental aspects of GSR's exploration activities, essential to informing its environmentally responsible future deep sea mining, were described. These included the collection of baseline data for deep-sea micro- to macro-faunal organisms and habitat characterization; visual mapping and quantification of the deep-sea megafauna; biochemical analysis of water samples; and monitoring and mapping of sediment plumes for model calibration.

With regard to economic considerations, GSR presented the polymetallic nodule price moving averages to explain the need for minimum nodule abundance to obtain commercial production, noting that only a fraction of the nodule-containing surface would actually be mined, with preservation areas allocated as a precautionary measure to safeguard local ecosystems and provide sources for local community regeneration. Finally, on the regulatory front, GSR showed its continuous support for the development of the regulations for responsible seabed mining, including environmental regulations and economically acceptable



financial payment mechanisms for the resource administrator (ISA) and its Member States.

Question and answer session

Participant

With regard to the competing activities, are there legal and practical reasons for differentiating between submarine cables and pipelines and other activities on the basis of the potential destruction by mining? Is there a rationale for differentiating treatment of shipping for example? Also, is there a misunderstanding of what constitutes due diligence? States have an obligation under due diligence to carry out 'due regard'.

Panellist

Some scholars emphasized that differences existed between cables and pipelines with regard to the cost of laying of cables in the EEZ. But, to lay pipelines had more to impact on the marine environment. Therefore, there was more concern about pipelines. For the deep seabed we refer mainly to the laying of cables and not the laying of pipelines. Due

diligence referred to misconduct amongst states and to coordinate activities. The Convention emphasized 'due regard' and 'reasonable regard'. There is no mention of due diligence in the Convention. This responsibility was, however, on States and not contractors.

Panellist

A panellist asked if there was an analog to ICPC for the contractors. The answer was no. Accountability lay directly with the regulator - the Authority - and not the ICPC.

Participant

To address the point made about 'due regard' and due diligence, the paper by Judge Treves provided guidance as to the relationship between 'due regard' and due diligence in practice. 'due regard' refers to taking diligent steps such as notice and consultations.

Participant

Reference was also made to a learned society developed to deal with marine minerals. It is called the International

Marine Minerals Society (IMMS). It is not a trade association but it opines on marine minerals and has an annual conference. It has a website which participants are invited to consult for more information. Representatives of IMMS also make presentations to the Authority.

Participant

It was encouraging to hear about the position of the Chinese Government in reference to 'due regard', when it came to existing assets on the seabed and the recommendation that all measures should be taken to avoid damage. But, bear in mind that cables have a design lifespan of 25 years. In many cases they are economically retired much sooner because as the technology advances, the new cables carry more capacity, so new cables are manufactured, and that was how the internet evolved. In relation to the 'due regard' principle, you talked about how it applied in relation to the existing assets. How would you apply the 'due regard' principle to new systems?

Panellist

In my presentation, I introduced the comments of the Chinese Government in relation to the draft exploitation regulations. The Chinese Government is of the view that activities in the marine environment also include fishing, navigation etc. and therefore it is not appropriate to single out the issue of submarine cables in the draft regulations.

As distinguished Judge Treves had identified some procedures and methods regarding 'due regard', for example, communication. Timely communication was very good practice and message for contractors and submarine cables industries to apply the principle of 'due regard'.

As many speakers emphasized, there were multiple uses of the ocean. While I

personally acknowledge the importance of the cable industry, no priority should be given to submarine cables over other activities.

The Chinese Government is also concerned about the use of the term due diligence not 'due regard'. This is because the Convention is the basis for the exploitation regulations. Since there were no provisions on due diligence regarding submarine cables, we do not think this term should be used in the draft regulations.

Participant

I understand you were uncomfortable with the word term due diligence, how should it be defined if we were to work together?

Panellist

I noticed that this morning many of the participants were of the view that we should place the term 'due regard' in the exploitation regulations, I do not know the position of the Chinese Government, but personally I do not think it is necessary to include such language in the exploitation regulations.

Also, during my presentation I looked at the example of how the contractor coordinates with the scientific community on scientific research in the Area. I think that in the future we will have the same level of cooperation, so why is cable industry being singled out? I think that this is unnecessary.

I invite those who want to continue the discussion about the regulations to speak to me during the breaks.

It was recalled that the focus of this workshop was on the development of a toolkit of practical options.

Another participant recalled that the workshop was trying to come up with practical solutions and to find a way to

build trust and understanding between the two industries working in the same (technological) economy. Both are complementary. We want to figure out a way to build respect for each other as companies and industries. One solution may be to develop "Joint best practices". Going to the Authority for more Regulations is not the solution as it does not build trust and understanding with the larger community of interested stakeholders.

Participant

We are talking about the deep sea. The submarine cable industry has been operating in over 40 something countries. One can side with the Chinese Government, absolutely; we are currently installing multiple systems with the Chinese claim and the recent change in the Ministry of Natural Resources. The framework already exists for cooperative discussion between people like ourselves. For example, I cannot install submarine cable system anywhere within the Chinese claim unless I have a lease block agreement with the Chinese National Offshore Oil Corporation, cable crossings that I have to present them. It is the same with Indonesia and many other countries, we have to show proof.

So we do engage. The mechanism does exist, it is not foreign and definitely it is a requirement of governments, the State entities that we engage. It is just as you leave the EEZ, that the question arises, isn't it? If all of you have sponsored States, and if you looked to your own States, you will see that the requirements are there, so maybe we don't have to do so much more homework but to focus on those best practices that we currently use all over the world.

Participant

Thank you to the panellists for sharing such information. First I have two comments. Submarine cables are the only other long-term infrastructure in the deep ocean right

now, and so to the point as to whether or not there is some need potentially to distinguish submarine cables or submarine and pipelines from other activities. There is for ICPC a particular issue because it is an issue that exists right now. And there are risks of damage posed by the uncoordinated deep seabed mining that don't arise for navigation and fishing. Furthermore, there are no pipelines in areas beyond national jurisdiction; there are no power transmission cables. It is just submarine telecommunication cables that we are talking about here so, although the provisions in the Convention with respect to submarine cables apply both to telecom and transmission cables, we don't have the transmission cables right now.

I thought that we were clear coming in that we were not going to have discussions about regulations but we are not the ones that keep bringing up the issue of regulation. I would just like to state that the ICPC and the Government of France have proposed jointly to address submarine cables specifically in the exploitation Regulations because of the uniqueness of submarine cables as compared to some of the other freedom of the high seas activities.

Moving on to my questions, I was curious to know from the contractors, if, with their imaging activities with AUVs they have ever collected images of submarine cables? Whether in service or out of service? And, if so, what do they do with that information?

Secondly, this is related to the data point. Consultation of charts was mentioned, but I was curious to know, nautical charts? I was curious to know from the contractors, do contractors consult any other resources to determine what else may be in the marine environment. I am not sure we are going to talk about this in our second segment on other resources that exist. They don't have to be in the public domain to be accessible, submarine cable operators and

the industry in general pay for access to a lot of data from commercial data providers to get a better picture of what's in the marine environment and I am curious to know to what extent mining contractors are doing that.

Panellist

Unfortunately, I am afraid I will have to tell you that I don't know if we have spotted any images of cables with the AUVs, that question will be more for my technical people. But I am sure that if that kind of information pops-up we have to process it first before we disclose it, because it is part of the information gathered as a result of our operations. Now on the question of whether we consult other sources on what we can find in the deep sea, that's also for the technical people in my company so I wouldn't really be able to provide an answer on that.

Panellist

I don't think we have an obligation to process anything, we just donated a huge number (thousands) of pictures to the Authority and it goes back to our parent company's activity in the entire CCZ from the late 70s. I believe those have been scanned and provided if not already, it will happen any moment, but I don't know that that would have been useful for your cable question.

Panellist

In my presentation I mentioned that when the applicant applies for an exploration contract according to the Convention and the Regulations on prospecting and exploration, the LTC should consider and ensure that installations will not interfere with the use of international navigation in areas of intense fishing activities. When we prepare our plan of work for approval by the Authority, we use public data - maybe some maps or charts published

by international or regional organizations since there is no requirement regarding submarine cables, so at this stage, there is no reference to maps regarding for submarine cables.

D. ICPC panel presentation

Three themes on the programme of the workshop were addressed through a presentation which was entitled "International Cable Protection Committee: Perspectives on Cable Planning, Operations, and Protection as Relevant to Deep Seabed Mining":

- Submarine cables: objectives and planning; materials, tools and methods for installation and repair
- Information in the public domain and/or by submarine cable operators regarding existing and planned submarine cable routes in the Area
- ICPC-IHO pilot project for charting of submarine cables at all ocean depths in the Clarion-Clipperton Zone

Members of the ICPC Panel were as follows: Graham Evans (ICPC Chairman - EGS Survey Group); Kent Bressie (ICPC International Cable Law Advisor - Harris, Wiltshire & Grannis); Gary Waterworth (ICPC EC Member - Alcatel Submarine Networks); Ben Sims (ICPC EC Member - Vodafone); René d'Avezac de Moran (ICPC EC Member - Fugro Survey); Greg Pintarelli (ICPC EC Member - SubCom); Andy Palmer-Felgate (ICPC EC Member - Facebook); Helelany Ly (ICPC Member - OPT French Polynesia).

Background and introduction

Submarine telecommunications cables are critical infrastructure responsible for the transmission of more than 99 percent of all international telecommunications traffic and are the very backbone of the internet that we all use every minute of every day. The remit of ICPC is to provide

leadership and guidance on issues related to submarine cable security and reliability whilst advocating the sharing of the seabed in harmony with other seabed users.

This second ISA-ICPC workshop aimed to advance the dialogue, cooperation and the exchange of information between mining contractors and those engaged in the various activities associated with the planning, installation, operation and maintenance of the submarine cables. ICPC's workshop participants included cable route planners and cable route survey organizations, submarine cable equipment manufacturers and system suppliers, submarine cable system installers, cable system maintenance providers; and the owners and operators of submarine cable systems. To provide context regarding international and national-level legal and regulatory regimes, the team was completed by the ICPC's International Cable Law Adviser.

To meet the objectives of the workshop, the ICPC team addressed:

- Overview of submarine cable objectives
- Threats, risks and coordination with other human activities
- Planning of submarine cable systems
- Submarine cable materials and tools
- Submarine cable installation
- Submarine cable repair
- Post cable installation protection
- Legal protection for installed submarine cables
- Submarine cables currently at risk from deep seabed mining
- Out of service cables
- Submarine cable location data and sources
- Protecting critical submarine cable infrastructure and deep seabed mining - The Future

1. Overview of submarine cable objectives

Approximately 350 submarine cable systems—totaling some 1.3 million kilometres or the equivalent of encircling the world 25 times, currently serve the world's connectivity needs. These systems provide real-time, high capacity connectivity for a variety of uses. These uses include internet traffic that we all depend on for our daily lives; supporting financial services including the ATM and credit card transaction, real-time video, voice communications, data centre connectivity supporting cloud services telemedicine, distance learning, delivery of government and social services; economic development especially to developing nations and particularly small island economic development; as well as civilian and military traffic.

Submarine cables transmit data at the speed of light and are by far the fastest transmission medium with latency measured in milliseconds. They are more secure than satellites. With this critical infrastructure responsible for carrying in excess of 3.5 petabytes of data per minute, over 4 million YouTube views and 400 minutes of video uploaded every minute; not to mention approaching 4 million Facebook posts per minute, it should be apparent that protecting this infrastructure from all threats to its integrity is paramount. The significance of this infrastructure is therefore both obvious and inescapable.

Demand for new systems is being driven by the replacement capacity of existing systems. New capacity to meet increasing demand is estimated to grow at 4.5 per cent compounded annual growth rate (CAGR) between now and 2024; as well as providing redundancy and geographic diversity.

Submarine cable system ownership may follow a traditional consortium model, built jointly by a group of investors or by a sole owner entrepreneur.

Submarine cable system development involves a number of key actors each with critical roles to play. The system owner will own and operate the system; the system supplier will design, manufacture and install the system; a survey company will be involved in route planning, and will be responsible for providing the pre-installation seafloor survey and post-installation burial survey; whereas the maintenance provider will provide maintenance services to an operator or group of operators.

ICPC facilitates direct engagement of its members with other marine industries but does not represent individual members in such negotiations or coordination exercises.

2. Threats, risks and coordination with other human activities

Submarine cables are exposed to a variety of threats and risks. Primary causes of cable damage are due to commercial fishing and anchoring which together amount to over 70 per cent of all cable damage. Typically, this damage occurs at water depths of less than 200m. Other threats come from dredging and dumping, energy resource development including oil and gas and increasingly renewable energy developments; unexploded ordnance and equipment theft. Natural, non-human threats come from earthquakes and meteorological events, tectonic activity, seafloor geology which, individually, or in combination may induce submarine landslides, turbidity currents and on-shore flooding.

Historically, few faults occur annually in deep water as it is a benign environment; however, deep seabed mining is an

emerging threat both because of increasing uncoordinated exploration activities and future potentially uncoordinated exploitation activities. Increasing demand for submarine cable communications capacity coupled with advances in subsea cable technology, enabling low latency ultra-long haul submarine cables to be built serving both existing and emerging telecommunications markets, has and will continue to result in cables being routed through areas where deep seabed mining activities are likely.

The submarine cable industry has a long history of coordinating submarine cable activities with other marine users and industries at the earliest stages of project development with each use or industry. These coordination activities cover established activities such as offshore oil and gas development and commercial fishing and emerging activities such as renewable energy development. The industry seeks to take a similar approach to deep seabed mining.

3. Submarine cable route planning

Submarine cable routes are designed to follow the shortest technically viable route between landing points exhibiting the lowest risk to the installed cable. Compromises to technical and economic viability are sometimes made in the interest of achieving lower latency, i.e., the transmission delay between the originating and termination points of a communication. Where possible route planners seek uninteresting flat seabed that avoids steep gradients, seamounts, vents and fracture zones. Route planners routinely evaluate potential risks posed by other seabed users and consider adjusting the route in consultation with such marine actors. Cable route planners and cable operators also seek geographically diverse routes to mitigate potential harmful impacts to the installed cable system.

Key to the route planning process is the avoidance of or minimizing conflicts with other seabed users and the identification of and early engagement with other marine stakeholders, when compromise and adjustment by both parties are most feasible and coordination is most effective. To meet this planning objective, industry organizations, including the ICPC and regional cable protection committees, have developed and/or endorsed recommendations for consultation and coordination among marine activities and spatial separation. ICPC Recommendation No. 17 specifically addresses deep seabed mining and submarine cables, although it remains a living document that ICPC seeks to update and refine based on continuing discussions with mining contractors and the Authority.

An essential activity prior to proving the technical viability of a cable route is the desktop (cable route) study. The desktop study accomplishes a range of activities including: (i) capturing archival research data gathered during pre-survey planning activities; (ii) assessing and summarizing risks and hazards identified along the route and incorporating this information in a risk matrix; (iii) cementing information gathered from visits to the system landing sites; (iv) logging and reporting on engagement with stakeholders and routing conflict mitigation; and (v) recommending appropriate route survey procedures designed to prove viability of pre-survey planning efforts.

Identification of deep seabed mining activity in a desktop study remains challenging. Contract areas do not appear on nautical charts, and geolocation data for contract areas is difficult to access on the Authority's website. Data regarding specific areas of exploration and associated plans of work are treated as confidential to the LTC and the Secretariat and is not available to third parties such as submarine cable operators. ICPC expects that the same will be true for

exploitation activities. ICPC is also aware that some mining contractors have taken the position that it is the responsibility of the Authority, rather than individual mining contractors, to engage with submarine cable operators, if at all. This situation is not conducive to meeting a key route planning objective of stakeholder identification and early engagement.

Following the cable route planning effort; the viability of the planned route is validated or amended as may be necessary by performing a cable route survey. In deep seabed mining areas, the survey would typically be the collection of a single line of multi-beam echo sounder data which would be the basis of determining final cable engineering and cable quantities prior to loading the cable system on board the cable laying vessel.

4. Cables, system components and cable ships

In water depths where deep seabed mining exploration takes place and where subsequent exploitation will take place, submarine cables are lightweight (0.7kg/metre) and of small diameter (17mm to 21mm). Such cables have an outer polyethylene layer encasing a copper tube which acts as a conductor to power the submerged system components (optical amplifiers) with an inner alloy or steel tube and 2, 4, 6 or 8 pairs of glass fibres. These cables can currently transmit more than 288 terabits of data per second. Optical amplifiers (repeaters) are positioned along the cable at intervals of between 60km and 80km along the length of the cable in order to regenerate the optical signal, which degrades over distance, using lasers. Submarine telecommunications cables are highly reliable with a minimum fault free design life of 25 years.

The installation and any repairs to the installed cable systems are performed from highly sophisticated cable ships that

can carry thousands of kilometres of cable and the associated optical amplifiers. To support cable laying and repair activities, these vessels are fitted with laboratories and clean rooms equipped with all the technology required for cable jointing and testing as well as highly-skilled personnel to execute the functions of both cable laying and cable repair.

5. Submarine cable installation

In the deep ocean, where cable burial is unnecessary, and also impractical, due to the weight of armouring and the logistics of seabed operations, submarine cables are surface laid. The elements of cable installation include the loading of the cable in cable tanks that are an integral part of the vessel. Most cable ships can carry several thousands of kilometers of cable in a single load as well as the optical amplifiers. In order for the cable to follow, exactly, the seabed profile. Sophisticated cable lay and navigation software control vessel speed and rate of deployment through slack management software, linear cable engines and cable drums in order to lay the cable under tension whilst ensuring that the correct amount of slack is achieved to follow the profile of the seabed that has been defined by the pre-installation cable route survey and to an cable engineering plan. Tension ensures that the cable lies flat on the seabed, avoiding loops or suspensions that could increase the risk of damage.

6. Submarine cable repairs

In the Area, the average repairs carried out equates to an average 3.85 repairs per year globally. This low "fault" rate (a fault is an event with the cable that will eventually require repair) reflects the benign deep sea environment and represents only two per cent of annual cable repairs worldwide compared to 43 per cent of repairs carried out within territorial seas and 55 per cent within EEZs/continental shelf areas. The

low incidence of repairs in deep water reflects the route selection across flat uninteresting benign seabed with no human activity. However, deep sea repairs are both time consuming and costly, with repair vessels often having to transit long distances to the repair ground which is added to time consuming cable recovery, repair and redeployment operations. Lengthy cable outages that result from deep sea cable breaks has the potential to isolate island communities where no traffic restoration path is available and where satellite bandwidth is insufficient to handle the required capacity demand.

Submarine cable repairs are carried out under maintenance agreements that typically involve a group of cable owners pooling costs and risks to contract with a cable ship to remain on standby and be called out in the event of a repair (although some owners contract individually in the spot market following a fault). Cable ships are stationed at strategic locations region so that transit times are optimized.

The submarine cable industry remains concerned that in effective coordination with mining contractors, the expected increases in deep seabed mining activity and (in response to ever-increasing demand for submarine cable capacity) new submarine cable deployments will result in more frequent spatial conflicts and a higher rate of cable damage in the deep ocean. This is particularly true, given advances in technology for ultra-long-haul submarine cables, which permit faster and more across ocean areas such as the east central Pacific Ocean and the CCZ.

7. Post installation protection

The route planning activities discussed above seek to minimize the risk of cable damage within certain performance parameters. Following installation, however, submarine cable operators undertake additional protection measures.

a. Physical separation

A default separation distance establishes a minimum separation distance between an existing submarine cable and another marine or coastal activity in the absence of any mutual agreement to allow the activity in closer proximity to the submarine cable. A minimum separation distance establishes an absolute minimum separation distance between the submarine cable and the other marine or coastal activity. Consistent with ICPC and other industry standards, many countries have established default or minimum separation distances to protect submarine cables. In the United States, an advisory committee to the Federal Communications Commission has recommended default separation distances of (a) 500m in water depths of less than 75m and (b) the greater of 500m or two times the depth of water in depths of water greater than 75m.

In April 2017, the Assembly of the International Hydrographic Organization (IHO) amended Resolution 4/1967 to require that charting authorities include a text box in publications such as mariners' handbooks and notices to mariners. The text box directs vessels to avoid any anchoring, fishing, mining, dredging, or engaging in underwater operations near cables at a minimum distance of 0.25-nautical mile on either side of submarine cables, and recognizes submarine cables as critical infrastructure, noting that damage to a submarine cable can constitute a national disaster.

Some governments have conducted comprehensive marine spatial planning to address potential conflicts between marine activities. Such planning activities can be effective in highlighting the need for submarine cable protection. These planning activities are particularly important in countries with federal political systems, where States or provinces may exercise significant authority over

marine matters in addition to the national government.

Cable protection zones and corridors, unlike default separation distances or buffer zones, prevent specified activities from posing risks to submarine cables including: fishing, anchoring, and dredging within fixed geographic areas. Cable protection zones grant protections to submarine cables that choose to locate—or are already located within them. Corridors, by contrast, require submarine cable operators to route their infrastructure in defined geographic areas. Both Australia and New Zealand—which have the world's most advanced cable protection regimes—have established cable protection zones, which they enforce with air and sea patrols and for which they impose severe infringement penalties.

b. Cable awareness and charting

Submarine cable operators also disseminate route information to interested stakeholders. To reduce anchoring and fishing-related risks, submarine cable operators share route location information with:

- Nautical charting authorities;
- Other marine industries (particularly commercial fishermen);
- Port authorities;
- Government agencies; and
- Military authorities.

Some regional cable protection committees provide web-based nautical charts showing cable locations and contact information for individual cables.

The ICPC has been discussing with the IHO the need to chart cables at all depths, not just to 2,000m as in current practice, with the IHO.

Stakeholder liaison and education is an effective strategy for post cable installation

cable protection. Submarine cable operators undertake extensive outreach to the commercial fishing industry including use of:

- Cable warning charts;
- Electronic information for navigation instruments;
- ICPC education and training materials; and
- In-person outreach at industry events.
- Operators also engage in outreach to port agencies, pilots, coast guards, and maritime academies.

Submarine cable operators also employ vessel monitoring tools including the use of automatic identification systems (AIS) to track vessels in proximity to installed submarine cables. Some governments and cable-fishing committees also use radar; vessel monitoring systems; and air and sea patrols, particularly to enforce cable protection zones.

c. The example of coordination with offshore energy industries

Coordination and negotiation with oil and gas and renewable energy companies clearly demonstrates how the submarine cable community successfully addresses and resolves potential cable routing conflicts. In areas of jurisdiction, submarine cable operators have long coordinated with energy companies to de-conflict their respective activities. In many jurisdictions, the energy regulatory agencies require such engagement and coordination with submarine cable operators as key stakeholders and establish coordination procedures. Submarine cable and energy companies use a variety of methods, including:

- Notifications;
- Confidential negotiations over areas of use; and
- Formal and informal crossing agreements (for pipelines and power transmission cables), defining

the locations of the respective infrastructures, agreed crossing notification procedures, and means and methods for the activity.

To be effective, both industries must be interested in coordinating and compromising. The regulatory regime should also establish procedures without dictating outcomes.

d. Infeasibility of burial in the deep ocean

ICPC noted that a suggestion had been made regarding the burial of cable in the deep ocean as a means of protecting submarine cables. Cable burial in the deep ocean is not feasible for the following reasons.

- Equipment and technology do not currently exist to bury submarine cables in the deep ocean.
- Even if burial equipment did exist, cost of use would be prohibitive, as burial would require:
 - Development of new deepwater cable and amplifiers,
 - Significant additional ship time and associated running costs.

Even if equipment existed and costs were manageable, efficacy would depend on mining contractors sharing significant and reliable data regarding their exploration and exploitation methods, including penetration rates for mining equipment.

8. Legal protection to installed submarine cables

With respect to civil and criminal liability for cable damage; the 1884 Convention on the Protection of Submarine Telegraph Cables requires State Parties to establish offences for cable damage.

Article 113 of the Convention provides that every State shall adopt the laws and regulations establishing a punishable

offence under national law for the breaking or injury by a ship flying its flag or by a person subject to its jurisdiction of a submarine cable beneath the high seas done willfully or through culpable negligence.

Countries such as Australia and New Zealand have established substantial penalties, particularly with respect to their cable protection zones, that are more likely to have a deterrent effect on those who might damage submarine cables.

Countries such as Sweden require that if the owner of a cable or pipeline causes damage to another cable or pipeline, the owner shall pay the cost of repairing the damage.

With respect to private legal claims and litigation; if a vessel is still in port or within the territorial sea, a submarine cable owner may seek to have authorities arrest the vessel. The following should be noted.

- Whether or not the vessel is arrested, submarine cable owners seek to have the provider of protection and indemnity insurance (a "P&I club") provide a letter of undertaking.
- Submarine cable operators must document the alleged fault of the vessel, which is much easier with AIS.
- Submarine cable operators must document damages, including running costs and standing charges.
- Submarine cable operators must either settle with insurers or pursue litigation.
- Such claims are more challenging to pursue against fishing vessels and against vessel operators who deactivate AIS.

9. Submarine cables currently at risk from deep seabed mining

Two submarine cable systems are currently at risk from both uncoordinated deep seabed mining exploration activities and

any subsequent deep seabed mining exploitation. The Honotua system owned by OPT French Polynesia, connects Tahiti to Hawaii, and the SAFE (South Africa Far East) Submarine Cable System owned by a consortium including Vodafone, Tata Communications and 38 other major telecommunications companies. SAFE connects Malaysia, India, Mauritius, Reunion and Cape Town. In both cases the cables were shown on nautical charts over their entire length.

Honotua was installed through what was a reserved area in 2009-10. In 2017, based on a recommendation of the LTC, the Authority entered into an exploration contract with China Minmetals Corporation covering an area directly over 224 kilometres of Honotua. Neither the LTC nor the Council nor the Secretariat accounted for Honotua during their reviews. Neither OPT French Polynesia nor the ICPC was ever contacted by the contractor or the Authority regarding the overlap.

SAFE was installed at the same that the Authority was considering an exploration contract with the Government of the Republic of Korea for exploration along the central Indian Ocean ridge. The SAFE owners have attempted to contact the Government of the Republic of Korea, with no response. The Government of the Republic of Korea has never initiated contact with the SAFE owners.

10. Out of service cables

Cable owners engage in a regulatory, cost-benefit, and environmental analyses and assess proximity to and crossings with other cables when deciding whether to remove or leave in place an out-of-service (OOS) submarine cable. Most OOS submarine cables are left in place when out of service, available for re-use or recycling if the opportunity arises. Significant lengths of deep water cable have been recovered and recycled.

OOS cables have been recovered and reused or donated to scientific institutions (e.g., IRIS, University of Hawaii). The first undersea "observatory" was a retired submarine cable.

Currently, three companies engage in recovery and recycling of near shore and deep water cables around the world.

11. Location data

As laid route data includes positional and depth information for both cable and submerged plant. Location data is derived from a GPS vessel surface position - in deep water the seabed position is calculated by lay back modelling with a typical positional accuracy of ~1-5 per cent water depth depending on water column conditions. To date, acoustic beacons have generally not been used to identify the specific location of cables. Deployment of acoustic beacons on certain sections of future systems at time of manufacture and installation could be more viable. Retrofitting existing cables would be prohibitively costly to install and could impair future performance.

The ICPC does not have access to, collect, or store cable location data, and there is no centralized industry repository of such data. A submarine cable owner owns and controls access to location data and Route Position List for its system. Only sharing of linear geographic coordinates is necessary for most coordination and protection purposes. As there is no global regulator for submarine cables, there is no regulator that collects or stores submarine cable location data on a global basis.

Contractors such as survey companies and suppliers are subject to non-disclosure agreements that bar them from sharing route position lists (RPLs) and survey data without consent. RPLs are more sensitive and include data regarding repeater and joint locations and fault history. Submarine cable operators routinely

exchange information with third parties pursuant to non-disclosure agreements, as effective coordination does not require public disclosure of location or activity information.

The ICPC generally supports the charting of submarine cables at all ocean depths, although it recognizes that there may be security concerns in particular situations. Furthermore, the ICPC only makes recommendations to its members and the industry more generally and cannot compel its members to chart cables. The ICPC cautions that current charts are not updated in real time, as there is a lag between the provision of data to charting authorities and its inclusion in charts. Also, charts often fail to reflect all older out-of-service cables.

To date, submarine cables have not been charted at all ocean depths because, historically, the IHO recommended charting only to depths of less than 2,000 metres due to its focus on safety of life at sea. The IHO also had not developed a technical specification to facilitate inclusion of submarine cable location information on nautical charts. Faults in the deep ocean are rare, meaning that charting has not been a critical tool for submarine cable protection until concerns arose regarding deep seabed mining. However, some cables are charted at all ocean depths, depending on the cable operator and the charting authority.

To give meaning to 'reasonable regard' obligations of the Convention, ICPC recognizes the need for accurate charting of cables in the deep ocean and is working with the IHO to:

- Eliminate 10-point rule. ICPC discovered that even where charted, the IHO was using a "10-point rule" that resulted in inaccurate charting of submarine cables;
- Develop a new charting specification.

- ICPC is working with the IHO to develop product specifications for more accurate charting data; and
- Implement a pilot program for charting of cables in the deep ocean. ICPC is working with the IHO Marine Spatial Data Infrastructure Working Group to implement a pilot project of provision of such data in areas proximate to deep seabed mining in the Clarion-Clipperton Fracture Zone.

Even without comprehensive charting to date, there are numerous sources of cable location information. Public and commercial sources of cable information include:

- Nautical charts, as numerous cables are charted at all depths;
- Regional cable protection committees, e.g., North American Submarine Cable Association and European Submarine Cable Association;
- Subscription databases, e.g., Global Marine Group database;
- TeleGeography and other maps of existing or planned systems; and
- Internet research, as most developers of new systems publicize their planned systems and routes.

12. Protecting critical submarine cable infrastructure and deep seabed mining – the future

The ICPC continues to believe that the current language in the Draft Regulations is insufficient to ensure protection of existing submarine cables because it does not address submarine cable protection early enough in the development and review of the contractor's plan of work for exploitation. Instead, it suggests that submarine cable protection be addressed only once a contract area has been finalized.

The ICPC believes this is too late in the process. As submarine cable operators know from working with other marine

industries, parties have the greatest opportunity for coordination and compromise at the earliest stages of the project planning process, before plans and financing are finalized and become difficult to change.

The ICPC, therefore, continues to believe that mining contractors should be required to perform due diligence using publicly-available charts and other materials to identify in-service and planned submarine cables, coordinate directly with operators of such submarine cables, and address their protection in any plan of work.

The ICPC believes that the LTC should assess mining contractors' plans of work to account for submarine cables and decline to recommend the Council's approval for a plan of work that fails to address protection of submarine cables in a proposed contract area; and ensure that the recommendations of the Commission and Council actions on applications for exploitation activities do not foreclose routes for future submarine cables through mining areas.

As stated previously, the ICPC does not seek detailed, prescriptive measures in the Exploitation Regulations. As ICPC's members know from coordinating with other marine industries, parties need flexibility to address commercial needs, seafloor topology, and available technology. ICPC does, however, seek procedural requirements in the Exploitation Regulations to ensure that diligence and coordination take place.

Question and answer session

Participant

Thank you very much and I commend you for the well-coordinated presentation by the group of ICPC. There are many things to comment upon, of course, and I will try to restrain from commenting on some.

The table of statistics of cable damage that shows China as one of the largest locations of its EEZ for damage was apparently justified by the size of the EEZ and that was something that immediately caught the eye of some of the people around the table. Because we know that China is somewhere between the 35th and 40th country with a larger EEZ. Countries like the USA, Russia, France, Australia, Portugal and Peru have larger EEZs than China, so the size and the number of incidents do not seem to correlate. And, in fact if it were to correlate with size, the table would show an even greater spike on the side of China. Now we know there are anthropomorphic causes for concern and there are also natural causes for concern in the highly seismic area. Countries like Canada have probably twice as much EEZ as China and have less than a fifth of the incidents that China has. That is something that caught my eye.

The second issue that was mentioned in a number of presentations, is the enforcement and the relationship between ICPC and its members and the relationship between the Authority and its State Parties. The ICPC membership seems to function rather well with recommendations. These are not binding codes of conduct for ICPC's members, these are recommendations but nevertheless are followed for the most part. It appears to me that suggesting that the Authority should adopt specific regulations and binding procedures to address the issue of cables, on the other hand, has a weight of compulsory obedience that differs with the recommendatory approaches followed by the ICPC.

In the sense of reciprocity, I do wonder whether, as proposed by a panellist, we do not have already all the elements in place by taking into consideration the practice of the oil and gas industry which does not require a regulation but follows protocol of common sense by making the individual Parties agree with one another on a modus operandi.

I have a lot of reservations about cable protection zones used by Australia and New Zealand. I think they make for a perfect military target for example. In the hypothesis that an attack to that infrastructure is considered, it will go precisely to that region with a 100 per cent success rate. The concept of safety zones as it does exist in the Convention, is already permitted through a number of parts of the Convention, whether it is artificial islands, installations etc.

With respect to the magic number of up to 500 metres that has already been discussed around the table, I am curious about the hydrographers who always say 0.25 nautical miles which is actually 469 metres. Either way, whether it is in shallow or deep water that is not an unreasonable path to follow in a bilateral agreement between organizations or between the operators. It appears to me that that is something that can work by agreement.

I have nothing to say about the virtue or lack of it, vis-à-vis mapping and charting with IHO. I imagine that this is a source of great debate internally within ICPC and some of them will be highly interested in doing it. I am certain that some of them have entered into confidentiality agreements with oil and gas companies for example and will not be as keen to necessarily share that information. So it will be, again, a recommendation but not necessarily adhered to in the future.

Let me finish with one element; the two per cent. I would be willing to bet that the two per cent shown in the graphic of damage by a panellist has to do with natural processes in the deep seabed. It is not an anthropomorphic accident. That is to say, if the two per cent in the high seas are caused by natural causes and we have only two cables crossing the exploration areas, the question is do we really have a problem? Or, is this something that can be addressed with common-sense and

a protocol-oriented solution in the case of the two cables that are being brought to our attention? To set a precedent on multiple uses in the future, in other words, is there truly a problem here? Because if there is, I don't see it. I think that we are far closer to the solution of the problem.

I have taken note of the statement made by the two cable operators in the Pacific and Indian oceans. The notes that I have in relation to the LTC is that the contractor is aware that cables are actually running through that area. So it is not as if in the process of consultation the Commission was not aware of the fact that those cables were there. I think that what is left for the parties to do is for the contractor and the cable operator to sit together and for the two parent organizations to facilitate a dialogue between them. That is my commentary.

Panellist

Thank you, just a brief follow up with regard to the two per cent. We are glad there has not been a case of damage from exploration activities, but there hasn't been a long history between cables and mining and given changes in technology now we're going to see a lot more new systems that can actually be built from Sydney to Los Angeles without interruption, and routing indirectly without Fiji and Hawaii. There is a lot more interest in going through the Clarion Clipperton Fracture Zone and the issue is regulatory certainty. It is not the two per cent. Systems cannot get financed and built if there is not a clear regime for de-conflicting these routes and that is clearly what we lack, as evidenced by the LTC.

The Commission may have had some information but there has not been a willingness between the contractors and the submarine cable operators to continue to engage. That is a concern both with Honotua and with SAFE.

In terms of recommendations, which is the other point I wanted to follow up on, in many cases, there are underlying legal requirements in areas of jurisdiction that actually underlie those recommendations and require engagement between the industries. If we have some contractors taking the position that it is the job of the Authority and not their job to engage with us, then we don't have anybody to engage with. We do want to engage but we are not there yet.

Participant

As the participant who just intervened said, each slide deserves questions but it would take time to highlight each slide. I have to choose some and I learned a lot from what I heard this afternoon. The amount of information is very impressive. I should have known that before. Just to say what I heard, finally, is a kind of success story. The way you present that everything is fine. You find all the solutions and, by the way, one of the means of finding solutions is to avoid any contact with government. I was really surprised that you are successful at doing that. But when you spoke about marine spatial planning you have to discuss that with governments. Especially if you come to the European Union, where there is a directive on marine spatial planning and member States are mandated to establish national plans for marine spatial planning in the EEZ. It means that at some point in time all your systems of coordination will find its own limits in my opinion.

And this leads me to the recommendation that another panellist raised. I noticed the 13th and 15th recommendations were referred to and that coordination is going well with other entities, but all the activities are in areas under national jurisdiction. How can you have an agreement on activities built on economic resources without having any kind of contact with public authorities? Those are some questions I am sure we will

talk about tomorrow. It is not possible to have sat for more than one hour and a half listening to you carefully and not reacting.

My last question refers to the contacts with the Japanese region mentioned in your presentation. I did not hear that you had contacted the regional fisheries organization. When you refer to the BBNJ, one of the main elements of the BBNJ process is not to undermine the mandate of existing regional organizations; which include the regional fisheries organizations. So those players are in the middle of the field and your choice has been to contact the regional fishermen committee rather than official representation at the regional level.

In regards to the collection and the ownership of data, you say in our industry there is no central body for gathering and having responsibility for data. What could be the role of the International Telecommunication Union? Is there no role for this international organization, I don't know, I am just raising a question.

Finally, Mr. Chairman, about IHO. I am not making a comment on the merit or not of charting, but IHO, as far as I remember, is an intergovernmental organization so it means that when they launch a project, even at the stage of it being a pilot project, it needs money and requires a budget. I don't know about the commitment of member States to pay; what is the cost of a chart? Are member States ready to pay for that? Private and public civil servants, we know that States are reluctant to add money to new projects nowadays really. This is my final point. Thank you it was really exciting to hear this presentation.

Participant

Thank you and I also join others in agreeing that your presentation was very interesting and informative. Of course due to the length, the questions were

piling up. So I will just select two. The first relates to something you mentioned concerning a scenario of vessels being obliged to sacrifice their anchor. What is the practical consequence of that? Is there any compensation?

This brings me to the point related to the interactions with the fishing industry: when and how do you agree on some sort of "no fishing area" because of the presence of cables; is there compensation to the fishing industry? I understand that in Nova Scotia in Canada that is the case. There have been some arrangements to compensate the fishing industry for avoiding certain areas where there are cables.

My second question relates to the part of the presentation concerning the Honotua cable. My question also relates to the importance of early coordination. If I understood clearly, the cable was built in 2009 and put in operation in 2010. In your presentation you also acknowledged that, before laying the cable, you knew that it was the Authority's reserved area. As you know, in a reserved area, there is an expectation that sooner or later there would be some exploration or exploitation activity. So why didn't you contact the Authority back in 2009 before the cable was installed?

Panellist

Regarding vessels sacrificing anchors or gear, this is addressed in Article 115 of the Convention providing for States to adopt laws and regulations indemnifying such parties for the loss of their gear if undertaken to avoid injury, so this is actually the concept. It is embedded in the Convention itself and actually dates back to the 1884 Cable protection Convention. Regarding Honotua, this is something as you know we have discussed this in the past. I think there is a perception that the submarine cable operators are averse to making notifications either to the Authority

or to its contractors. We are not, but there is no procedure for doing so and there has been a perception on the part of the cable industry that the Authority in some cases does not want to play a regulatory role between the contractors and others in the marine environment. That remains to be sorted out with the Authority but we will be very interested to discuss a process for making notifications for planned cables. There isn't one and a developer of a new system, doesn't have any idea of how he might reach out to the Authority, who are, to the extent that there are actually contractors. I guess they can try to make company to company contact and I think that's an area we may want to discuss more.

Participant

When we are choosing a route for a submarine cable, we can't actually make a detour of 100 kilometres because we are crossing an area. So these are aspects that we have to look at. Also we've made attempts a few times, through the years, to contact the Authority or the contractors and these attempts were unsuccessful. We didn't get any response. As for OPT, we met the first time with China Minmetals Corporation during the workshop last year in Qingdao. So that was the first time that we met and the first time that we started discussions. We hope from this workshop to put tools in place to improve communications between the cable industry and the contractors.

As for the comment made by a participant before asking if there were any problems, I would say there hasn't been one yet. What we don't want is one problem to occur on a cable. China Minmetals Corporation has only been exploring the contract area for a year. So it still has 14 years to go. And we don't want a problem to occur on the cable during this time, we would like to address these issues before something like that happens.

Regarding the recommendations, I would say it works right now for the cable industries with other seabed users, because, we all agree to apply these recommendations, and these recommendations being sufficient will only work if all parties are willing to engage and agree, which clearly hasn't been the case so far.

Participant

I join the others in thanking you for most informative sessions. I learned a lot. I have two questions. The first one is very technical and I am looking for a practical definition, in the context of the CCZ of flat and uninteresting seabed.

All other things being equal, if you as a cable operator could choose between a nodule field and a nodule-free field, which would be mostly flat and uninteresting and therefore preferred for cable laying. In other words, would you prefer a seabed with or without nodules? This is not hypothetical because one of the great frustrations of being a nodule contractor is that the difference between nodule free and nodule rich areas is actually quite small. So I listened very carefully and with interest to your ability to maneuver cables a little bit. So is nodule free more flat and uninteresting than nodule covered? That's my first question and perhaps you might like to deal with it, because my next one is a really nerdy legal question.

Panellist

I don't think it makes any difference. I think the cables sit on nodules as happily as on a seabed without nodules. In terms of the light-weight cable, there is certainly no history of the cable suffering any adverse consequences of being on a nodule rich seabed versus a nodule-free seabed. I really don't think it makes much difference. But what we are interested in is keeping the distance as short as possible. So we don't want to be diverting left and right.

We prefer to go in a straight line when possible.

Participant

So from your point of view, it is all the same, but from the contractor's point of view, clearly it is more interesting to not have you in a nodule field, therefore if we can present you with a nice handy corridor, that would be of interest wouldn't it?

Panellist

I think that that would be classified as 'due regard', wouldn't it? If we could share information about where a preferred grid circle route might be. So yes, in the spirit of cooperation that is a possibility to look at.

The submarine cable industry engages with world militaries all the time. And they are not keen to share any information about what it is they have on the seabed or why. But they are often willing to provide information to say "actually you could just move a little over here" you don't have to do a major re-route or "not in this area" or something like that. And that sort of vague dance has worked reasonably well in many, many cases, where we don't need to know why; we just need to know about an alternative that does not require major changes or burdens that doesn't incur cost or latency.

Participant

That is actually really good to know because that's another set of experiences you can draw from when you have your discussion tomorrow on how to deal with this. But from a nodule contractor's point of view, it is very good to know. It is possible to propose something different. Now the nerdy legal question, bear with me all non-lawyers.

It is simply a point of clarification. A panellist raised in one bullet point on one of your

slides, I know it is always scary to put legal matters in bullet points on slides, and that's why it is a point of clarification, also in the context of Judge Treves' excellent paper this morning I don't think was addressed and this is why I require insight. The bullet point is as follows: "on the High Seas and in the Area, submarine cables are not subject to permitting or licensing requirements"

I believe that's an accurate reflection of the bullet point. Now here is my question for clarification. Is this a statement of the current situation? In other words, there are no licenses or permits currently applied to cables on the high seas or in the Area? Or is this a statement that actually interprets UNCLOS? In other words, it is not legally possible to impose licenses or permits on cable laying in the Area in the high seas, or is it both?

Panellist

Setting aside the issue of jurisdiction flag States have over vessels, which of course vessels on the high seas are still subject to flag State jurisdiction. Given the jurisdictional provisions of the Convention governing what coastal states can do in the different ocean areas moving outward from the coasts. A coastal state does not have jurisdiction to impose license or permits in areas beyond national jurisdiction. There is no international organization with the authority to do that either. It is both a statement of the current state of affairs and of the jurisdictional provisions of the Convention.

Participant

But not applicable to flag States?

Panellist

Correct. The vessel on the high seas is still subject to flag State jurisdiction for flag State matters.

Participant

Thank you for the very full presentation which was very informative and whetted my appetite to know more. I have a brief comment regarding the recommendations which we referred to. I am not getting into the discussion between recommendations and regulations, rather the accessibility to them. I note that they are available on request to people with a bona fide interest and I am pleased to say I was a person who was recognized as having a bona fide interest. However, I just wondered whether there is a case for being proactive in making them more readily accessible online, so that those who are working in the Area can go to the website and find them without that extra step in the process. I am sure we can overcome that small obstacle.

Panellist

With the recommendations and accessibility, they are not in the public section of the website and this has been a subject of disagreement among the members. I have my personal views that they should be public, because I think that they facilitate discussion and cooperation. But there is a concern about liability and also about a perception that ICPC could be deemed as a standard setting organization which can raise competition law issues in various jurisdictions. Honestly, again my personal view, whether it is public or not is not a competition issue. But we are happy to facilitate dissemination to those here who are interested to make sure you're aware of what we do in this area. Because we're aware that this is important because we view the people in this room as stakeholders, with this kind of engagement.

Participant

It was a very useful presentation and very informative. I have some questions and some comments. The role of the

LTC is framed by the Convention and honestly in this case of the cable in French Polynesia I don't know how we could have acted differently. The issue with the other contractor, you said it was the Republic of Korea with the contract area for polymetallic sulphides, I think there is a mistake there because the contract in 2002 was for India regarding nodules. The contract with the Republic of Korea concerning polymetallic sulphides was granted more than a decade later. So it must have been after that for sure, I can't remember the exact year, just a matter of precision.

A question that I have is that uncertainty regarding the location of cables is about 10 per cent of the depths of the water. The question is as follows: for a cable operator, would the corridor of 500 metres be sufficient to warrant that the cable is protected?

The other thing was the need for a regulatory regime and the need for certainty. I would say that this is quite difficult because, you are saying that the systems have been in the seabed for 25 years and in respect of the Area. If you go, for e.g., to the site of the US National Oceanic and Atmospheric Administration (NOAA), it says today that at a depth 80 per cent of the ocean is unmapped and unexplored and most of this 80 per cent is relative to the Area in fact. So marine scientific research is ongoing in this respect. So you cannot prevent the fact that tomorrow someone might find an important deposit of resources and apply for a contract in a place that already had cables on. So the certainty is very difficult to address in this case.

Of course having a submarine cable in an area licensed for exploration or exploitation makes things even more difficult and increases the need for more coordination. I just gave an example, though complex, that could arise. Imagine that there is a cable in a licensed area and

that the cable was damaged but naturally and you need to repair the cable. You will use the hook system because we are in the deep sea. I don't know how many hundreds of metres you require to put the hook in the seabed, but this tool will penetrate sediments, and for instance where very restricted regulations in regards to the marine environment, the LTC and even the Convention wants that the protection of the marine environment be as much in effect as possible.

So we have the recommendations for guidance of contractors for the assessment of possible environmental impacts arising from activities. For instance we have a list of activities requiring EIA and there are activities that need EIA as well as an environmental monitoring programme to assess the effect of these activities on the environment. One of the systems to create artificial disturbance on the seafloor might be the case of the hook. Maybe the question is, is there a cable operator willing to participate in the effort in the contract area of a contractor for the exploration of mineral resource to assist them to participate in the implementation of the monitoring programme on getting environmental data to assess the effect of these activities. Of course this is very complex but it is something that could happen. Your examples are about good coordination, because you seem to succeed and overcome all these issues, so I think it would also be easy from this perspective.

Panellist

Thank you, we appreciate your thoughtful comments. Just to follow up on them. Regarding regulatory certainty, I didn't mean to suggest that we had to have absolute certainty as to route or other proximate activity. It is more about a process which can be flexible to address potential development of new mineral resources that may be valuable

- exploration, exploitation and in other ocean areas because the Authority's jurisdiction is global throughout the Area.

Mineral resources are of interest right now, and one of the reasons why we do engage is because we believe that research is going to identify valuable resources that will be commercialized and which will take mining into other areas, where cables may already be present. So, again, we are focused on establishing procedural framework that allows the industries to engage with each other. That's the certainty that we are seeking, not specific substantive outcomes. We want flexibility as well. Every case has its own particulars and we want to be able to work through that.

On the issue of potential sediments in the water column, from grapnel drags with repairs, there's been a lot of research done mainly in areas of jurisdiction, though in shallower waters, a lot of these techniques are the same; and this is a lot of information that we have shared in the BBNJ context, noting that peer review of scientific research shows the scientifically benign and neutral nature of cables. So, I think that including us in a monitoring plan, the Authority does not have jurisdiction over cable operators under the Convention. I don't know how that will work, if the Authority wants to be responsible for some sort of mixed initiative. I do think that we are talking about different potential environmental impact. But to try and combine those things I am not sure how that will work.

Participant

Thank you very much, but it is not the Authority that will ask this. I mean the Authority will ask the contractor to comply with the Regulations. The contractors will then say to you, if you have a cable here, you must help us to do something. Because the contractor must comply

with these Regulations and since the beginning, the Authority has been aware of this, because the role of the Authority is well established. It would then be again the coordination between the contractor and a cable operator. But it could be an issue that the contractor could raise for the cable operator, stating to the cable operators "we must comply with this regulation and you are doing something that will interfere with the seabed and subsoil of my area of exploration", so we need to do this together.

Panellist

Maybe we can follow up offline about that, because I know that there are a few more questions.

Participant

I am going to add my thanks. It was a marathon, but it was really good. One observation, though, is that it seems like the main challenge going forward and putting behind existing cables, is how to cooperate at the early stages of your desktop survey. It seems to me getting the published geographic coordinates of all the contractors and drawing up a contact list is a good start. I realize you've had different responses for whatever reasons we haven't been on that contact list so that's good but maybe in future (side talk). My question builds on a point mentioned by one of the panellists which is not so much on the jurisdiction of the Authority. This is something for you to think about and not to respond to right now. My point is about the shared responsibility from the aggregate impact or the additive impact on the environment i.e. what it will be doing as a result of mining and that additive effect in the aggregate if you like. That may be something that's also important. I really think firstly, and for planning purposes finding a non-nodule route is a good step. But I think there is going to be that question of additive effect.

My other question is about the 25 year-design lifespan for a cable, which is typically much shorter because of the rate of technological change. My question is, would you really be looking for a 25-year agreement with a contractor or would you be saying six years is what we will do. In terms of access, maybe the contractor isn't going to mine in that particular area right away. Because the first couple of mine sites would be 30-year mine sites. There's room, I am trying to plant some things that you guys might want to think about, recognizing that everybody is going to compromise and find easy paths hopefully.

Panellist

I think 25 years is indeed the de-facto lifespan, no one can predict when a technical or technological obsolescence may occur. That would depend on the future pace of progress. I think 25 years would be our default. When we do come to decommissioning, the cable is benign environmentally so there's no reason why it has to come out of the water when it is decommissioned. So now when we decommission a cable we just turn it off. It gets left there.

Participant

I understand environmentally but that is not what we are talking about here today. If it is in the middle of somebody's abyssal plain, it is an economic blight not an environmental blight. And so is that part of the discussion? Just putting it out there for the practical discussion that has to take place.

Panellist

I am sure by engaging early there could be an agreement from the owners to handover the cable to the contractor or allow the contractor to remove it. By early engagement that is definitely possible.

There's also money to be made. People who recover the cables are keen to get their hands on them because of the recycling of the materials; the copper, the plastic and steel are worth money. So there is a business in recycling these cables.

Participant

This seems to be more your scope of business than ours.

Panellist

Thank you, those are the kinds of ideas we want to explore. With design life, there are systems that go beyond 25 years. There is a lot of unpredictability depending on the route and who the owners are as to exactly how long a cable will remain in service. But to your point about early coordination at the desktop study phase, absolutely.

Participant

I wanted to ask a very technical question which is whether the minimum separation distances would differ for each type of resource? Is that correct? And, for example, if it were agreed as part of a protocol,

wouldn't it make sense to actually specify, up front, what the minimum separation is? Would it be subject to the different types of resource that you are exploring? That's my first question.

My second one is, can ROVs damage cables? Not at all? OK, alright.

Panellist

With minimum separation distance, the idea of it is that in the absence of any direct engagement which can allow closer proximity. I think the submarine cable industry is often very cautious about trying to identify absolutes when there can be coordination. Because there's a desire to cooperate and compromise, because in one case, you might need something more and in another, we might need something more and that's the nature of the engagement that submarine cable industry is often dealing with repeat players over many, many years. That's the relationship between oil and gas industries, and so there is a lot of back and forth.

ROVs absolutely can damage cables.

V. SUMMARY OF DAY 1 DISCUSSIONS

Shawn Stanley, DOALOS

At the end of day 1 of the workshop we had the opportunity to:

- understand the legal underpinning for the discussions with the keynote presentation of Judge Treves; and
- cover many of the technical aspects highlighted by a number of the speakers from the LTC of the ISA, contractors with the Authority, submarine cable companies and the ICPC.

Under the technical framework we covered a range of issues addressing the:

- processing of applications for the approval of plans of work for exploration;
- information resources, data management and confidentiality from the point of view of the LTC and from the point of view of submarine cable operators;
- deep seabed activities in the Area including objectives and planning; and tools and methods for activities in the Area; and
- submarine cables including objectives and planning; materials, tools and methods for installation and repair.

VI. SPECIAL SESSION: DEVELOPING PRACTICAL OPTIONS AND POTENTIAL COORDINATION TOOLS

A. Developing practical options for the implementation of the 'due regard' and 'reasonable regard' obligations under UNCLOS

Dr. Galo Carrera Hurtado, former Chair and Vice-Chairperson of the CLCS

1. Elements associated with the implementation of 'due regard' obligations by seabed and subsoil users were identified and discussed as follows

Duty to cooperate: Seabed and subsoil users must balance their rights and obligations vis-à-vis the rest of the seabed and subsoil user community's rights and obligations.

Due diligence: Seabed and subsoil users must fulfill their obligations of 'due regard' to ensure that no damage may occur, or its activities may not interfere negatively, with respect to any other users.

Reciprocity: Seabed and subsoil users must fulfill their obligations of 'due regard' equally with respect to any other users, i.e., no hierarchy of any kind should be introduced among different users.

Time independence: A seabed and subsoil user must fulfill its obligations of 'due regard' with respect to any other previous, concurrent, and future users.

2. Seabed and subsoil users in Areas within and beyond national jurisdiction

There is a large group of seabed and subsoil users of maritime areas under and beyond national jurisdiction. Some of the major activities conducted by these users include:

- Exploration and exploitation of living and genetic resources: Seabed fisheries and bioprospecting;
- Marine scientific research: Conservation and management, environmental, geological/geophysical and biologic/genetic;
- Exploration and exploitation of non-living resources: Oil, gas and hydrates, and multiple types of mineral resources;
- Submarine cables: Fiber optic, power, and scientific cables and
- Pipelines: Oil condensate, rich/dry gas, and water pipelines.

3. Natural and anthropomorphic threats to submarine cables

There are two major threats to the physical security of submarine cables: natural and anthropomorphic. Some of the main natural threats posed to cables are due to a wide range of gravity driven sediment flows across the continental margin (shelf, slope and rise), other seabed and subsoil movements associated with seismic

and tectonic activities, and volcanic and magmatic events. Some of the anthropomorphic threats posed to cables are due to dropping anchors, marine construction and dredging, seabed mining, scientific or industrial drilling, and cyber-security and intentional physical attacks. While most of the cable breaks due to anthropomorphic causes recorded to date seem to be attributed to anchors (8 per cent), dragging fishing gear (67 per cent), and marine construction and dredging (2 per cent); reliable statistics are not available in the public domain at this time for other causes such as seabed mining or cyber-security attacks. However, there are instances of cable breaks due to sand mining in several coastal zones. Apparently, there has not been a single documented instance of a submarine cable break due to anthropomorphic causes in maritime areas beyond national jurisdiction to this date.

4. Breadth and scope of overlapping activities with respect to the seabed and subsoil within and beyond national jurisdiction

Whereas all submarine cables cross areas under the national jurisdiction of one or two States at their two landing sites, many submarine cables also often cross maritime areas under the national jurisdiction of other States throughout their full route. Some transoceanic submarine cables also cross vast segments of the Area. However, the current overlap between submarine cables and mining areas under contract by the Authority is limited to only two:

- (a) The Honotua Cable, which crosses a polymetallic nodules contract area in the Pacific Ocean; and
- (b) The SAFE Cable, which crosses a polymetallic sulphides contract area in the Indian Ocean.

One of the important elements to be highlighted in the search of a solution

to the overlap between cables and mining areas is the limited geographical dimension of the current problem without underestimating either its importance or its potential costs and logistical challenges.

5. Practical options for the implementation of the 'due regard' and 'reasonable regard'

Under the provisions of the Convention, laying of submarine cables, seabed mining, and other deep seabed activities are expressly authorized, and required, to exercise 'due regard' with respect to all others.

In the absence of a provision in the Convention on the resolution of conflicts between private cable owners and ISA mining contractors, the best strategy is to avoid disputes and reduction of risks with practical solutions by privileging dialogue and exchange of information in compliance with the 'due regard' obligation. Mediation and conciliation could be made available by agreement.

While not defined in the Convention, 'due regard' first requires notice, which can be actual or constructive, and then consultation and coordination between the cable owners and the mining contractors engaged in competing activities in the international seabed Area taking into consideration all other potential users.

Charting the submarine cables in exploration areas under contract and the Authority's publicly designated exploration areas at present in the international seabed Area would help the exchange of notice and the consultation, but it may not provide the necessary accuracy to avoid accidents. Additionally, more detailed information would be needed.

Cable owners and contractors with the Authority need to elaborate practical ways

to avoid mutual interferences in crossing areas, such as the development of more precise location, warning and alert, and avoidance techniques.

Cable owners and contractors with the Authority need to assess their mutual liabilities in the event of a fault to a submarine cable or damage to a contractor's infrastructure on the seabed to facilitate the resolution of disputes.

The ICPC and the Authority can play important roles in the exchange of information, to help their respective members advance common interests and address 'due regard's obligations, including agreements leading to avoidance arrangements, such as re-routing or re-allocation, and prevention measures, such as the designation of safety zones.

6. Legal, political and technical framework

A Memorandum of Understanding was signed by the Authority in 2009 and ICPC in 2010, which is designed to encourage consultation and promote mutual understanding of their respective activities. The ISA Technical Study No. 14 also highlights important recommendations for further follow up and action in this regard. Both documents, together with the exchanges made in this workshop, provide a useful framework for further progress towards the implementation of their 'due regard' obligations.

7. Final remarks

'Due regard' means a duty to: cooperate; exercise due diligence; act in reciprocity, and recognise the time independence of all obligations.

Mining contractors and cable operators should implement their 'due regard' obligations not only among themselves but also in consideration of several

other important seabed and subsoil users in maritime areas beyond national jurisdiction.

Natural and anthropomorphic threats to submarine cables occur mostly in maritime areas under national jurisdiction. There are only two known current instances of overlap between submarine cables and ISA contract areas at present. The effect of potential economic and logistic competitive disadvantages vis-à-vis contract areas to mining contractors should be considered.

Practical options for the implementation of the 'due regard' and reasonable regard in the Area can develop an important precedent for its implementation to many States in maritime areas under national jurisdiction.

There is a Memorandum of Understanding framework between the ICPC and the Authority to foster individual practical solutions on a case by case basis. Voluntary mediation and conciliation could be made available.

B. Mining contractors and submarine cable owners operating in the Area: considering practical options to give effect to the legal obligation under the Convention to give 'due'/'reasonable regard' for other activities

Pr. Warwick Gullett, University of Wollongong, Australia

A clear principle contained in the Convention, and which has also emerged from international jurisprudence, is that persons engaged in lawful activities at sea in areas beyond national jurisdiction are expected to consider the rights and interests of others undertaking lawful



marine activities in the same area. The expectation extends to consideration of activities which, if undertaken without restraint, could lead to the prospect of the attempted conduct of fundamentally incompatible activities at the same location and time. The obligation of carrying out marine activities with 'reasonable regard' for other activities in areas beyond national jurisdiction or with 'due regard' for high seas freedoms applies to States which have responsibility for the conduct of the activities, and it can be argued that a substantively identical principle has crystallized in customary international law.

While the existence of the 'due' or 'reasonable regard' obligation is clear, its content is not. Neither term has been defined in the LOSC and little can be gained by attempting to articulate a semantic distinction between "reasonable" and 'due regard', and thus 'due regard' can be used to describe the obligation. International jurisprudence concerning the obligation is sparse, with perhaps the most helpful statement coming from the International Court of Justice which expressed the view in 1974 that the

'reasonable regard' obligation in the 1958 High Seas Convention means that activities in tension must be reconciled and co-exist.

A number of further observations about the 'due regard' obligation can be made:

- a. It implies certain conduct is expected but it does not articulate any specific details about the type of conduct expected;
- b. Its basic elements would be ascertaining and sharing information about activities (notice), and discussing options to resolve conflicts (consultation); and
- c. It is applicable to all situations of potential conflict between marine activities in areas beyond national jurisdiction and the high seas, yet the myriad of circumstances of potential conflict, and water column and seabed environments, would mean that the detailed content of what is reasonable is likely to differ from case to case.

Both seabed mining contractors and submarine cable operators have established rights under international law to conduct their activities in the Area, with

both sectors also obliged to give effect to the 'due regard' obligation.

The obligations contained in the Convention, supported by piecemeal developments in the customary UNCLOS, lead to the view that neither sector's rights can be considered absolute. Rather, each sector would be expected to reasonably accommodate the other.

The principal circumstances to avoid are contact between mining and cable equipment, and the conduct of one activity interfering with the conduct of the other.

Where potential for conflict between activities exists, the optimum result would be for both sectors to reach an agreement about how both activities will be accommodated in space and time. Each sector would be expected to take full account of the rights and potential impact on the other.

An approach to implementing the 'due regard' obligation would be to provide notice of intended activities, and then, if further discussion is needed, for representatives of both sectors to consult in good faith with the aim of reaching an agreement on practical measures that would enable reasonable accommodation of both activities. The "reasonableness" would depend, in part, on the relative inconvenience to each sector of proposed courses of action. Where it is clear that there is the prospect for fundamentally incompatible overlap of activities (for example, where mining activities are proposed in an area that is optimal for the laying of a cable), it is unlikely to achieve reasonableness if one activity is to totally trump the other. The determination of what is reasonable accommodation in any circumstance is not a precise science leading to an obvious objectively-determined outcome. Rather, the conduct of good faith negotiations between both sectors is the best way to identify practical

options to give effect to the 'due regard' obligation.

Notice would be expected to be timely and effective. This raises the following questions: At what time should notice be given? Is it preferable to utilize actual notice rather than rely on constructive notice? (Noting that some information about both activities is publicly available). Should exchange of information be facilitated by a broader entity or representative body?

Consultation should be meaningful, evincing a genuine desire to reach an agreement. In practical terms, where potential for conflict is apparent, both sectors should initially identify and propose a modified approach to their activities with the intention of reaching agreement about how both activities can co-exist, and ensuring that respective interests are balanced. Each sector can consider what reasonable alternative approaches are available. 'Due regard' implies that a degree of voluntary restraint may be needed.

Two principal scenarios of potential conflict in the Area between seabed mining contractors and cable operators can be envisaged in which a similar approach to implementing the 'due regard' obligation can be considered.

(a) Scenario 1: Application for a plan of work for activities in the Area in a location where submarine cables exist: What is the best way to inform cable owners of proposed mining exploration/exploitation activities? What is the best way to ensure mining operators are aware of the presence of cables in areas in which they apply for a plan of work? What is a reasonable approach to enable mining activities while avoiding risk to cables?

(b) Scenario 2: Proposed submarine cable in an area for which a plan of work to conduct activities in the Area

has been approved: What is the best way to inform mining contractors of the proposed cable? What is the best way to inform cable operators of the location and type of exploration/mining activities? What is a reasonable approach to avoid risk to cables while enabling mining activities?

In conclusion, the task of giving practical effect to the 'due regard' obligation requires extensive, good faith discussions. A degree of "give and take" would be expected in the spirit of achieving reasonable accommodation of both activities. Building goodwill and trust across the sectors is of critical importance to smooth resolution of different interests. One possible approach to build cross-sector communications is to share environmental knowledge of seabed environments (provided it does not concern commercially sensitive information, or appropriate safeguards are in place).

Question and answer session

Participant

What should be done if a proposed cable in the area where prospecting is occurring or otherwise, what should be done if prospecting activity is to be done in a location where submarine cables exist? Where this prospecting is being done by the Enterprise.

Participant

I wish to comment on the point raised regarding the fact that the issues that we see in the shallow waters are relatively insignificant in deep water. I don't believe they are. I think that we have to understand that the industry has spent many years mitigating the shallow water threats. They do things like placing branching units with splitters just off the shelf so that if one branch breaks, the traffic can be switched to the other one. We have ships located in

those shallow water environments ready to respond within 24 hours and, typically, to complete repairs within a couple of days. We have all sorts of ways to manage those situations, whereas in the case of the deep sea repairs, it can take weeks to get a ship to that repair site. The network is not set up with the same level of redundancy as we have in shallow waters, so when we do have an issue in the deep sea, albeit very rare, it is very difficult to manage. It is a big problem for us.

We need to have the certainty that these deep sea environments are going to remain as safe as they are today. The prospect of their becoming unreliable brings up a whole lot of question marks for the industry regarding our cost base. If we suddenly have to start locating repair ships on islands in the middle of the Indian and Pacific oceans in order to be on standby to counter these potential new threats that is highly significant, considering that the day rental for a ship could be over USD 100,000. This is an issue.

I think that the second point is one of foreclosure of rates. I think that the experience of the SAFE and Honotua cables has not been particularly positive thus far. This makes us particularly nervous about this issue of foreclosure.

In terms of any commentary as to how, going forward, things at a practical level can be different with the benefits of hindsight, do you have any comments you would like to share?

Panellist

Thank you for your comments and questions. Yes, I agree that there could be a range of slightly different scenarios and I tried to condense it to the two main scenarios that I think are most relevant for our purposes today. I also note that Judge Treves outlined four scenarios and I take note of the other situation that you

mentioned. In response I could say, it could be different scenarios but the approach would essentially be the same. I think point about prospecting is very interesting. We discussed this yesterday. This is preliminary to applications for plans of work and so the requirements, in a sense, may be a little bit different.

But this makes us mindful of the point of the 'due regard' obligation, whether for prospecting, it can still apply outside of the Convention. Otherwise, I think the way things would evolve would be within a customary international law principle that would match up in substantial terms to any treaty obligation. It would mean the conduct, from the perspective of prospectors, if they operate in an area, they should be given consideration in terms of the location of a cable. I imagine that cable operators will have no idea someone could be prospecting in an area prior to a plan of work. So it is interesting that the prospecting activities, though on a lower scale, could be an issue of interference with a cable and I think the governing principle for that would still be the 'due regard' obligation, whether or not in the Convention, but more of customary international law. Maybe that would then be incumbent upon prospectors to reach out to cable operators, when they start their prospecting activity.

Participant

If you feel that there is no good place to have a cable broken I would agree, be it in the shallow or deep environment. The deep water poses its own challenges. I am not going to take the point of view of a miner but I will play the role so that you understand the dynamics here. If you think that it is difficult for a cable operator to go to the middle of the Atlantic, Pacific or Indian Ocean and repair a cable, just imagine

the cost and effort of mining at a depth of 7,000 metres in the middle of the Atlantic. They would argue that the logistics of it is quite demanding as well and the fact that a cable is located in the area poses logistical problems, creates great concern.

I am going to be honest with all of you. I think that the greatest risk is not a rupture of a cable and it is not the liability of a mining operator, it is the postponement of investment in both activities. If all of a sudden I know that investing in seabed mining is going to create conflict with cable operators and reduce my profit margin or create problems for me, I would not invest in that area. At the same time, if I had a person that was willing to invest in cable operations and I begin to see the liability of the rupture of a cable, I would think twice before I made that investment as well.

It is in our best interest to find a solution to this problem that minimizes the expenses, that minimizes the logistics and that can allow you to sleep well every night, knowing that only two per cent of cables have been affected in the seabed area and you are not going to have to travel that far that often.

I think the point is that there will be cables in the future that will cross the CCZ and that we need to understand that we will not always have the option to reroute a cable. The SAFE cable can easily be rerouted for example or we can find a relocation of the mining area for that purpose. That is a relatively simple problem. The more interesting problem is, when we pressed, yesterday, he said there are other cables coming for redundancy. That is why we have an obligation to find these practical avenues for the establishment of safety zones. The two operators are going to have to work with one another.

VII. SYNTHESIS OF ROUND TABLE DISCUSSIONS: KIT OF PRACTICAL OPTIONS AND TOOLS

Roundtable discussions addressed the following topic: developing a kit of potential and practical tools to coordinate activities in the Area and submarine cables under the UNCLOS framework; addressing the "prior cable" and "prior mining" scenarios.

Discussions were aimed at answering two questions:

1. What successful lessons could be learned from other maritime sectors?
2. Develop a list of options for toolkit.

A. Summaries of round table discussions

The summaries of discussions by the seven round tables are reported below. They are not listed in the order they were presented and no view is attributable to any individual as the discussions took place under the Chatham House Rules.

Report of Table A

A package of proposals for existing cables in mining areas was investigated without agreement:

- a. A potential separation distance on either side of cable, e.g. 500 m, on either side raised in an analogous fashion to safety zones in the Convention was explored but only as part of a package with other elements;

- b. Issues relating to overlap in terms of costs and logistical problems to mining contractors and cable operators for fulfilling any 'due regard' obligations were raised and recognized as an issue;
- c. The question of whether there should be compensation to a mining contractor due to additional logistical difficulties, delays in production issues and reduction in resource available and, if so, who should pay compensation and what the form of that compensation would be - whether monetary, or in form of additional contract area, or otherwise was discussed without any agreement on the need or form for compensation.
- d. The question of whether there should be compensation to a cable operator in the event of cable breaks and, if so, who should pay compensation and what the form of that compensation would be was discussed without any agreement on the need or form for compensation.

Direct industry-to-industry communication regarding the locations of existing cables and mining operation zones was important.

In the event of damage for existing cables and need for repair, close coordination was needed to reduce further risks to either contractor or operator.

Issues of communications among mining contractors and cable operators needed to be addressed.

Communication among mining contractors and cable operators was needed in order to re-route new cables through least interesting resource areas, or potentially through preservation reference zones and impact references zones.

Information on contract mining areas needed to be readily available to cable operators for new cable route planning.

Cable industry is interested in a test bed project to take a segment of unused cable and install it in a particular area to investigate what interactions can take place and how interactions can take place in field conditions.

Report of Table B

The discussions allowed participants to explore each other's perspectives and come up with some practical ideas for cooperation going forward. In addition to our response to the first question on what lessons could be learned from others, we talked along similar lines to the other tables. The only issue we covered outside of those already mentioned was that of national jurisdiction. We acknowledged that there was a practice in place for national jurisdiction guided by a strong regulatory environment.

The table felt that the 'due regard' obligation, while applied in the national regulation of the environment, it was most pertinent in this area. And, also, that it provided a level of confidence and comfort that if we all followed the concept of 'due regard' we could all work together to ensure that the objectives of both parties could be met.

In addressing options for the toolkit, we talked about early engagement being necessary and agreed that the onus was on the party taking the action or making the change on the seabed to reach out -

whether it was the contractor or the cable operator.

We discussed the importance of having information readily available for both parties to make their commercial decisions. Operating in good faith, each party should declare operations being implemented in the environment to each other, as early as possible to facilitate decision-making and compliance with the due diligence obligation by both parties.

In terms of practical elements, we worked on the basis of sharing information as a two-way street. We felt that contractors should be informed about the location of cables and looked at the Authority and ICPC developing a checklist that could be used by contractors on current websites to find the information available on the most up to date placement of cables. This should be considered a part of the due diligence of contractors as they sought to undertake their activities on the seabed.

On the flip side, we looked at block disclosure information. We thought that there might be a role for the Authority to make available to cable operators more specific coordinate details either on a need-to-know basis or on a website basis. We believed that these two practical elements could be easily implemented. The other practical outcome explored was for cable operators to have their cables charted to provide greater clarity on their location to guide future business decisions.

We also looked at escalation and resolution. No conclusion was reached regarding where do we go if we don't agree, where one party still feels aggrieved with the decisions being made by another. We believed this required longer term dialogue.

We were very focused on practical elements, and on what could be done today to work

better together. We also discussed safety zones and how they might help or hinder operations on the seabed. Perspectives would differ depending on which side of the fence you were sitting, either as a cable operator or as a contractor.

Report of Table C

1. What successful lessons could be learned from other maritime sectors?

International Ocean Drilling

- ICPC was notified by the International Ocean Discovery Programme (IODP) about planned drilling projects, then the Secretariat emailed members with co-ordinates. If the proposed activity was proximate to a cable, the cable owner (not involving ICPC) directly suggested a safe distance and the proposed programme of activity revised accordingly.

Fishing industry

- Nova Scotia used industry-to-industry arrangements, leaving governments out. Fisheries did not go to an area in return for compensation.
- In Oregon, cable companies paid an annual membership fee to the Oregon Fisheries and Cable Committee (OFCC). Before a cable could be licensed and charted there was a requirement for the cable company to consult and reach an agreement with the fishing industry. Unreasonable requirements were addressed, reimbursement defined and liabilities capped. This arrangement has worked in good faith but under state jurisdiction that could not be replicated on the high seas without jurisdictional creep.
- In Japan long line fishing of up to 100 kilometres was possible. Fishermen were paid to recover gear and in return for not fishing an area after a cable was laid were compensated

for loss of revenue. And off Japan there were many cables in an area where there were up to 10 exploration cruises a year. It was often easier to deal with the cable industry than the very hard negotiations with fisheries who insisted on historic rights to fish. Fisheries unions can be very powerful, but nevertheless fishing was excluded in the area from April to August each year.

Marine Scientific Research

- There were some parallels but conflict was largely theoretical given the freedom to undertake benign activities. Groups worked through consultation rather than regulation.

Military activities

- Although practices were not well known, States could effectively encourage industries to avoid areas according to military need.
- 2. Develop a list of options for the toolkit
 - New activity had to share geospatial activity with the industry to be impacted (in the context of confidentiality and security). Onus was on that new activity through a protocol to be elaborated with defined process, for sharing co-ordinates (and vice versa).
 - ‘Due regard’ was continuous not one off. There were different points at which cables were laid, maintained or inspected.
 - There was the need for an early and continuous engagement and for a dialogue between two sectors long before a decision was needed. Emphasis was placed on the beginning of a relationship at the outset which would evolve over time.
 - There was a need for a focal point in both organizations – who they should contact and the means of contact (e.g., email).

- Actual notice was preferable to constructive notice.
 - Specific details should be provided, with opportunities for recourse for more information.
 - The Authority can share knowledge and research areas and submit coordinates for cables within that area.
 - There was a need for formally documenting the process under the procedures of the Authority.
 - The issue of regulatory procedures/protocols (certainty) vs. recommendations (non-binding) was discussed. The form of procedure was less of an issue than actually addressing the substantive issue.
 - Reciprocal and formally defined protocol for disseminating route was mentioned.
 - A safety zone did not need to be a matter of big corridors. Minimum distance for activities around cables should be determined by accurate charting and precision of technology. The more accurate and precise the less need for a safe distance.
 - There were no blanket rules – safe modalities and technologies evolved over time. "Hop over" technologies might emerge.
 - There was the question as to whether cables should be laid in natural boundaries between licencing blocks/areas of no mining kept as a preservation zone?
 - There was need for direct industry-to-industry contacts.
- Thailand including Chevron and PPT-EP.**
- It is a reciprocal relationship where the cable operator submitted a plan of work, procedures and the crossing agreement to the oil company.
 - The oil company then informed the cable company of the location of drilling or other activities.
 - If the drilling is too close to the cables, then the cable operators would inform the oil companies who were asked to re-route or relocate.

2. Suggestions for toolkit

2.1. There is a need for an official process.

- Participants were of the view that Standard Operating Procedures (SOPs) are required.
- Someone should be identified in the Authority and the focal point so that new cable plans could then be sent to the Authority who could raise a red flag for any issues.
- Information sharing should be done as early as possible – given the different timeframes.
- Participants suggested that the Secretariat of the Authority coordinates this process rather than a high-level decision-making process.
- Participants expressed concerns that if there were a case where the contractor had to abandon an area that had a cable project planned (or other activity) then the Authority should compensate them in some way, which they noted may not be easy.
- If a cable-line cut through in the middle of the area the participants suggested that the Authority should compensate the contractors.

2.2. Develop mining tools that can detect cables

- As the deep-sea mining industry is developing, participants suggested

that the cable industry could engage with mining contractors to help develop mining tools that can detect cables.

- Participants noted that from an engineering perspective we already have solutions and as equipment is still being developed it can be done in a way to ensure the cables were not damaged.
- Cameras could be installed to detect if you are approaching a cable rather than trying to define rules and recommendations like safety corridors.

2.3 Confidentiality and Transparency

Participants suggested there should be open lines of communication between the cable operators and contractors. However cable companies do not need to be informed why they cannot lay the cable there (as is done in the military).

2.4 Best practice

Participants suggested that mining and contractors should widen scope of desktop studies undertaken by mining contractors to include a study about potential cables.

Report of Table E

The communication that took place at this table was most useful with the opportunity to exchange views that probably had not been exchanged before. There was also the opportunity to see areas under national jurisdiction where pipelines and cables overlapped and where different jurisdictions interacted. One participant explained the complex types of arrangements made among different jurisdictions in order to ensure the security of the cables while another participant was able to convey the concern the mining operators had in terms of having a cable on top of their operations.

Discussion points not addressed by other tables include: the opportunity to reroute a new cable in an area where a contractor had been awarded an exploration contract; and working cooperatively to route cables through areas of lower grade mineral resources. That would require cooperation, communication and exchanges between the two parties and there were discussions around the table as to the effectiveness of that path.

We considered whether safety zones could be an avenue to solve this issue and we began to create a hypothesis of a safety zone. If a safety zone were to be created, without being specific about the distance around that safety zone, but using the measurements mentioned in the Convention on safety zones around artificial islands and scientific research sites and other facilities, which is 500 meters on either side. Questions were raised as to: How would that affect mining operations? What would be the consequence? Would it address safety of the cable operators? It appeared from the discussion that 500 meters on either side, was a reasonable distance that can be used. With today's technology, it would be sufficient to address the concerns of safety around them.

The issue raised by minerals contractors was the need for compensation. Two types of losses would result from the designation of a safety zone of 500 meters on either side of a cable. One was the direct loss of resources; in other words, all the mineral resources that would have been potentially extracted in that one kilometre corridor across the contract area. The other was the operational cost of maintaining and moving equipment carefully from one area to another at those depths. It was concluded that there would be a need for compensation. There was no conclusion, however, regarding the terms and form and by whom that compensation should be paid.

The disadvantages in terms of competitiveness of the operation of one contract area that had a cable, as opposed to another area that did not have a cable was also discussed. It was also mentioned that this was one of the issues that should be deliberated by the LTC and the Council of the International Seabed Authority in any future consideration of areas in terms of ensuring a level playing field for contractors in the future.

There was also a proposal to have a test-bed scenario of laying a cable at a certain depth and have a joint effort between an individual contractor and an individual miner to test what would happen to equipment working over that cable. While it was acknowledged that different equipment was used by different operators to mine a variety of minerals, the experience from the cable industry demonstrated that the results of experiments of this nature would be useful in making decisions relating to better methodologies and techniques to protect them from these types of operations.

Other issues were discussed. One was the lack of communication between the parties. Mediation and conciliation was mentioned but there was no conclusion as to whether that would be an effective or non-effective means of communication. Emphasis was placed on the two industries working directly together, but in the absence of an agreement, the only option was to urge the Authority to try to motivate one or the other to engage in discussions. Even on that point there was no conclusion as to whether that was truly the role of the Authority.

We also considered that the request of the ICPC to have the GIS information on the precise coordinates of the relevant areas. There was also the offer to provide similar GIS data, on a need to know basis, of cables in the industry.

Report of Table F

The discussion began with a general discussion of the respective interests of the relevant stakeholders. From the perspective of the LTC, the Commission is bound by the Convention, its Annexes and the Regulations of the Authority. However, there may be more flexible ways in which the interests of the cable operator could be taken into account, outside of the Regulations. For example, the requirement for contractors to submit annual reports may be an avenue in which the LTC could raise the issue of cables.

From the contractor's perspective, they wanted to be notified early on in the process and minimize disruption to mining operations, particularly considering the significant amount of investment mining requires and the fact that having to avoid a certain area because a cable is laid there may result in the contractor incurring extensive costs. At the same time, the contractor would prefer no changes to the Regulations and the solution to be with the cable industry directly. With regard to cable operators, they would like to engage in consultations as early as possible, at the very front end of planning a route. During the desktop study, they would identify stakeholders that needed to be engaged with and find a way in which a cable route could run through, for example, an oil and gas installation or an intensively fished area. The cable industry would like to engage with the mining industry at the plan of work stage to ensure that cables already laid are taken into account. It was also observed by the cable industry that they had difficulty ascertaining where the exploration concessions were located, although the ICPC had now obtained the co-ordinates of existing exploration contracts on an informal basis.

The next phase of the discussion examined several scenarios and possible best

practices. The first scenario dealt with the prior mining contract / prospective cable scenario. This dealt with the situation where a cable operator was planning a cable route that would traverse the Area and cross an existing exploration or exploitation contract. In this scenario, it was important that the location of the mining contract was accessible to the cable industry so that they would know whether there was a potential overlap. It was then suggested that the cable operator should inform the ICPC, which would act as a clearing house, and both should inform the contractor that a cable route was planned and the location of the route subject to a non-disclosure agreement. This would begin a process of consultation between the cable operator and the contractor on where the cable can be routed and areas to avoid, and this consultation, hopefully, would eventually lead to an accommodation of uses. In the event that consultations failed to produce a solution whereby a new cable could be routed through an existing contract area, there was debate on what would be the next steps, and whether some form of dispute settlement mechanism should be agreed upon. It was suggested by the mining industry that in this event, the cable operator should avoid the area under contract altogether as this would provide commercial certainty for the contractor. In response to this suggestion, the cable industry felt that this had the potential to increase the costs of cable laying and was contrary to the 'due regard' obligation which implied that neither competing use should trump the other. The cable industry also noted that in their experience with other industries, there were never usually any provisions that dealt with what happened if consultations failed, as in almost every case, some form of accommodation was found. It was generally agreed that it is difficult to agree on any hard and fast rules or provisions dealing with what would happen in the event consultations failed to produce a solution and it might be better to address this on a case-by-case basis.

Another issue that was raised in the course of this discussion is the role of the Authority in this process. It was suggested by the cable industry that when the cable operator / ICPC first notified the contractor about a potential new route, it should also inform the Authority, as the primary regulator. The mining industry expressed some concern about whether the Authority should be informed at this stage and preferred to keep initial consultations confined to the respective cable operator and contractor.

The second scenario that was discussed was a prospective cable / prospective mining contract scenario - in other words, a cable traversing the Area which was not yet subject to a contract. In this regard, once again, it was emphasized that provision of information by the cable industry was important. It was suggested that a process be established whereby the cable operator would inform the ICPC as a clearing house through which information would be made available to the Authority subject to confidentiality requirements. The information should not be disseminated to everyone or be made publicly available but both the prospective sponsoring State and contractor should have access to this information when proposing a location for a mining contract. It was noted that the considerations for the cable operator were very different (1) during a desktop study and (2) where a survey had already been done and considerable investment had been made. Thus, while it was potentially possible for a cable route to be adjusted during the desktop study, it would result in considerable costs for the cable route to be changed after a cable route survey had been done. Accordingly, it was important for engagement between the cable industry and the contractor to be done as early as possible to facilitate an accommodation of uses.

The third scenario, namely a prior cable / prospective mining contract scenario was briefly discussed, and it was suggested

that a similar process for the provision of information on an existing cable route be established i.e. whereby the cable operator would inform the ICPC as a clearing house and information be made available to the Authority subject to confidentiality requirements. The prospective sponsoring State and contractor should have access to this information when proposing a location for a mining contract. However, one critical consideration that needed to be taken into account was the fact that once a cable had been laid, it was extremely difficult or even impossible to reroute it. Accordingly, engagement between the cable operator and the contractor also had to happen as early as possible.

It was clear from the discussion that there were several issues which would require further dialogue between the two industries, including *inter alia*, mechanisms for the exchange of data, the procedure for notification and consultations, whether options for dispute settlement if consultations failed to achieve an accommodation of uses were necessary, and the involvement and role of the Authority in such processes. In the meantime, there was general consensus that both industries should engage in confidence-building measures such as mutual invitations to industry conferences and workshops where each industry could learn more about the other and develop relationships and build trust.

Report of Table G

A. Introduction

Pursuant to the provisions under the Convention, it provided freedom of use of the high seas and the Area subject to its provisions. This includes seabed mining and underwater cable laying. The Convention also provides for a general principle that users must give 'due regard' to other users and vice versa to ensure the

peaceful use of the Area. All users, in this case, contractors and cable owners and operators, are therefore able to conduct their activities at the same time and in the same space.

As the laying of cables and deep sea mining had implications for each other's activities, for example, the laying of cables through the Area designated by the Authority as reserved, or deep sea mining in a designated area by the Authority which already had cables laid, the Authority and the ICPC signed a Memorandum of Understanding in 2011 to increase their mutual cooperation with a view to exchange relevant information and facilitate direct liaison with the owners of international cable systems. Moreover, the Memorandum of Understanding sought to promote joint cooperative schemes to conduct seminars and studies.

It was against this background that, in 2015, the ICPC and the Authority held the first workshop with a view to advancing common interests and to address the Convention's 'due regard' obligation.

The second workshop this week therefore continued the dialogue started in 2015 by furthering advance mutual understanding between both mining and cable sectors by exchanging information and elaborating practical measures to avoid interference between legitimate activities and thus implementing the 'due regard' obligation under the Convention. The task therefore of the workshop was to identify the elements of a practical toolkit to facilitate effective coordination between legitimate uses of the high seas and activities in the Area. The workshop benefitted from the participation of actors from the submarine cable industry, the contractors with the Authority, representatives from sponsoring States, judges of international courts and tribunals, members of the LTC of the Authority, former members of the Commission on the

Limits of the Continental Shelf, renowned academics and other stakeholders, all gathered under one roof.

The toolkit, thus, was to be an initial reference for all actors to ensure the implementation of the general principle of 'due regard'. The purpose of the roundtable discussion was to provide input to the workshop as to what this toolkit would look like.

B. Approach of the Roundtable Discussions

In developing the idea of the toolkit, it was evident that there was a lack of communication, which fostered the development of distrust and suspicion, particularly between the two users of the Area. Communication therefore became the crux of the toolkit. Thus participants proposed four easy preliminary steps to follow, give the limitation of time for discussion, the duration of the workshop, and the need to provide some deliverable at the end of the meeting. The four-step approach associated with the commonalities that were reported from the other round tables and sought to simplify the application of the information through the steps.

C. A Four-Step Approach

It was demonstrated what, practically, would be the scenario showing the current state of play between contractors and cable owners and operators. The exchanges between industry representatives reflected the sentiments held by both sides which, typically, has resulted in the inability to find common ground.

Issues such as a lack of a focal point to facilitate communications, issues of confidentiality, and a lack of transparency in technical information and data, resulted in challenges to the ability to enable appropriate due consideration to each other on the use of the Area.

It was considered that the Authority had an important role to play in this regard to facilitate the communications between the interested users in this scenario. This facilitation could be by way of being a conduit for communications through STEP 1 or STEPS 1 - 4, as the users may choose, including interfacing with the ICPC.

What was discovered was all these pre-meditated notions had been born from the fact that there had been no communication between the two sides. The lack of communication had led each side to assume the other may be working to disadvantage the counterpart. The mere fact that the workshop and roundtable discussion provided space for a dialogue between the contractors and the cable owner and operator, it not only allowed for a brief moment for both sides to raise issues of concern, but also facilitated understanding of what the challenges were and possible solutions and benefits of cooperation and mutual understanding.

One such benefit was discovering how the use of technology and equipment from both sides may be used for "win-win" situations including possibly sharing of economic benefits by way of cost cutting leading to possible better profit margins.

This table therefore concluded as an overarching approach to the implementation of the 'due regard' principle is that it is premised upon communication. Communication could, therefore, lead to a better appreciation of both sides on issues of concern and by overcoming such concern lead to mutually beneficial outcomes in a win-win scenario. Even if no clear economic benefit was to be forthcoming, mutual understanding and acceptance was viewed as a better option to mutual suspicion and possible hostility. Thus, communication must be made as early as possible, must be made without pre-conditions, be genuine, with trust, good faith, and with a willingness to compromise.

The 4-step approach proposed may be explained as follows:

As a foundation to the 4-step approach

- THAT 'due regard' was owed by both contractors and cable owners and operators to each other pursuant to the Convention;
- THAT both industries had the right to use the Area for their activities pursuant to the Convention; and
- THAT both industries were obliged under the Convention to engage with one another for the purpose of affording 'due regard' to each other and to maintain the peaceful use of the Area as envisioned by the Convention.

The four-step approach would then answer the basic question:

- How do we reconcile both activities in order to exist in the Area at the same time and in the same space?

The answer was communication. Communication would facilitate the implementation of the principle of 'due regard' by way of the four-step approach:

STEP 1 - Initial communication be made by the interested party as early as possible through the Authority. STEP 1 would facilitate introductory communication requesting a meeting to discuss the subject of either laying cables or mining in a designated contracted area (or area to be contracted) which contains a cable. No substantive information was required to be exchanged at this time apart from an answer from the other party to set up a time for further follow-up communications.

STEP 2 - Follow-up communications through the Authority at this time would enable the exchange of information and a means of building trust and the genuine intention to engage in good faith, and a willingness to listen. This was

considered the most important step and should complete at least 99 per cent of the work. STEP 2 could involve a number of communications within a time period to ensure all matters were resolved before moving to STEP 3. This step is undertaken by working level experts. Issues related to confidentiality, technical data, equipment, location, and so forth were addressed here. The input from all other roundtables on their views as to how the 'due regard' principle is implemented, would also be part of STEP 2.

STEP 3 - Arriving at this step, presupposes expert workers on both sides including facilitation of the Authority with interface with the ICPC as the case may be, had completed their necessary engagements at STEP 2 and had advised their superiors or CEOs, that they recommended going forward to finality in whatever the expert workers had agreed upon, and they were satisfied for both sides to enjoy a win-win scenario. The purpose of STEP 3 is for the industry CEOs to meet and formalize whatever agreement their expert workers had agreed upon, complete the formal communication made at STEP 1, and give final endorsement and approval.

STEP 4 - Given that the Convention provided equal access to all users of the high seas and the Area regarding rights of use, with none being superior to any other, this step involved the publication of the agreement reached by the contractor and the cable owner and operator, for purposes of transparency and information of all users. The Authority interfacing with the ICPC may assist the users in this regard.

There was a STEP 5 which was considered as a possibility but this table recommended against it. This was the possibility of a costly legal action taken against each other. The purpose of the 4-step approach was to find balance in the interests of all users which have rights under the Convention, in an amicable and facilitative manner. Legal

action would only harden users against compromise.

Conclusion

The need for communication was the foundation of the implementation of the 'due regard' principle enshrined in the Convention. 'Due regard' is afforded to all users of the high seas and the Area. The 4-step approach was proposed as a tool to be used to facilitate communications, what should be considered in the communication, and what the communications should result in. It is a preliminary proposal from which input from the other roundtables may feed into, particularly STEP 2.

B. Synthesis of options

Judge Kriangsak Kittichaisaree

The workshop has added the value to the previous workshop. In my opinion, we should not wait till the next workshop or report to implement our discussions because at this moment there are on-going negotiations in the Sixth Committee of the UN General Assembly on the omnibus General Assembly resolution on the topic of oceans and UNCLOS. There are many issues that could be incorporated in the resolution. The cable industry does not have legal standing to take part in these negotiations. Consequently, Japan, Singapore, Tonga and other nations active in the Sixth Committee should try to add input from our Bangkok meeting to alert the Committee and the General Assembly on our interests and concerns.

What seems to have emerged from this workshop is that there is still an adherence to the freedom of the high seas in the laying of submarine cables while paying 'due regard' to deep seabed mining and the role of the Authority in this regard. It was noted that neither industry was

asserting the so-called 'acquired right', but adhering to the freedom of the high seas and the principle of 'due regard' in order to exercise this right. There should be: firstly early dialogue between the two industries; secondly confidence building measures on an on-going basis; and thirdly, cooperation between the two industries on the basis of reciprocity. The idea of having a standing working group between the two industries was welcome as it would facilitate ongoing dialogue and negate the need to wait for workshops.

The experience of cable industries regarding oil and gas industries was mentioned in discussions; however, there is one new phenomenon to be taken into account in terms of the possibility of States exploiting hydrocarbon resources of the continental margin beyond 200 miles. For example, Bangladesh had been awarded, by ITLOS, continental shelf beyond 200 miles. Even if oil and gas industry had not yet started, such States needed to be aware of the concerns of the cable industry.

In respect of safety zones, it was important to work very closely with negotiations on the BBNJ (marine biodiversity beyond limits of national jurisdiction) because they were working on issues like the identification of the so-called 'marine protected areas'. The exclusivity of marine protected areas could mean that no potentially harmful activities would be allowed in these areas. The precise determination of what constituted environmentally unfriendly activities could be very broad and might be still subject to negotiation. This is something that had to be factored into the role of the cable industry in this new agreement and the role of deep seabed mining.

One of the major concerns of the discussions at this workshop was the issue of confidentiality. I understand that in respect of the Authority there is a mining code as well as draft contract agreements

on confidentiality. How do you apply or adapt them to accommodate the concerns of these sectors? This is something to work on especially in relation to critical infrastructures. This has to be worked out in detail.

There was also the issue of compensation which had to be looked at further, perhaps at the working group level.



ANNEX I. LIST OF PARTICIPANTS

Amanda Chong	Attorney-General's Chambers, Singapore
Tara Davenport	Centre for International Law (CIL), National University of Singapore (NUS)
Dan Zhang	China Institute for Marine Affairs (CIMS)
Hao Zheng	China Minmetals Corporation
Yutang Guan	China Ocean Mineral Resources Research and Development Association (COMRA)
Hitoshi Shimoda	Deep Ocean Resources Development Co. (DORD)
Tomoko Tauchi	Deep Ocean Resources Development Co. (DORD)
Daniel Rincon	Global Sea Mineral Resources NV (GSR)
Nobuyuki Okamoto	Japan Oil, Gas and Metals National Corporation (JOGMEC)
Phuchphop Mongkolnavin	Ministry of Foreign Affairs of the Kingdom of Thailand
Tevita Suka Mangisi	Kingdom of Tonga
Sean Fowler	Ocean Infinity
Wang Rong	Ocean Mineral Singapore Pte Ltd (OMS)
Gavin Watson	United Kingdom
Jennifer Warren	UK Seabed Resources Limited (UKSRL)
Galo Carrera Hurtado	Independent Expert
Shawn Stanley	United Nations, Office for Legal Affairs, Division for Ocean Affairs and the Law of the Sea
Philomène Verlaan	University of Hawaii
Warwick Gullett	University of Wollongong
Carrie-Anne Henderson	Australia - Department of Home Affairs
Dhisadee Chamlongrasdr	Ministry of Foreign Affairs of the Kingdom of Thailand
Krittiya Chittanonda	Ministry of Foreign Affairs of the Kingdom of Thailand
Wichien Intasen	Department of Mineral Resources, Ministry of Natural Resources and Environment of the Kingdom of Thailand
Kwanjai Yuangdetkla	Department of Mineral Resources, Ministry of Natural Resources and Environment of the Kingdom of Thailand
Jaripaporn Chailertwanitkul	Department of Mineral Resources, Ministry of Natural Resources and Environment of the Kingdom of Thailand
Prapat Lekkumnerd	CAT Telecom Public Company Limited
Boromsak Vittaycprapakorn	Department of Mineral Fuels, Kingdom of Thailand
Kriangsak Kittichaisaree	ITLOS Judge
Tullio Treves	ITLOS former judge
Graham Evans	International Cable Protection Committee
Kent Bressie	International Cable Protection Committee
Benjamin Sims	International Cable Protection Committee
Gary Waterworth	International Cable Protection Committee
Andy Palmer-Felgate	International Cable Protection Committee
Helelany Ly	International Cable Protection Committee
Greg Pintarelli	International Cable Protection Committee
René d'Avezac de Moran	International Cable Protection Committee
Soundiramourty P.	International Cable Protection Committee
Elie Jarmache	LTC of the International Seabed Authority
Pedro Madureira	LTC of the International Seabed Authority
Alfonso Ascencio-Herrera	International Seabed Authority
Gwenaëlle Le Gurun	International Seabed Authority
Katie Elles	International Seabed Authority

ANNEX II. BACKGROUND NOTE

Second Workshop on Deep Seabed Mining and Submarine Cables

Developing practical options for the implementation of the 'due regard' and 'reasonable regard' obligations under UNCLOS

Bangkok, Thailand, 29-30 October 2018
UN-ESCAP, Headquarters¹, Meeting Room "A"

Background and Introduction

On 10-11 March 2015, the International Cable Protection Committee ("ICPC") and the International Seabed Authority ("the Authority") held a workshop on "Submarine Cables and Deep Seabed Mining - Advancing Common Interest and Addressing UNCLOS 'Due regard' Obligations" in New York City.

This was the first workshop held to address the combined issues of submarine cables on the high seas and deep seabed exploration in the Area.² It brought together representatives from the submarine cable industry, a contractor with the Authority, as well as delegates from the ICPC, the Authority, United Nations and several governments in a non-representative capacity. The workshop aimed at finding practical solutions for the successful coexistence of both uses in areas beyond national jurisdiction and practical ways to avoid mutual interferences. The Workshop fostered mutual understanding between the ICPC and the submarine cable industry, and the Authority and its contractors. It emphasized the need to continue the cooperation. Several actions were recommended by the workshop, including that the ICPC and the Authority should organize a follow-up workshop. The workshop proceedings and recommendations are documented in the Authority's Technical Study No. 14.³

As a result of further informal consultations during 2017 and 2018 between the Secretariat of the Authority and the ICPC under the existing 2010 Memorandum of Understanding,⁴ both entities agreed to hold a second workshop to further explore practical options to guide cable operators and contractors in the implementation of the 'due regard' and 'reasonable regard' obligations under UNCLOS ('the Convention'), as well as to assist in the task of identifying, in this context, the appropriate role of the Authority, contractors and sponsoring States, as well as the role of the of submarine cable owners.

¹ <https://www.unescap.org>

² In accordance with Article 1(1) of the United Nations Convention on the Law of the Sea ('the Convention'), the "Area" is defined as the seabed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction.

³ Available at: www.isa.org.jm/sites/default/files/files/documents/techstudy14_web_27july.pdf

⁴ www.isa.org.jm/files/documents/EN/Regs/MOU-ICPC.pdf

The possibility of a second workshop was referred to in the Secretary-General of the International Seabed Authority's report under Article 166, paragraph 4, of the Convention for the twenty-fourth session in July 2018.⁵ Moreover, the dates and location of the workshop were included in the decision on the Reports of the Chair of the LTC that was taken by the Council of the Authority in July 2018.⁶

Objectives of the second workshop

The second workshop would aim to advance the dialogue, cooperation and exchange of information between contractors and cable operators with a view to enhancing a better understanding of their respective activities to promote that both sets of activities coexist successfully in the Area and to elaborate practical ways to avoid potential mutual interferences between current and future activities in the Area and the laying and the repair of submarine cables.

Throughout the workshop, it was intended to foster the exchange between cable operators and mining contractors of as much factual and practical information as possible in order to enhance understanding and maximize the options for realizing reasonable and 'due regard' at a practical level. To do so, it was proposed that the workshop focused on delivering as the main outcome and as a way forward:

Identify the elements of a kit of potential and practical tools to coordinate activities in the Area and submarine cables under the UNCLOS framework: addressing the "prior cable" and "prior mining" scenarios.

It was proposed that the workshop structure be arranged along the following main sections (see Annex A):

- (a) Opening session: welcome statements and key note presentation;
- (b) Technical framework;
- (c) Developing practical options and potential coordination tools; and
- (d) Next steps and closing remarks.

More specifically, the workshop would be organized in the following manner:

- (i) At the opening session, apart from the welcome statements, it would include a keynote presentation introducing a background paper on the applicable legal framework, including practical options as the way forward (20 minutes);
- (ii) Plenary high-level expert presentations during the first day of the workshop (10 minutes each);
- (iii) A special session to be devoted to explore issues related to the expected main outcome of the workshop;

⁵ ISBA/24/A/2, paragraph 64.

⁶ ISBA/24/C/22, paragraph 13.

- (iv) Based on the high-level presentations on the first day and the special session on the first part of the second day, interactive round table discussions would address a specific set of questions to develop suggestions connected with the main outcome of the workshop. Each round table would have a lead speaker who would report to the plenary; and
- (v) A closing session to introduce the next steps.

Primarily, the workshop was intended to bring together: contractors of the Authority, cable operators, a number of members of the LTC, sponsoring States and interested Member States, in addition to invited experts in UNCLOS, science and ocean policy. Other stakeholders may participate, subject to space availability.

Contractors and cable operators were encouraged to include among their representatives, technical and engineer experts to assist in developing feasible practical options. It was suggested that contractors and cable operators nominate a maximum of two representatives.

In view of the meeting room space constraints, participation would be limited to 70 participants. The seating arrangements for the workshop would be in 10 round tables with 6-7 participants each.

Each round table would combine participants from different sectors to promote participatory and interactive discussions and to ensure that a broad range of views and approaches are communicated.

Discussions were held under the Chatham House Rule.

The workshop would not aim at achieving a consensus. The report would aim at reflecting points of general agreement, points for further discussion and, as a way forward, suggested actions under the identified main outcome. For organizational reasons, each speaker was kindly requested to send their abstract, PowerPoint presentation and the text of their presentation to Ms. Kayon Wray by 19 October 2018.

For registration, participants were kindly invited to fill out and return the attached form (see Annex B) along with a picture to Ms. Kayon Wray (email: kwray@isa.org.jm) no later than 15 October 2018. When participants arrive at the UN-ESCAP, they would have to pass the x-ray machine and approach the registration counter on ground floor to get their badge. Please be advised that only participants with a meeting badge are allowed to enter meeting room A.

For the convenience of participants, during the coffee and lunch breaks, the Conference Centre offered a full complement of reasonably priced snacks, food and beverages.

ANNEX III. PROGRAMME OF THE WORKSHOP

Developing practical options for the implementation of the 'due regard' and 'reasonable regard' obligations under UNCLOS

Monday, 29 October 2018

Time	Session	Presentation	Speakers	Moderator
8:00-9:00	Registration at the main entrance of the UNCC			
9:00-9:20	A. Opening Session	1. Welcome statements	Alfonso Ascencio-Herrera, Legal Counsel of the International Seabed Authority Deputy to the Secretary-General	Judge Kriangsak Kittichaisaree, ITLOS
9:20-9:50		2. Advancing the practical implementation of the 'due regard'/'reasonable regard' obligations: the applicable legal framework and practical options for its implementation	Judge Tullio Treves, ITLOS former judge	
9:50-10:20	B. Technical Framework	1. Processing applications for the approval of plans of work for exploration	Elie Jarmache, Member of the LTC of the International Seabed Authority	Shawn Stanley, DOALOS
10:20-10:40	Break			
10:40-12:05	B. Technical Framework	2. Information resources, data management and confidentiality (a) Information resources, data management and confidentiality in the context of exploration for minerals in the Area	Pedro Madureira, Member of the LTC of the International Seabed Authority	Galo Carrera, former Chair and Vice-Chairperson of the CLCS
12:05-13:30	Lunch break (group photograph at 13:10)			

Time	Session	Presentation	Speakers	Moderator
8:00-9:00	Registration at the main entrance of the UNCC			
13:30-14:15	B. Technical Framework	3. Deep seabed activities in the Area - <i>objectives and planning</i> (ISA contractors)	COMRA, UKSRL, GSR	Alfonso Ascencio-Herrera, ISA
14:15-15:15		3. Deep seabed activities in the Area - <i>tools and methods for activities in the Area</i> (ISA contractors)	COMRA, UKSRL, GSR	
15:15-15:30	Break			
15:30-16:15	B. Technical Framework	4. Submarine cables - objectives and planning	Graham Evans (EGS/ICPC), René d'Avezac de Moran (Fugro), Benjamin Sims (Vodafone)	Kent Bressie, ICPC
16:15-17:15		4. Submarine cables - materials, tools and methods for installation and repair	Hellany Ly (OPT), Greg Pintarelli (TE SubCom), Gary Waterworth (Alcatel Submarine Networks)	Kent Bressie, ICPC
17:15-17:40		2. Information resources, data management and confidentiality (b) Information in the public domain and/or by submarine cable operators regarding existing and planned submarine cable routes in the Area	Benjamin Sims (Vodafone)	
17:40-18:00		(c) ICPC-IHO pilot project for charting of submarine cables at all ocean depths in the Clarion-Clipperton Fracture Zone	Graham Evans (EGS/ICPC)	Galo Carrera, former Chair and Vice-Chairperson of the CLCS
18:00-18:20	Summary of Day 1 by Shawn Stanley			
18:30-19:30	Reception at the venue			

Tuesday, 30 October 2018

Time	Session	Presentation	Speakers	Moderator
9:00-9:30	C. Special Session	Developing Practical Options and Potential Coordination Tools	Warwick Gullett, University of Wollongong, Australia/ Galo Carrera, former Chair and Vice-Chairperson of the CLCS	Judge Tullio Treves, former Judge, ITLOS
		Topic	Questions	
9:30-11:00	D. Round Table Discussions	Developing a kit of potential and practical tools to coordinate activities in the Area and submarine cables under UNCLOS framework: addressing the "prior cable" and "prior mining" scenarios.	1. What successful lessons could be learned from other maritime sectors? 2. Develop a list of options for the toolkit.	
11:00-11:15	Break			
11:15-12:30	E. Reporting by each round table facilitator to plenary; discussions and synthesis of options.			
12:30-13:00	F. Closing session	Next steps and closing remarks	Alfonso Ascencio-Herrera, ISA, Kent Bressie, ICPC and Judge Tullio Treves, former Judge ITLOS	Judge Kriangsak Kittichaisaree, ITLOS
End of Workshop				

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