
Centre for International
Governance Innovation



Liability Issues for Deep Seabed Mining Series | Paper No. 1 – July 2018

Legal Liability for Environmental Harm: Synthesis and Overview

Legal Working Group on Liability

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CIGI Masthead

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About the Project

The Liability Issues for Deep Seabed Mining project was developed by the Centre for International Governance Innovation (CIGI), the Commonwealth Secretariat and the Secretariat of the International Seabed Authority (ISA) to assist in clarifying legal issues of responsibility and liability underpinning the development of exploitation regulations for the deep seabed. CIGI, in collaboration with the ISA Secretariat and the Commonwealth Secretariat, in 2017, invited leading legal experts to form the Legal Working Group on Liability for Environmental Harm from Activities in the Area (LWG) to discuss liability related to environmental damage, with the goal of providing the Legal and Technical Commission, as well as members of the ISA with an in-depth examination of potential legal issues and avenues.

“Legal Liability for Environmental Harm: Synthesis and Overview” is a summary of the various papers that have been written for the Liability Issues for Deep Seabed Mining project. This paper may be cited as: Neil Craik et al, “Legal Liability for Environmental Harm: Synthesis and Overview” CIGI, Liability Issues for Deep Seabed Mining Series Paper No 1, 13 July 2018. Papers in the series cover the following topics: the current legal architecture for liability/responsibility under the United Nations Convention on the Law of the Sea; the scope of activities covered under a liability regime; the responsible parties; the potential claimants; the range of recoverable damages; and the appropriateness of using insurance and compensation funds to ensure adequate resources for compensation. CIGI Senior Fellow Neil Craik was the principal author of the synthesis report and coordinated the development of the paper series.

About the LWG

The LWG was co-convened by CIGI, the Commonwealth Secretariat and the Secretariat of the ISA, under the joint direction of Neil Craik (CIGI), Hannah Lily (Commonwealth Secretariat) and Alfonso Ascencio-Herrera (ISA Secretariat). Other members of the LWG were invited based on their expertise in areas related to international law of state responsibility and liability, international environmental law and law of the sea. While working under the auspices of the ISA, the LWG is an independent group of legal experts.

The members of the LWG are:

- Alfonso Ascencio-Herrera, Deputy Secretary-General, ISA
- Christopher Brown, Legal Officer, ISA
- Eden Charles, Independent Consultant on International Law, and Former Ambassador, Trinidad and Tobago*
- Neil Craik, Senior Fellow, CIGI, and Professor of Law, University of Waterloo*
- Tara Davenport, Research Fellow, Centre for International Law, National University of Singapore*
- Elie Jarmache, Special Adviser on the Law of the Sea, Member, Legal and Technical Commission, ISA
- Hannah Lily, Legal Adviser, Commonwealth Secretariat*
- Ruth Mackenzie, Reader in International Law, University of Westminster*
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- Dire Tladi, Professor, University of Pretoria, and Member, International Law Commission
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*Contributing authors to the paper series.

Acronyms and Abbreviations

ABNJ	areas beyond national jurisdiction
CHM	common heritage of mankind
CIGI	Centre for International Governance Innovation
ICJ	International Court of Justice
ILC	International Law Commission
ISA	International Seabed Authority
ITLOS	International Tribunal for the Law of the Sea
LOSC	United Nations Convention on the Law of the Sea
LTC	Legal and Technical Commission
LWG	Legal Working Group on Liability for Environmental Harm from Activities in the Area
NGOs	non-governmental organizations
RPEN	Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area
SDC	Seabed Disputes Chamber

Executive Summary

A critical component of the development of international rules governing the exploitation of deep seabed minerals is ensuring that, in the event of harm to the environment, persons and property, there are appropriate rules and procedures ensuring that adequate and prompt compensation be paid to address those losses. The unique features of the deep seabed mining regime, including the complicated mix of state and non-state entities involved in the activities, and the status of the seabed area beyond national jurisdiction (“the Area”) as — to use the language of the United Nations Convention on the Law of the Sea (LOS) — the “common heritage of mankind”¹ (CHM), raise new and complicated legal issues. This paper provides an overview and synthesis of the work of the Legal Working Group on Liability for Environmental Harm from Activities in the Area (LWG), an experts’ group convened to identify and analyze legal issues that will need to be addressed in preparation of sector-specific liability rules for deep seabed mining. The LWG’s work, which will be published in a series of separate CIGI papers in 2018, examines a range of substantive and procedural issues that will need to be addressed as part of the development of liability rules for deep seabed mining.

In addition to providing a summary of the LWG’s papers, this paper provides an overview of the basic architecture set out in the LOSC, respecting liability for harm arising from activities in the Area and the broader objectives of liability regimes in the context of environmentally risky activities. The paper identifies key issues and policy determinations that will need to be addressed as the liability rules are formulated:

- In relation to the overall approach taken, it will be necessary to consider whether the principal rules respecting liability will be formulated within domestic legal systems, with the possibility of international minimum standards and requirements, or whether the approach will be more centrally driven by the International

Seabed Authority (ISA), adopting common rules and mechanisms for compensation.

- Consideration should be given to the suitability of alternative approaches to addressing environmental damage that rely on administrative mechanisms, such as emergency orders or other remediation orders, and the use of trust funds.
- Liability rules will address harm from “activities in the Area,” but legal certainty will require careful delineation of the boundaries of any liability scheme.
- Given the complex constellation of actors involved in deep seabed mining, liability rules will need to establish rules on attribution, including consideration of:
 - whether channelling of liability to particular entities should be adopted and, if so, whether liability would be channelled exclusively to contractors;
 - whether channelling would provide for a full exclusion from liability from some or all other actors, or whether recourse by the contractors against other responsible parties would be permitted;
 - whether channelling would need to be accompanied by other features, such as strict liability and mandatory insurance; and
 - treatment of subcontractors and other potentially responsible actors, including how allocation of liability may be privately arranged between those parties.
- Specific attention will need to be paid to the role of parent companies and states that directly, or through their nationals, have effective control over contractors. This will require a clarification of the meaning of “effective control” as it appears in the LOSC.
- Whether the standard of liability should require fault, recognizing that different approaches to liability may be imposed on sponsoring states, the ISA and contractors, respectively, and may be accompanied by other rules and procedures, such as exceptions to liability, liability caps, and the use of insurance and compensation schemes.
- The scope of compensable damages should be clearly identified and should reflect the

¹ *United Nations Convention on the Law of the Sea*, 10 December 1982, 1833 UNTS 397 (entered into force 16 November 1994) [LOS], art 136 (The use of the term “mankind” in article 136 is widely acknowledged to be an anachronism. Herein the term is retained where direct reference is made to article 136, but otherwise updated.)

particular features of the marine environment of the Area, and the status of the Area and its resources as the CHM. Key issues in determining the scope of compensable damages include:

- whether, in order to require compensation, damages must exceed a threshold, such as “serious” or “significant” harm; and
 - whether pure environmental losses will be recoverable and, if this is desirable, whether there are adequate tools for quantifying this form of damages.
- Clarity on which parties have standing to claim for damages to the marine environment, including damages to the Area and its resources, is needed.
- Assessment of the adequacy of existing dispute settlement mechanisms and the potential for a multiplicity of proceedings or lack of an available forum for claims.
- Investigation of mechanisms to ensure that funds are available to provide adequate compensation, including the commercial availability and scope of insurance, and how any compensation funds may be funded and administered.

Introduction

The ISA is currently developing regulations for the exploitation of marine minerals in the Area, with a tentative timeline for completion by 2020. A crucial aspect of the regulatory framework for deep seabed mining will be rules and procedures governing liability for damage arising from activities in the Area. While the basic legal architecture of a liability system has been addressed in several provisions (article 139[2] and Annex III, article 22) of the LOSC,² and elaborated upon by the Seabed Disputes Chamber (SDC) of the International Tribunal for the Law of the Sea (ITLOS) in its advisory opinion on *Responsibilities and Obligations of States Sponsoring Persons and Entities with*

Respect to Activities in the Area,³ there remain both substantive and procedural gaps that will need to be addressed prior to the commencement of the mineral exploitation phase. The salience of a more detailed consideration of liability questions by the ISA was noted by the SDC: “Considering that the potential for damage, particularly to the marine environment, may increase during the exploitation phase, it is expected that member States of the ISA will further deal with the issue of liability in future regulations on exploitation.”⁴

Recognizing the centrality of liability rules for a responsible and effective exploitation regime, the Legal and Technical Commission (LTC) of the ISA identified “responsibility and liability” as a priority deliverable in the development of the Mining Code for the exploitation stage of deep seabed mining (ISBA/22/C/17, Annex II). One of the next steps identified by the LTC to move this item forward was the establishment of a legal working group to support and inform the development of rules by the ISA.

In the spring and summer of 2017, the Centre for International Governance Innovation (CIGI), in collaboration with the Secretariat of the ISA and the Commonwealth Secretariat, invited leading legal experts to participate in a working group, with the objective of developing and delivering a work plan for a set of papers that would be preliminary in nature and directed toward providing the ISA Secretariat and the LTC with a more in-depth understanding of the potential legal avenues for establishing a sector-specific liability regime for deep seabed mining, focusing on liability related to environmental damage. In assembling the Legal Working Group on Liability for Environmental Harm from Activities in the Area (LWG), the co-conveners sought experts with a wide variety of experience in international law, law of the sea, international environmental law, maritime practices and seabed mining activities. The LWG included two members from the LTC, as well as experts from a variety of regions. All LWG members participated in their personal capacity, and not in any representative capacity.

3 SDC of the ITLOS, *Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area* (2011), Advisory Opinion, No 17 [SDC Advisory Opinion 2011], online: <www.itlos.org/fileadmin/itlos/documents/cases/case_no_17/adv_op_010211.pdf>.

4 *Ibid* at para 168.

2 *Ibid*.

The LWG held its first meeting on September 28 and 29 in London, United Kingdom, for the purpose of developing a work plan to carry out the research.⁵ A second meeting, also in London, was held on February 8 and 9, for the purpose of reviewing draft papers.

The approach of the LWG in reviewing papers was not to seek a consensus document, but rather to provide an opportunity for expert review and comment, while leaving the content of the individual contributions in the hands of the authors. The authorship of the individual papers in this series is indicated, and the views expressed should not be taken as being the views or position of the LWG members or the convening institutions. Prior to their final publication, the papers in the series were peer reviewed by an independent legal expert.

The issues addressed in the papers are intended to provide a foundational understanding of key questions surrounding the further development of liability rules. Given the potential scope of work related to liability, the LWG identified several key issues, but recognizes that there will likely be further relevant questions that will also need to be addressed. The topics chosen were determined by the LWG at its first meeting, based on the LWG's assessment of the areas where further rules were likely necessary, considering gaps identified by the SDC, the trajectory of existing state practices in the area of international liability, and views expressed by the LTC (chiefly in relation to incorporating an analysis of "effective control" into the work plan).

Given the length and breadth of the papers contained in the series, this overview document was prepared in order to synthesize the findings contained within the papers and to identify the key elements and policy choices that need to be addressed by the ISA and stakeholder groups as liability rules are developed.

Purpose of Liability Rules

Liability schemes can have several different purposes, which may affect the interpretation or development of the rules and procedures. The liability rules under the LOSC, including the specific provisions in Part XI, appear to have two principal aims. The wording of article 235, which is found in Part XII of the LOSC, captures these goals:

Article 235 – Responsibility and Liability

- 1) States are responsible for the fulfilment of their international obligations concerning the protection and preservation of the marine environment. They shall be liable in accordance with international law.
- 2) States shall ensure that recourse is available in accordance with their legal systems for prompt and adequate compensation or other relief in respect of damage caused by pollution of the marine environment by natural or juridical persons under their jurisdiction.
- 3) With the objective of assuring prompt and adequate compensation in respect of all damage caused by pollution of the marine environment, States shall cooperate in the implementation of existing international law and the further development of international law relating to responsibility and liability for the assessment of and compensation for damage and the settlement of related disputes, as well as, where appropriate, development of criteria and procedures for payment of adequate compensation, such as compulsory insurance or compensation funds.

The first objective, as indicated in paragraph 2, is to ensure prompt and adequate compensation to those persons or entities that have suffered damage because of pollution to the marine environment. This objective is the foundational purpose of any liability regime. Prompt and adequate compensation is consistent with the general requirements for restitution under the

⁵ Freedom-Kai Phillips, "Legal Working Group on Liability for Environmental Harm from Activities in the Area" CIGI, Conference Report, September 2017, online: <www.cigionline.org/sites/default/files/documents/2018_London%20UKweb.pdf>.

law of state responsibility,⁶ and is also reflected in Principle 13 of the Rio Declaration.⁷ Promptness requires that any procedures that are developed provide for efficient and accessible recourse for those persons or entities that have suffered damage. The International Law Commission (ILC) notes that given the often-protracted nature of compensation claims in domestic courts, consideration ought to be given to specialized procedures at national or international levels.⁸ The goal of adequacy speaks to the breadth of compensation and to the quantum of damages awarded. Article 22 of Annex III, which speaks to the responsibility and liability of contractors and the ISA in connection with deep seabed mining activities, explicitly addresses this point, noting, “Liability in every case shall be for the actual amount of damage.”⁹

The second objective is to prevent and remediate harm to the environment. This objective is very clearly identified in paragraph 1, which links protection of the marine environment with liability. Liability rules may provide a measure of deterrence by providing clear incentives for actors to meet their obligations. The harm prevention and remediation roles are affirmed in relation to deep seabed mining in article 145 of the LOSC, which directs the ISA to protect the marine environment and provides the general framework of environmental protection in the Area as follows:

Necessary measures shall be taken in accordance with this Convention with respect to activities in the Area to ensure effective protection for the marine environment from harmful effects which may arise from such activities. To this end the Authority [ISA] shall adopt appropriate rules, regulations and procedures for *inter alia*:

- a. the prevention, reduction and control of pollution and other hazards to the

marine environment, including the coastline, and of interference with the ecological balance of the marine environment, particular attention being paid to the need for protection from harmful effects of such activities as drilling, dredging, excavation, disposal of waste, construction and operation or maintenance of installations, pipelines and other devices related to such activities;

- b. the protection and conservation of the natural resources of the Area and the prevention of damage to the flora and fauna of the marine environment.

The connection between liability and environmental goals is made explicitly by the SDC in its advisory opinion, where it links the availability (and quantification) of damage to the marine environment to restoration.¹⁰ In other words, the liability rules ought to operate so as to prevent harm, but where harm occurs, the compensation should be adequate to support reasonable restoration efforts. Identifying environmental protection as a key objective is consistent with the purposes of liability identified by the ILC in its work on allocation of environmental loss,¹¹ as well as the approach taken in numerous international civil liability regimes. The ILC identifies ancillary purposes that may be served by these two objectives, including the peaceful resolution of disputes, contributing to economic activities, and providing predictable, equitable, expeditious and cost-effective compensation.¹²

6 ILC, *Draft articles on Responsibility of States for Internationally Wrongful Acts, with commentaries*, 53rd Sess, UN Doc A/56/10 (2001), art 36 [ILC, *Draft Articles*].

7 *Rio Declaration on Environment and Development*, UNGA, UN Doc A/CONF.151/26 (Vol I); 31 ILM 874 (1992), Principle 13 [*Rio Declaration*].

8 ILC, *Draft principles on the allocation of loss in the case of transboundary harm arising out of hazardous activities, with commentaries*, 58th Sess, UN Doc A/61/10 (2006), Principle 3, Principle 4 at para 7 [ILC, *Draft Principles on Allocation of Loss*], online: <http://legal.un.org/ilc/texts/instruments/english/commentaries/9_11_2011.pdf>.

9 LOSC, *supra* note 1, art 22, Annex III.

10 SDC Advisory Opinion 2011, *supra* note 3 at para 197.

11 ILC, *Draft Principles on Allocation of Loss*, *supra* note 8, Principle 3.

12 *Ibid*, Principle 3, Commentary 10.

Basic Architecture of the Deep Seabed Mining Liability Scheme under the LOSC

The distinction between responsibility, on the one hand, and liability, on the other, was addressed by the SDC, which equated the term responsibility with obligation, and is taken to refer to primary obligations on the relevant actors to act in conformity with requirements of the LOSC. Liability refers to the legal requirements arising from the consequences of a breach of such a primary obligation.¹³ This report adopts the same usage of the terms responsibility and liability.

Liability for activities in the Area is addressed in the LOSC under article 139, and articles 4 and 22 of Annex III. The liability provisions were also the subject of analysis under the SDC advisory opinion, which focused on the obligations of sponsoring states, but also comments on the respective responsibilities of contractors and the ISA.

Article 139 states:

- 1) States Parties shall have the responsibility to ensure that activities in the Area, whether carried out by States Parties, or state enterprises or natural or juridical persons which possess the nationality of States Parties or are effectively controlled by them or their nationals, shall be carried out in conformity with this Part. The same responsibility applies to international organizations for activities in the Area carried out by such organizations.
- 2) Without prejudice to the rules of international law and Annex III, article 22, damage caused by the failure of a State Party or international organization to carry out its responsibilities under this Part shall entail liability; States Parties or international organizations acting together shall bear joint and several

liability. A State Party shall not however be liable for damage caused by any failure to comply with this Part by a person whom it has sponsored under article 153, paragraph 2(b), if the State Party has taken all necessary and appropriate measures to secure effective compliance under article 153, paragraph 4, and Annex III, article 4, paragraph 4.

- 3) States Parties that are members of international organizations shall take appropriate measures to ensure the implementation of this article with respect to such organizations.

This basic structure is restated in article 4(4) of Annex III:

4. The sponsoring State or States shall, pursuant to article 139, have the responsibility to ensure, within their legal systems, that a contractor so sponsored shall carry out activities in the Area in conformity with the terms of its contract and its obligations under this Convention. A sponsoring State shall not, however, be liable for damage caused by any failure of a contractor sponsored by it to comply with its obligations if that State Party has adopted laws and regulations and taken administrative measures which are, within the framework of its legal system, reasonably appropriate for securing compliance by persons under its jurisdiction.

These provisions identify the primary obligation of sponsoring states as a “responsibility to ensure” that mining activities undertaken by a contractor sponsored by that state are carried out in accordance with the contract and other obligations under the LOSC. In order to provide guidance on the matter, the SDC considered the meaning of the expression “responsibility to ensure” contained in article 139, and article 4(4) of Annex III, noting in paragraphs 107–110 of the advisory opinion:

107. The central issue in relation to Question 1 [respecting the legal responsibilities of sponsoring states] concerns the meaning of the expression “responsibility to

¹³ SDC Advisory Opinion 2011, *supra* note 3 at paras 65–67.

ensure” in article 139, paragraph 1, and Annex III, article 4, paragraph 4, of the Convention.

108. “Responsibility to ensure” points to an obligation of the sponsoring State under international law. It establishes a mechanism through which the rules of the Convention concerning activities in the Area, although being treaty law and thus binding only on the subjects of international law that have accepted them, become effective for sponsored contractors which find their legal basis in domestic law. This mechanism consists in the creation of obligations which States Parties must fulfill by exercising their power over entities of their nationality and under their control.
109. As will be seen in greater detail in the reply to Question 2, a violation of this obligation entails “liability”. However, 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.
110. 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. To utilize the terminology current in international law, this obligation may be characterized as an obligation “of conduct” and not “of result”, and as an obligation of “due diligence”.

The SDC, in its advisory opinion, sets out in considerable detail the substantive requirements of due diligence, as well as further primary obligations that the sponsoring state is required to fulfill, which include not only enacting appropriate legislative frameworks to properly oversee mining activities, but also

developing administrative measures for effective implementation and enforcement of those rules.¹⁴

Liability flows from the failure of a sponsoring state to meet its primary obligations, where that failure is causally connected to damages suffered. Sponsoring states are not liable for damages that arise from a contractor’s non-compliance, so long as the sponsoring state has discharged its oversight responsibilities. As a consequence, the SDC characterized the responsibility and liability of sponsoring states and contractors as existing in parallel, as opposed to being joint and several.¹⁵ A sponsoring state is not vicariously liable for the acts or omissions of a contractor, but is independently liable for its own acts or omissions.

The responsibility and liability of contractors and the ISA is addressed in article 22 of Annex III: “The contractor shall have responsibility or liability for any damage arising out of wrongful acts in the conduct of its operations, account being taken of contributory acts or omissions by the ISA. Similarly, the ISA shall have responsibility or liability for any damage arising out of wrongful acts in the exercise of its powers and functions, including violations under article 168, paragraph 2, account being taken of contributory acts or omissions by the contractor. Liability in every case shall be for the actual amount of damage.”

The SDC addresses the distribution of responsibilities among the sponsoring state, contractor and the ISA by noting that primary responsibility for wrongful acts committed in the conduct of seabed mining activities falls to the contractor and ISA under article 22 of Annex III. In particular, the SDC notes: “No reference is made in this provision to the liability of sponsoring States. It may therefore be deduced that the main liability for a wrongful act committed in the conduct of the contractor’s operations or in the exercise of the ISA’s powers and functions rests with the contractor and the ISA, respectively, rather than with the sponsoring State. In the view of the Chamber, this reflects the distribution of responsibilities

14 For a discussion of the SDC Advisory Opinion 2011, see Donald K Anton, Robert A Makgill & Cymie R Payne, “Advisory Opinion on Responsibility and Liability” (2011) 41 *Env’tl Pol’y & L* 60; David Freestone, “Advisory Opinion of the Seabed Disputes Chamber of International Tribunal for the Law of the Sea on Responsibilities and Obligations of States Sponsoring Persons and Entities With Respect To Activities in the Area” (2011) 15:7 *ASIL Insights*, online: <www.asil.org/insights/volume/15/issue/7/advisory-opinion-seabed-disputes-chamber-international-tribunal-law-sea>.

15 SDC Advisory Opinion 2011, *supra* note 3 at para 201.

for deep seabed mining activities between the contractor, the ISA and the sponsoring State.¹⁶

Sponsoring states are not liable for the unmet or residual liabilities of contractors, except insofar as those damages can be causally linked to the sponsoring state's failures.¹⁷

Liability is also addressed in two other provisions of the LOSC: article 235, quoted in full above, and article 304, which is contained in the general provisions of the LOSC. Article 304 states: "The provisions of this Convention regarding responsibility and liability for damage are without prejudice to the application of existing rules and the development of further rules regarding responsibility and liability under international law."

Read together with the provisions cited above, article 235 clarifies that states have further obligations to provide avenues through their own legal systems or through further international cooperation "for prompt and adequate compensation." The obligation to "establish procedures and, if necessary, substantive rules governing claims for damages" is explicitly identified by the SDC as a primary obligation of sponsoring states.¹⁸ The term "prompt and adequate compensation" is not defined, but article 22 of Annex II makes it clear that compensation shall be for actual damages, which means full restitution.

The inclusion in article 235(3) of the possibility of developing new mechanisms, such as insurance or compensation funds, to meet the obligation of providing "prompt and adequate compensation" indicates that the liability rules and procedures were not anticipated to be static, but rather left it open to the parties to develop appropriate rules in a cooperative manner. The dynamic nature of the liability rules is further underscored in article 304, which also contemplates their further development. The development of new liability rules is again addressed explicitly by the SDC: "Article 304 of the Convention thus opens the liability regime for deep seabed mining to new developments in international law. Such rules may either be developed in the context of the deep seabed

mining regime or in conventional or customary international law."¹⁹ The legal authority of the ISA, through Council and the Assembly, to develop new liability rules, falls within those bodies' broad plenary powers to develop rules, regulations and procedures for deep seabed mining.²⁰

The development of regulations by the ISA in relation to exploration has not yet resulted in any further clarification of the structure or content of the liability scheme for deep seabed mining. For example, Regulation 30 of the Nodules Regulation, which addresses responsibility and liability, simply states: "Responsibility and liability of the contractor and of the ISA shall be in accordance with the Convention. The contractor shall continue to have responsibility for any damage arising out of wrongful acts in the conduct of its operations, in particular damage to the marine environment, after the completion of the exploration phase."²¹

The standard contract provisions also address responsibility and liability of the contractor and the ISA: "The Contractor shall be liable for the actual amount of any damage, including damage to the marine environment, arising out of its wrongful acts or omissions, and those of its employees, subcontractors, agents and all persons engaged in working or acting for them in the conduct of its operations under this contract, including the costs of reasonable measures to prevent or limit damage to the marine environment, account being taken of any contributory acts or omissions by the ISA."²²

The current structure of liability rules is incomplete in two ways. First, it leaves open the possibility of significant liability gaps: there may be circumstances where damage is suffered by third parties, but the rules, without further elaboration, may not ensure adequate compensation is available. The SDC noted the potential for a liability gap where the sponsoring state (and the ISA) have met their due diligence obligations, but the contractor nevertheless fails to comply with its requirements and damages result. In such a case, if the contractor is unable to cover its liabilities, there is no recourse to the sponsoring state or the

¹⁶ *Ibid* at para 200.

¹⁷ See Don Anton, "The Principle of Residual Liability in the Seabed Disputes Chamber of the International Tribunal for the Law of the Sea: The Advisory Opinion on Responsibility and Liability for International Seabed Mining (ITLOS Case No. 17)" (2011) 7:2 *JSDLP* at 241–57.

¹⁸ SDC Advisory Opinion 2011, *supra* note 3 at para 140.

¹⁹ *Ibid* at para 211.

²⁰ LOSC, *supra* note 1, arts 162(2)(o)(ii), 160(2)(f)(ii).

²¹ *Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area*, 22 July 2013, ISBA/19/c/17, Annex, Regulation 30 [RPEN].

²² *Ibid*, Annex IV, s 16.

ISA, as they have met their responsibilities.²³ It should also be noted that even where a sponsoring state or the ISA has liability as a result of a failure to exercise due diligence, there may still be gaps if the responsible states or the ISA cannot meet their liabilities. The SDC points out that one role for insurance, or compensation funds (the SDC uses the term “trust fund,” but refers to article 235[3], which uses the term “compensation funds”) is to provide a mechanism that would better ensure the availability of funds to avoid shortfalls of compensation. The existing international models for such compensation funds are discussed below and are the subject of a separate LWG paper.²⁴

The liability rules under the LOSC are also incomplete in the sense that they are silent on the procedures and specific elements that would facilitate recourse to compensation. Article 235 imposes minimum standards for domestic legal systems, an obligation expressly identified by the SDC as being linked to a sponsoring state’s responsibility to ensure that a contractor can meet its obligations to compensate for damages arising from its activities.²⁵ As outlined below, it is questionable whether those minimum standards will be achieved without some coordinated efforts. Alternatively, article 235 raises the possibility of deeper international cooperation in order to ensure prompt and adequate compensation. In either case, the goals of prompt and adequate compensation and environmental protection may not be well served without further elaboration of liability rules and procedures.

Approaches to the Form of a Liability Scheme

There are several different forms that a liability scheme can take, depending on the purpose and level of governance used to implement the scheme. There are several approaches that are useful to consider in brief:

23 SDC Advisory Opinion 2011, *supra* note 3 at para 203.

24 Julia Xue, “The Use of Compensation Funds, Insurance and Other Financial Security in Environmental Liability Schemes” CIGI, *Liability Issues for Deep Seabed Mining Series*, forthcoming 2019.

25 SDC Advisory Opinion 2011, *supra* note 3 at para 140.

The Law of State Responsibility

A scheme could focus on state liability with rules operating entirely through international law. Here, the relevant actors, both claimants and defendants, would be states or possibly international organizations, which have standing in international law. The rules governing liability would be the basic rules of state responsibility and liability, principally as contained in the LOSC and in customary international law. States could claim for damages to the state arising from internationally wrongful acts or may be able to pursue claims on behalf of their nationals, where local remedies have been exhausted.²⁶

Unharmonized Domestic Liability Rules

Direct claims against contractors could proceed under the relevant domestic legal frameworks, as anticipated under article 235. However, in the absence of further cooperation, there would be a patchwork of rules at the domestic level (see Box 1),²⁷ resulting in claims being adjudicated under different substantive and procedural rules. There would be a myriad of potential barriers arising under the rules of private international law respecting access to justice, appropriate forum (*forum non conveniens*), enforceability of judgments and immunities. There may be concerns about the adequacy of available funds for compensation, if left to individual states, in particular where contractors have complex, transnational legal structures. This latter issue raises concerns about the ability of sponsoring states to regulate parent companies, which has been considered under the broader topic of “effective control” of contractors.²⁸

Harmonized Domestic Liability Rules

One response to these concerns would be the development of minimum requirements and other harmonization rules that seek to provide a more consistent approach across domestic legal systems. The ILC’s *Draft Principles on the Allocation of Loss*

26 See Malcolm Shaw, *International Law*, 5th ed (New York: Cambridge University Press, 2003) at 730 (discussing exhaustion of local remedies rule).

27 Hannah Lily, “Sponsoring State Approaches to Liability Regimes for Environmental Damage Caused by Seabed Mining” CIGI, *Liability Issues for Deep Seabed Mining Series*, forthcoming 2019.

28 Andres Rojas, “Effective Control: Toward a Definition” CIGI, *Liability Issues for Deep Seabed Mining Series*, forthcoming 2019.

provide a set of minimum standards that could be used to inform the development of domestic rules in the context of deep seabed mining. These principles identify minimum requirements for access to courts or other dispute settlement mechanisms for foreign claimants (on a non-discriminatory basis), ensure those bodies have the necessary jurisdiction, indicate that rules should allow for no-fault recovery, and could provide for national-level insurance or compensation funds.²⁹

International Civil Liability Rules

In other areas involving hazardous activities that have potential transboundary impacts, the preferred approach has been to seek to develop a civil liability regime through international rules. This approach is evident in several sector-specific regimes, such as oil pollution and nuclear accidents. As discussed below, and elaborated in a separate paper,³⁰ compensation schemes usually involve channelling liability to the operator and providing clear mechanisms, such as insurance and compensation funds, which are set up and coordinated on an interstate basis, to ensure the availability of adequate funds for compensating losses. It should be noted that under existing international liability and compensation-fund schemes, there remain requirements to implement those schemes in domestic legal systems, but much of the administration and rule making emanates from the international bodies.

Regulatory Alternatives

Finally, it should be recognized that there may be alternative measures that do not rely on liability rules per se, but rather respond to environmental harm through other collective mechanisms. Emergency or other administrative orders could be used to require remediation as a function of regulatory compliance, not civil liability.³¹ Trust funds are another alternative mechanism that has been raised in the context of deep seabed mining.³² Trust funds might be distinguished from compensation funds insofar as the former may require contributions based on participation in mining activities and could

²⁹ ILC, *Draft Principles on Allocation of Loss*, *supra* note 8, Principles 4, 5.

³⁰ Xue, *supra* note 24.

³¹ *Ibid*, see discussion of Antarctic Protocol.

³² ISA, "Developing a Regulatory Framework for Deep Sea Mineral Exploitation in the Area – Report to Stakeholders" (ISBA/CONS/2015/1) at 36; see also SDC Advisory Opinion 2011, *supra* note 3 at para 205.

Box 1: Sponsoring States' Legislative Treatment of Liability

The LWG examined the current rules in domestic law of sponsoring states on prompt and adequate compensation. This review confirmed that 11 of the 20 sponsoring states had sponsorship laws in place as of March 2018, and that 12 ISA exploration contracts were, at that time, being sponsored by states with no relevant law in place. In a further review of existing sponsoring state legislation, there is little evidence that sponsoring states have sought to create specific rules or procedures addressing liability or the obligation to ensure prompt and adequate compensation. Where domestic legislation addressed liability, it typically recited the requirements of the LOSC respecting liability. The treatment of liability is very uneven in relation to key issues such as access to domestic courts, enforcement of judgments, requirements for insurance or guarantees, or specific causes of action and jurisdictional competences. While some of the requirements for implementing article-235 obligations may be met through existing domestic processes and legislation or through contractual arrangements, the current situation raises the spectre of quite divergent approaches to liability across different sponsoring states and uncertainty about the ability of domestic legal systems to respond to the environmental protection and reinstatement goals that underlie liability rules in the deep seabed mining context.³³

provide funding for benefits to the marine environment where the harms are only indirectly linked to operator activity. Compensation funds, on the other hand, are a form of self-insurance, where payments are related directly to operator liability. Trust funds may have some advantages because they address the goal of environmental protection without having to establish a causal link between a particular operation and environmental harm. Establishing causality may be a challenge in the case of diffuse and cumulative environmental impacts. Additionally,

³³ Lily, *supra* note 27.

there is some likelihood of damage that may not be feasibly reinstated, but the use of offsets, funded through a trust mechanism, could provide for opportunities for net environmental benefits.³⁴

The broader point here is that the goals may be more effectively and efficiently pursued through alternative mechanisms to standard civil liability structures. Given the central role of the ISA as regulator and as a kind of trustee for the CHM, entitled to claim for damages to the Area,³⁵ it is important to consider the structure of any further liability rules in light of the wider range of regulatory options that may be available.

It should be noted that these different approaches to the form of a liability scheme are neither exhaustive nor exclusive. Different approaches may be used in parallel with one another or combined within a common approach. In the event of parallel approaches, there may be advantages to having clear rules on avenues of first recourse and avoidance of multiple claims.

It follows from the above discussion that a key policy decision that will need to be addressed is the basic approach to liability adopted in relation to deep seabed mining (i.e., whether there is a preference for a scheme that is largely rooted in domestic legal systems, one that relies at least in part on an administrative process originating at the ISA, or one that more closely resembles an international liability and compensation scheme).

The LWG identified a number of foundational issues that will need to be considered in the development of liability rules. Without being exhaustive, these elements include:

- Identification of the scope of liability rules; that is, which activities would be subject to specific liability rules and procedures?
- Who are the responsible actors that may be subject to claims, and to what degree should liability be channelled to specific parties?
- What is the standard of liability? Should the liability be negligence based or based simply

on causation (no-fault liability)? Should liability be subject to certain exclusions or caps?

- What kinds of damage should be recoverable under specific liability rules?
- Which parties should have standing to pursue claims?
- How could insurance and/or compensation funds support the liability scheme?
- What are the available forums for resolving claims?

In addition to these issues, the LWG also analyzed the liability features of existing sponsoring state legislation³⁶ and considered the interpretation of the term “effective control” in the context of Part XI of the LOSC.³⁷ The latter issue concerns itself with the extent to which states that exercise control over contractors, either directly or through their nationals, have responsibilities (and therefore liability) under Part XI. The LTC expressly recommended that the LWG explore this concept in the context of its liability work. This issue is discussed with attribution of liability.

Scope of the Deep Seabed Mining Liability Scheme

Any specific set of rules respecting liability will need to clarify to which activities those rules apply. This will be important for determining issues such as the scope of coverage of compensation mechanisms, such as insurance or compensation funds, and for defining the boundaries of responsibility and liability between actors within the deep seabed mining regime and those subject to other rules of international law, in particular laws relating to flag-state responsibilities under maritime law.

Article 139 identifies the scope of responsibility and liability rules as applying to “activities in

³⁴ See Michael Lodge, Kathleen Segerson & Dale Squires, “Sharing and Preserving the Resources in the Deep Sea: Challenges for the International Seabed Authority” (2017) 32:3 Intl J Mar & Coast L at 427–57.

³⁵ SDC Advisory Opinion 2011, *supra* note 3 at para 179–80.

³⁶ Lily, *supra* note 27.

³⁷ Rojas, *supra* note 28.

the Area.” While the LOSC has defined “activities in the Area” as all activities of *exploration* for, and *exploitation* of, the resources of the Area,³⁸ this phrase has not been further defined in the various Exploration Regulations.

The definition of “activities in the Area” was addressed by the SDC, which defined “activities in the Area” by examining provisions in the LOSC and its Annexes, in particular article 145, article 1(1) in Annex IV and article 17(2)(f) of Annex III. The SDC held that “activities in the Area” in the context of exploration and exploitation include, first of all, “the recovery of minerals from the seabed and their lifting to the water surface,”³⁹ which include “drilling, dredging, coring, and excavation; disposal, dumping and discharge into the marine environment of sediment, wastes or other effluents; and construction and operation or maintenance of installations, pipelines and other devices related to such activities.”⁴⁰ Further, the SDC held that “shipboard processing immediately above a mine site of minerals derived from that mine site” as described in article 17(2)(f) in Annex III is to be considered as included in “activities in the Area.”⁴¹ Thus, the evacuation of water from the minerals and the preliminary separation of materials of no commercial interest, including their disposal at sea, are also deemed to be covered by the expression “activities in the Area.”⁴²

The SDC, however, found that the transportation, processing and marketing of minerals recovered from the Area are not included in the notion of “activities in the Area,” notwithstanding their inclusion in the definition of “exploitation” cited above. The SDC highlighted that article 1(1) in Annex IV of the convention stipulated that “the Enterprise is the organ of the ISA which shall carry out activities in the Area directly, pursuant to Article 153, paragraph 2 (a) *as well as the transporting, processing and marketing of minerals recovered from the Area* [emphasis added].” Thus, in the SDC’s view, this provision “distinguishes ‘activities in the Area’ which the Enterprise carries out directly

pursuant to Article 153 (2) (a) of the Convention, from other activities with which the Enterprise is entrusted, namely the transporting, processing and marketing of minerals recovered from the Area.”⁴³ According to the SDC, “processing” (the process through which metals are extracted from the minerals and which is conducted at a plant situated on land) is excluded from “activities in the Area.”⁴⁴ Similarly, “transportation to points on land from the part of the high seas superadjacent to the part of the Area in which the contractor operates” is not included in the notion of “activities in the Area.”⁴⁵ The inclusion of transportation to points on land could create an unnecessary conflict with provisions of the convention such as those that concern navigation on the high seas.⁴⁶ That said, the SDC acknowledged that “transportation within that part of the high seas, when directly connected with extraction and lifting,” should be included in the definition of “activities in the Area.”⁴⁷

The SDC noted that processing, transportation and marketing were included in the definition of exploitation in the Exploration Regulations.⁴⁸ The SDC observed that the scope of exploration and exploitation in the regulations seemed broader than the “activities in the Area” as envisaged in the provisions of the convention. However, the SDC noted “the Regulations are instruments subordinate to the Convention which, if not in conformity with it, should be interpreted so as to ensure consistency with its provisions.”⁴⁹ It should also be recognized that there might be some aspects of the ISA’s regulatory competence, in particular its production policies, which include having due account for broader market and production activities, that justify a broader

38 See LOSC, *supra* note 1, art 1(1)(3) (exploration and exploitation have not been defined in the LOSC, but have been defined in the Exploration Regulations).

39 SDC Advisory Opinion 2011, *supra* note 3 at para 94.

40 *Ibid* at para 87.

41 *Ibid* at para 88.

42 *Ibid* at para 95.

43 *Ibid* at para 84.

44 *Ibid* at para 95.

45 *Ibid* at para 96.

46 *Ibid* at para 95.

47 *Ibid* at para 96.

48 *RPEN*, *supra* note 21, Reg 1(3) explicitly included “processing facilities and transportation systems” in the definition of “exploration” and “processing and transportation systems for the production and marketing of metals” in the definition of “exploitation.”

49 SDC Advisory Opinion 2011, *supra* note 3 at para 93.

definition of “exploitation,” but that do not bear on the scope of the liability regime.⁵⁰

Accepting the SDC’s definition of “activities in the Area” does not fully resolve the issue of scope, as there remain questions respecting the role of flag states (of vessels used for mining and related activities, for example) and their legal responsibilities for oversight of shipping matters. Any development of new liability rules will need to carefully delineate the division of responsibilities. The scope of a liability regime will also be impacted by the identification of which parties may access the procedures, and which parties may be held responsible for damage. Furthermore, the scope of compensation available will impact the wider scope of the regime.⁵¹

The central challenge in relation to the scope is careful delineation of boundaries of specific liability rules. The definition of “activities in the Area” should guide this delineation, but may require further clarification as rules become further developed.

Attribution of Liability

The issue of attribution of liability⁵² is a question of who, among the many parties involved, should be held ultimately liable for risks related to damage arising from a particular activity. Clear attribution rules are important to limit the possibility of liability gaps arising where an actor that has caused damage can avoid paying compensation, either because it is not legally responsible or, even if responsible, has insufficient funds and is not required to be properly insured.

A preliminary question for any liability and compensation regime is the extent liability should be attributed to states or to non-state actors

responsible for an activity or a combination of both. In general, the law of state responsibility has proved to be of limited value in attributing liability to states for environmental damage, which is why emphasis has shifted to civil liability regimes where non-state actors carrying out the activity are held liable.

In civil liability regimes, the question is whether liability should be channelled to one actor (usually the owner/operator) or whether it should be channelled to several actors that are potentially responsible for damage. Where liability is channelled, liability is attached to one party that becomes fully responsible for the damage. The victim can only sue the channelled injurer and not another actor that may have contributed to the loss. Channelling is typically coupled with no-fault liability, such that the duty to compensate is triggered by the presence of damage, not fault. Examples include the 1960 Paris Convention on Third Party Liability in the Field of Nuclear Energy⁵³ and the 1969 Convention on Civil Liability for Oil Pollution Damage.⁵⁴

Economic channelling to one party entails that one party, usually the operator, takes insurance coverage, known as umbrella or omnibus insurance, whereby the potential liability of the subcontractors of the operator is also covered. The operator bears the financial liability burden of the accident, but has a right of recourse against the subcontractors that may have been responsible, which could include suppliers and designers of equipment. Examples include the 1957 Price-Anderson Act on nuclear damage in the United States.⁵⁵

Non-exclusive Liability

Not all conventional liability regimes channel liability exclusively to the owner/operator. For example, the 1999 Basel Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal⁵⁶ does not exclusively channel

50 LOSC, *supra* note 1, arts 150, 151; *Agreement relating to the implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982*, 28 July 1994, Annex, s 6 (entered into force 16 November 1994).

51 Ruth Mackenzie, “Liability for Environmental Harm from Deep Seabed Mining Activities: Definition of Compensable Environmental Damage” CIGI, *Liability Issues for Deep Seabed Mining Series*, forthcoming 2019.

52 Tara Davenport, “Responsibility and Liability for Damage Arising Out of Activities in the Area: Attribution of Liability” CIGI, *Liability Issues for Deep Seabed Mining Series*, forthcoming 2019.

53 *Convention on Third Party Liability in the Field of Nuclear Energy of 29 July 1960*, as amended by the *Additional Protocol of 28 January 1964* and by the *Protocol of 16 November 1982*, 29 July 1960, (entered into force 1 April 1968).

54 *International Convention on Civil Liability for Oil Pollution Damage*, 29 November 1969, (entered into force 19 June 1975).

55 *Price-Anderson Nuclear Industries Indemnity Act*, 42 USC § 2210 (1957).

56 *Basel Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal*, 9 December 1999 (not yet entered into force).

liability to the owner/operator and imposes liability on several persons involved in hazardous waste movements. This is in recognition of the fact that different persons exercise operational control over the hazardous wastes, depending on which stage of the movement is concerned, and channelling liability to only one person would create a disincentive for the other persons involved to exercise the best possible care to prevent the occurrence of damage.

In sum, there are advantages and disadvantages to each approach, and the most appropriate approach will depend on the characteristics of the activity in question, and the objectives of the liability and compensation regime.

Channelling of legal liability to one actor has the following advantages:

- The owner/operator is usually in the best position to exercise control over the source of potential damage and, consequently, may most effectively prevent damage.⁵⁷
- Channelling liability to the operator is grounded on the belief that the “one who created high risks seeking economic benefit must bear the burden of any adverse consequences of controlling the activity.”⁵⁸
- Channelling facilitates victims’ identification of liable parties, since victims do not have to go through the complicated process of identifying the person liable and avoids the uncertainties that arise in cases concerning contributory fault of the other person involved.
- Channelling facilitates the availability of insurance, as it reduces the number of persons required to obtain insurance coverage and avoids overlapping insurance coverage.⁵⁹

On the other hand, concerns have been voiced that channelling is unjust, since it may direct liability away from other actors who are at

fault.⁶⁰ Furthermore, it has been argued that channelling of liability to one party undermines the goal of deterrence since it “negatively affects the incentives to take care more particularly by all other parties who could have equally influenced the accident risk.”⁶¹ Finally, channelling liability to the operator may not facilitate prompt and adequate compensation to the victim in the event the operator is insolvent, lacks sufficient funds or insurance cover or invokes a limitation of liability.⁶² In such cases, channelling could prevent the victim from pursuing compensation from other responsible persons.

These concerns may be addressed through other measures. For example, concerns respecting the adequacy of compensation may be addressed through insurance or compensation-fund requirements. Concerns around incentives and the unjust exclusion of responsible actors could be addressed through provisions that provide for avenues of recourse by the operator against other responsible parties. The latter structure could be achieved through a form of economic channelling, such that the operator bears the financial liability burden of the accident, but has a right of recourse against others that may have been responsible, which could include suppliers and designers of equipment.⁶³

Deep Seabed Mining and the Attribution of Liability

The deep seabed mining regime poses a unique challenge to the development of liability and compensation rules, due to the involvement of states, non-state actors and international organizations that engage in acts that could potentially result in damage, as well as the fact that the availability of insurance for such activities is still not clear. Under the current structure of the LOSC rules on liability, there are three classes of responsible parties as suggested by article 139 of the LOSC and article 22 of Annex III of the LOSC: the contractor (as the entity

⁵⁷ Jan Albers, *Responsibility and Liability in the Context of Transboundary Movements of Hazardous Wastes by Sea* (New York: Springer, 2015) at 249.

⁵⁸ ILC, *Draft Principles on Loss Allocation*, *supra* note 8 at 155.

⁵⁹ Albers, *supra* note 57 at 200; Michael Faure, ed, *Civil Liability and Financial Security for Offshore Oil and Gas Activities* (New York: Cambridge University Press, 2016) at 623.

⁶⁰ Evelyn Ameye, “United States and India: two nuclear states with legislation that truly holds responsible parties liable in the case of a nuclear accident” (2015) 18:8 *J Risk Research* at 1073–74.

⁶¹ Kristel De Smedt, Hui Wang & Michael Faure, “Towards Optimal Liability and Compensation for Offshore Oil and Gas Activities” in Faure, *supra* note 59 at 306, 314.

⁶² Albers, *supra* note 57 at 249.

⁶³ De Smedt, Wang & Faure, *supra* note 61 at 315–17.

undertaking mining activity), which consists of states, state enterprises and privately owned companies; the sponsoring state; and the ISA (the latter two in their respective oversight roles).⁶⁴

An issue that needs to be considered further is when there are multiple actors responsible for the same damage. The SDC gave some guidance on this issue. As between the sponsoring state and the contractor, the SDC held that the sponsoring state and the contractor are not to be held jointly and severally liable. This is because “the liability of the Sponsoring State arises from its own failure to carry out its responsibilities, whereas the contractor’s liability arises from its own non-compliance” and, as a result, both “forms of liability exist in parallel.”⁶⁵ Thus, “if the contractor has paid the actual amount of damage, as required under Annex III, article 22...there is no room for reparation by the sponsoring state.” Under this scenario, the sponsoring state is not exempt from liability, but rather if the claimant is made whole by the payment of compensation by the contractor, there are no further uncompensated damages to be paid by other responsible parties. In cases where the contractor is unable to compensate the full amount of damages, the sponsoring state may be liable for the residual damages, only if those damages are causally related to its own failure (and if they are not related to the sponsoring state’s wrongful actions, there is the risk of uncompensated damage). This is not joint liability because a sponsoring state is not required to bear losses it did not cause. However, what the SDC does not address is whether a contractor may have recourse against the sponsoring state for contributory acts, and vice versa, although this may be addressed by the contract between the sponsoring state and the contractor. Several sponsoring states’ legislation includes indemnities.⁶⁶

With regard to damage caused by both the ISA and the contractor concurrently, the SDC states “the main liability for a wrongful act committed in the conduct of the contractor’s operations or in the exercise of the Authority’s powers and functions rests with the contractor and the Authority, respectively.”⁶⁷ It is not clear whether there would

be joint and several liability between the ISA and the contractor, given they are responsible for different aspects of activities in the Area. Article 22 of Annex III specifically mentions that liability ought to account for the contributory acts and omissions of the ISA and the contractor in relation to the liability of the other, and the Exploration Regulations stipulate that both the contractor and the ISA are obliged to indemnify each other against all claims and liabilities of any third parties arising out of their respective wrongful acts and omissions.

The potential for the Enterprise to engage in mining activities in the future may raise additional considerations.⁶⁸ Article 22 of Annex III, which sets out the respective liability of the contractors and the ISA, does not refer to the Enterprise. Annex IV on the statute of the Enterprise does not contain a provision equivalent to article 22 of Annex III, although there are certain provisions on the separation of liability of the Enterprise and the ISA vis-à-vis the contractor. In principle, the Enterprise should have the same liability to compensate for damage as the contractors do, also bearing in mind that the initial operations of the Enterprise are to be done by joint ventures. The issues related to developing a liability and compensation system for the Enterprise, including standards of liability, apportionment between the Enterprise and joint venture partner, and the insurance of the Enterprise, deserve further study.

In addition to contractors, sponsoring states and the ISA, other potential responsible actors include subcontractors or other persons engaged in working for the contractor in the conduct of its operations; deep seabed mining equipment manufacturers; flag states, in relation to their oversight obligations of vessels engaged in deep seabed mining activities; as well as parent companies of contractors and the home state of parent companies (which implicates the issue of effective control). These relationships will be subject to complex commercial arrangements, which may themselves address allocation of liability between the parties involved. The existing contractual rules respecting exploration effectively channel liability to the contractors for damages arising from the wrongful acts of its “employees, subcontractors, agents and all persons

⁶⁴ LOSC, *supra* note 1, art 139; Annex III, art 22.

⁶⁵ SDC Advisory Opinion 2011, *supra* note 3 at para 201.

⁶⁶ Lily, *supra* note 27.

⁶⁷ SDC Advisory Opinion 2011, *supra* note 3 at para 200.

⁶⁸ LOSC, *supra* note 1, art 170 (establishing the Enterprise as an organ of the ISA).

engaged in working or acting for them in the conduct of its operations under this contract.”⁶⁹

If such an approach were to be adopted in the exploitation phase, it may be useful to consider whether this wording captures the full scope of actors that might be subject to claims, and whether the intention is to exempt subcontractors and others or just leave the determination of allocation of responsibility between the contractor and its subcontractors. If recourse is provided for, it may be desirable to specify rules and procedures addressing the means by which contractors can seek compensation. It should be noted that attention may need to be given to the forum for such claims, since in the absence of further specification, claims against non-state entities would be addressed in domestic legal systems. It may be desirable, if liability is to be channelled to contractors at the international level, that contractors have similar opportunities for recourse.

The allocation of liability between contractors and owners and operators of mining vessels and installations may require additional consideration, given the potential role of flag states and the interaction between rules developed for deep seabed mining and those developed for shipping and other regimes.

Effective Control

A further issue that requires separate consideration is the legal position of parent companies of contractors and the states that have jurisdiction over the parent company. The concern is whether parent companies, which may benefit economically from the activities of their subsidiaries, owe residual obligations to those damaged by the subsidiary’s activities in case the subsidiary is unable to pay compensation. In domestic contexts, there may be circumstances that allow for a “lifting of the corporate veil” to allow for recovery from a parent company, as an exception to the general rule of limited shareholder liability. The potential responsibility of parent companies leads to further questions about the responsibilities of the home state of the parent company, and whether states whose nationals, whether real or juridical persons, exercise control over contractors, have international legal obligations and consequential liabilities.

⁶⁹ RPEN, *supra* note 21, Annex IV, s 16.

This issue has broader implications for the regulation of deep seabed mining and has been linked to the issues of monopolization and abuse of dominant position. As outlined in a separate paper,⁷⁰ at the heart of this issue is an interpretive question concerning the provisions of the LOSC that include responsibilities for states parties where the contractor possesses the nationality of the state party or where the contractor is “effectively controlled by them or their nationals.”⁷¹ Effective control can be interpreted as referring to administrative or regulatory control, which would typically be the state of nationality of the contractor, but it could also be interpreted as meaning economic control, which would require looking more closely at the internal decision-making processes of the contractor and its shareholders. From a liability perspective, the issue that arises is whether there are conditions under which a parent company and its home state may be liable for damages arising from the activities of the contractor, based on economic control.

The current practice in relation to exploration contracts is to interpret effective control as a matter of administrative or regulatory control. This approach focuses on *de jure* control, as opposed to looking at economic or *de facto* control. It is not uncommon in other legal systems for the rules respecting environmental liability to favour *de facto* control. Such an approach in relation to liability may be justified on a beneficiary-pays model of liability, whereby entities that derive profits from activities may bear legal responsibility for adverse consequences, and those states that have regulatory authority over parent companies may bear responsibility to ensure that any control exercised by the parent is consistent with the requirements of Part XI of the LOSC. In the event that an economic approach is taken with regard to interpreting effective control in relation to exploitation contracts, parent companies and potentially their home states may have responsibilities that could entail liability.

The key considerations that ought to be accounted for in relation to attribution and channelling of liability include:

- If channelling is adopted, would liability be channelled exclusively to contractors?

⁷⁰ Rojas, *supra* note 28.

⁷¹ LOSC, *supra* note 1, art 139.

- Would channelling provide for a full exclusion from liability for some or all other actors, or would recourse by the contractors against other responsible parties be permitted?
- Would channelling need to be accompanied by other features, such as strict liability and mandatory insurance?
- Consideration would need to be given to the treatment of subcontractors and other potentially responsible actors, including how allocation of liability may be privately arranged between those parties.
- The interpretation of “effective control” and any consequential responsibility and liability for parent companies and home-state jurisdictions would need to be considered.

Standards of Liability

A threshold question for designing liability rules in any legal system is the degree of fault required to impose liability.⁷² Most legal systems distinguish between three forms of liability: negligence, strict liability and absolute liability. Negligence regimes are defined as requiring a degree of fault, usually a breach of an identified standard of care, as well as a causal link between the activities undertaken by the subject of liability and the harm, in order to impose liability for environmental harm. The standard of care for negligence can be defined variably, but is often identified as reasonably prudent or duly diligent behaviour, as evidenced by accepted standards of behaviour in the area of activity.⁷³ Strict liability, on the other hand, requires no proof of fault for a finding of liability in relation to harm, but does require causation. Strict liability may still allow

certain defences or exceptions to the imposition of liability, such as acts of God, acts of war, necessity, and third-party or contributory negligence. Where there are no exceptions, the liability is often classified as being absolute in nature.⁷⁴

The basic theory behind requiring fault as an element of attributing liability is an ethical or justice-based idea that a person who suffers some loss at the hand of another should only be compensated where the person who causes the harm has acted wrongly in some fashion.⁷⁵ The difficulty with fault requirements is that the victim remains harmed through no fault of their own. Thus, in the absence of fault, the policy question that arises is who should bear the loss between two potentially innocent actors. Creation of risk is most often raised as a basis for imposing liability without a requirement to prove fault.⁷⁶ As a consequence, activities with higher degrees of risk are often subjected to strict forms of liability in both international and domestic law. The presence of risk underlies the law of strict liability in common law tort regimes⁷⁷ and is raised as a basis for imposing strict liability on states where they engage in or authorize hazardous or “ultra-hazardous” activities.⁷⁸

Strict liability may be justified to deter risky behaviour by providing greater incentives for operators to take steps to prevent accidental damage. In a no-fault context, the rationale of deterrence focuses on the imposition of a higher standard of care than mere non-negligence to avoid harms that are viewed as socially undesirable. In the case of pollution, deterrence also reflects the notion that harm prevention is preferred to compensation, given that some environmental harms may be difficult or impossible to restore, and that the full measure of harm is not easily quantifiable. As a regulatory matter, operators are

74 Sands & Peel, *supra* note 73.

75 Ernest J Weinrib, “Corrective Justice in a Nutshell” (2002) 52:4 UTLJ 349.

76 De La Fayette, *supra* note 73; ILC, *Draft Principles on Allocation of Loss*, *supra* note 8, Principle 4 at para 13.

77 See e.g. *Rylands v Fletcher* (1868), LR 3 HL 330.

78 W Jenks, “The Scope and Nature of Ultra-Hazardous Liability in International Law” (1966) 117 *Recueil de Cours* 99; LFE Goldie, “Liability for Damage and the Progressive Development of International Law” (1965) 14:4 *Intl & Comp LQ* 1189; Kerryn Brent, “Solar radiation management geoengineering and strict liability for ultra-hazardous activities” in Neil Craik et al, eds, *Global Environmental Change and Innovation in International Law* (New York: Cambridge University Press, 2018).

72 Neil Craik, “Determining the Standard for Liability for Environmental Harm from Deep Seabed Mining Activities” CIGI, *Liability Issues for Deep Seabed Mining Series*, forthcoming 2018.

73 For general discussions of standards of liability in international environmental law, see Louise De La Fayette, “International liability for damage to the environment” in Malgosia Fitzmaurice, David M Ong & Panos Merkouris, eds, *Research Handbook on International Environmental Law* (Cheltenham, UK: Edward Elgar, 2010) at 320; Alan Boyle, “Globalizing Environmental Liability: The Interplay of National and International Law” (2005) 17 *J Envtl Law* 3; Philippe Sands & Jacqueline Peel, *Principles of International Law*, 4th ed (New York: Cambridge University Press, 2018) c 16.

much better positioned to take risk minimization measures and, therefore, requiring a higher standard facilitates greater care, as the law requires that the operator take all steps to prevent harm, not just those that are reasonable. In the absence of strict liability, operators may externalize the costs of measures taken to protect the environment that go beyond mere negligence. Thus, strict liability implements the polluter pays principle.⁷⁹ No-fault regimes may also provide for simplified dispute settlement processes, since the claimant is relieved of the burden of proving fault and may therefore be preferred on efficiency grounds; a goal that might be seen as being present under the LOSC in the requirement for “prompt” compensation.⁸⁰

Under the current rules respecting responsibility and liability, the standard of liability for sponsored states and the ISA is negligence, since the obligation is to take all reasonable steps to ensure contractor compliance.⁸¹ The question of the standard of state liability was addressed directly in the advisory opinion, where the ITLOS was firmly of the view that liability “arises only from [a sponsoring state’s] failure to meet its obligation of due diligence.”⁸²

The standard of liability for contractors is also framed as a duty of conduct. Annex III, article 22, requires that contractors be held liable for “wrongful acts.”⁸³ Wrongful in this context means that liability will flow from a breach of the requirements to which the contractor or ISA is subject under the deep seabed mining regime, which may be established with or without proof of fault, depending on the nature of the primary obligation. The primary obligation on contractors to prevent environmental harm in relation to exploration activities is set out in the regulations. Regulation 31(5) is framed as a duty of conduct to take “necessary measures to prevent, reduce and control pollution and other hazards to the marine environment arising from its activities in the area *as far as reasonably possible*, applying a precautionary approach and best environmental

practices.”⁸⁴ As it stands under the Exploration Regulations, the standard of liability imposed on contractors requires a failure of due diligence; that is, a failure to take reasonable measures. Accidental damage from exploration activities that arises despite all reasonable measures being taken, or damages that are unforeseen, are not currently “wrongful” and, therefore, not compensable under the LOSC. However, where the failure to comply with a direct, primary obligation results in harm, for example, failing to comply with an emergency order, the non-compliance ought to be viewed as wrongful, with liability consequences flowing from the non-compliance.

The wording of articles 139(2) and 304 makes it clear that the provisions on responsibility and liability are without prejudice to existing and future rules of international law. As a result, the LOSC contemplates the possibility of the development of new rules on liability, whether they arise from general developments in public international law or specifically in the context of the deep seabed mining regime.⁸⁵ The SDC specifically links the potential for the development of future rules on responsibility and liability, such as the establishment of compensation funds, to the presence of liability gaps (uncompensated damage) that currently exist under the deep seabed mining regime.⁸⁶

The rules of state responsibility and the development of international civil liability regimes in relation to other risky activities may provide models for the development of new rules respecting liability for deep seabed mining. The customary rules for state liability for environmental harm closely follow the rules in the LOSC, imposing an obligation of due diligence on states and international organizations to prevent harm from activities under their jurisdiction. The approach taken under civil liability regimes, on the other hand, uses a no-fault standard.

The policy determination that is required in relation to the standard of liability is whether liability will be imposed on a strict standard or based on fault. Different standards of liability may be imposed on sponsoring states, the ISA and contractors, respectively, and may be

79 *Rio Declaration*, *supra* note 7, Principle 16; see also Priscilla Schwartz, “Principle 16: The Polluter Pays Principle” in J Vinales, *The Rio Declaration on Environment and Development: A Commentary* (Oxford, UK: Oxford University Press, 2015) 426.

80 LOSC, *supra* note 1, art 235(2).

81 SDC Advisory Opinion 2011, *supra* note 3 at para 110.

82 *Ibid* at para 189.

83 LOSC, *supra* note 1, Annex III, art 2.

84 *RPEN*, *supra* note 21, Reg 31(5) [emphasis added].

85 SDC Advisory Opinion 2011, *supra* note 3 at para 211.

86 *Ibid* at para 209.

accompanied by other rules and procedures, such as exceptions, limits on liability and the use of insurance and compensation schemes.

Defining Compensable Damages

The liability framework under the LOSC provides that recourse be made available for “prompt and adequate compensation” in respect of damage to the environment.⁸⁷ More broadly, under Annex III, article 22, liability for wrongful acts resulting in damage shall be for the actual amount of damage. The LOSC does not, however, identify what types of damage are compensable, and how damage is to be assessed and quantified. As discussed in a separate paper, addressing the definition and assessment of environmental damage in the context of deep seabed mining activities is complex, given the gaps and uncertainties that exist regarding deep seabed ecosystems.⁸⁸ Nonetheless, elaborating on these issues would provide greater certainty in relation to liability rules for deep seabed mining, in particular in determining the potential scope and quantum of liabilities that may need to be addressed, which will inform risk calculations by contractors and their insurers (as well as the design and funding of any additional compensation mechanisms, such as funds). Defining damage also provides an understanding of the kinds of environmental harms that are likely to be addressed through liability rules or determined to be better addressed through other regulatory tools.

The focus of the LWG’s examination was primarily on environmental harm and the specific issues raised by harm to the marine environment in ABNJ. However, damage to persons and property is also contemplated in international liability schemes.⁸⁹

The definition, and compensability, of damage to the environment varies under the international

agreements addressing civil liability in relation to activities or substances that are potentially hazardous to the environment.⁹⁰ Some early instruments contain no specific reference to damage to the environment. The most commonly accepted formulations included within the definition of compensable damage are:

- loss of profit arising from impairment to the environment;
- reasonable measures of reinstatement of the environment undertaken or to be undertaken; and
- reasonable preventive measures.

The civil liability regime established for oil pollution damage covers “impairment of the environment” within the definition of “pollution damage.” However, other than loss of profit from such impairment, this definition is limited to “the costs of reasonable measures of reinstatement actually undertaken or to be undertaken.”⁹¹ This is a departure from domestic law where reinstatement may be used as a basis to calculate damages, but the claimant is not required to actually perform the remediation. As noted above, “preventive measures” are also covered, defined as “any reasonable measures taken by any person after an incident has occurred to prevent and minimize pollution damage.”⁹² Similar approaches to the definition of compensable environmental damage are taken, for example, in the 2001 International Convention on Civil Liability for Bunker Oil Pollution Damage,⁹³ and the 1996 Hazardous and Noxious Substances Convention and its 2010 Protocol.⁹⁴ In some liability regimes, measures of reinstatement may include not only measures to reinstate or restore damaged or destroyed components of the environment, but also measures to introduce the equivalent of those

⁸⁷ LOSC, *supra* note 1, art 235(2).

⁸⁸ Mackenzie, *supra* note 51.

⁸⁹ *Hazardous and Noxious Substances Convention*, 3 May 1996, arts 1(6)(a), (b) (not yet entered into force) [HNS Convention]; *Basel Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal*, 10 December 1999, arts 2(c)(i), (ii) (not yet entered into force) [Basel Protocol].

⁹⁰ See generally Louise De La Fayette, “The Concept of Environmental Damage in International Liability Regimes” in Michael Bowman & Alan Boyle, eds, *Environmental Damage in International and Comparative Law: Problems of Definition and Valuation* (Oxford, UK: Oxford University Press, 2002) at 149–89.

⁹¹ *International Convention on Civil Liability for Oil Pollution Damage*, 27 November 1992, art 1(6)(a) (entered into force 30 May 1996).

⁹² *Ibid*, art 1(6)(b), (7).

⁹³ *International Convention on Civil Liability for Bunker Oil Pollution Damage*, 23 March 2001, Cm 6693 art 1(9) (entered into force 21 November 2008).

⁹⁴ *HNS Convention*, *supra* note 89, arts 1(6)(c), (d).

components into the environment.⁹⁵ Measures to assess damaged or destroyed components of the environment may also be included.⁹⁶ Current approaches to assessing and quantifying environmental damage may also take into account loss of ecosystem goods and services.⁹⁷

“Pure” environmental loss (i.e., non-economic loss associated with environmental damage) has not been widely incorporated in the international civil liability regimes.⁹⁸ Such damage requires different means of assessment and valuation, including potentially theoretical models of valuation. However, other international processes, such as the United Nations Compensation Commission, have indicated that compensation for pure environmental loss cannot be precluded in international law.⁹⁹ The ILC also has indicated that damage to “non-use” values “is, as a matter of principle, no less real and compensable than damage to property.”¹⁰⁰ More recently, the International Court of Justice (ICJ) has affirmed that “it is consistent with the principles of international law governing the consequences of internationally wrongful acts, including the principle of full reparation, to hold that compensation is due for damage caused to the environment in and of itself, in addition to expenses incurred by an injured state as a consequence of such damage.”¹⁰¹ In this regard, the ICJ took the view that “damage to the environment, and the consequent impairment or loss of the ability of the environment to provide goods and services, is compensable under international law” and that “[s]uch compensation may include indemnification for the impairment

or loss of environmental goods and services in the period prior to recovery and payment for the restoration of the damaged environment.”¹⁰²

In its advisory opinion, the SDC observed that while neither the convention nor the relevant Exploration Regulations specifies what constitutes compensable damage, “[i]t may be envisaged that the damage in question would include damage to the Area and its resources constituting the common heritage of mankind, and damage to the marine environment.”¹⁰³ A range of potential impacts from seabed mining activities in the Area include:

- damage to persons and property occurring as a result of seabed mining activities in the Area, including loss arising as a result of environmental damage caused by seabed mining activities;
- damage to the marine environment of the Area, including damage to living resources in the Area;
- damage to the Area and its resources constituting the CHM;
- damage to living resources in the water column above the Area;¹⁰⁴ and
- damage to the marine environment and natural resources outside the Area (i.e., in areas under national jurisdiction).¹⁰⁵

The extent to which these and/or other heads of damage are compensable will depend, in part, on the scope of the regime to be established, but article 235(2), which addresses the marine environment as a whole, suggests that the range of compensable damages should not be

95 Protocol to Amend the Paris Convention on Nuclear Third Party Liability, 12 February 2004, art I.B (not yet entered into force); Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment, 21 June 1993, ETS 150 art 2(8); Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress to the Cartagena Protocol on Biosafety, 5 October 2010, art 2(2)(d) (entered into force 5 March 2018) [Nagoya-Kuala Lumpur Protocol].

96 HNS Convention, *supra* note 89, art 2(d).

97 Nagoya-Kuala Lumpur Protocol, *supra* note 95, art 2(3)(c). See also *Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v Nicaragua)* Compensation owed by the Republic of Nicaragua to the Republic of Costa Rica, Judgment of 2 February 2018 at para 42 [Costa Rica v Nicaragua].

98 Sands & Peel, *supra* note 73 at 749.

99 UNCC, *Report and Recommendations Made by the Panel of Commissioners Concerning the Fifth Instalment of “F4” Claims*, UN Doc S/AC.26/2005/10 (2005) at para 58.

100 ILC, *Draft Articles*, *supra* note 6, art 36, commentary 15.

101 *Costa Rica v Nicaragua*, *supra* note 97 at para 41.

102 *Ibid* at para 42.

103 SDC Advisory Opinion 2011, *supra* note 3 at para 179.

104 For example, depending upon the nature of living resources affected, if such damage is covered, it might conceivably include loss of profit from impairment to the marine environment, as well as claims relating to damage to the marine environment as such, involving assessment of preventive measures, reasonable measures of reinstatement, assessment and monitoring, and potentially pure environmental damage. If the definition of the “Marine Environment” in the draft Exploration Regulations is adopted, and were to be integrated into any liability regime, then living resources of the water column above the Area would be included within the scope of the rules and procedures on liability.

105 Possible impacts of activities in the Area, on areas within national jurisdiction of coastal states, are recognized in the LOSC and the Exploration Regulations. Article 142 of the LOSC addresses the rights and legitimate interests of coastal states; and, for example, Regulation 34 of the Nodules Regulation addresses rights of coastal states, including the avoidance of serious harm to the marine environment of a coastal state.

artificially constrained. Given the current high levels of scientific uncertainty, there will likely be challenges associated with quantification of environmental damage. Where adequate measures of reinstatement or restoration, or introduction of equivalents, cannot be put in place, consideration should be given to other ways of compensating damage to the marine environment, in particular given the status of the area as CHM.¹⁰⁶ This might suggest consideration of the desirability and feasibility of using offsets or incorporating pure environmental damage into any liability regime.

When considered in the context of the deep seabed mining regime, one question that arises is whether there is a threshold requirement of “serious harm” to the marine environment to trigger compensation obligations. This emerges by implication from the use of avoidance of serious harm as the basis for an approval under article 162, and the use of that standard to issue emergency orders under the regulations.¹⁰⁷ Importing a minimum threshold requirement may be importing a regulatory standard into a determination of whether damage has been suffered, which is a different question.¹⁰⁸ For example, under a no-fault system, where liability is triggered by the presence of harm (and causality) alone, does the harm need to exceed some minimum standard before compensation rights are triggered?

The characteristics and legal character of the Area mean that a tailored approach to damage will be required that takes into account the existing legal framework for deep seabed mining. At a minimum, the definition of compensable damage in any such regime needs to accommodate the particular features of the marine environment of the Area, and the status of the Area and its resources as CHM. Key challenges in determining the scope of compensable damage will be providing clarity regarding whether damage must exceed a threshold, such as “serious” or “significant” harm; whether pure environmental losses will be recoverable; and how any

compensation for environmental damage within the scope of the regime might be valued.

Potential Claimants and Standing to Bring Claims

The analysis of which actors may claim damages, undertaken in a separate paper, takes a broad definition of standing, and will proceed on the basis that it incorporates consideration of which potential claimant has a *sufficient legal interest* to bring a claim,¹⁰⁹ as well as *access* to the SDC under section 5 of Part XI of the LOSC. In the context of liability and compensation for deep seabed mining, a variety of actors could potentially sustain damage or suffer injury as a result of deep seabed mining activities. The categories of compensable damage will ultimately determine the class of potential actors that can claim compensation for such damage. For purposes of this discussion, the following categories of damage arising from activities in the Area will be addressed: damage to CHM resources in the Area; damage to the marine environment in the Area; damage to living resources in the Area; damage to persons and property in the Area; and damage to areas under the jurisdiction of the coastal state.

Standing to Bring Claims for Damage to CHM Resources

Determining which party has standing to bring a claim against the actor responsible for damage to CHM resources requires consideration of the meaning of CHM in order to define the types of legal interests this principle entails. Although the CHM principle has been a controversial legal concept, it is widely accepted to consist of non-appropriation, shared management of the resources on behalf of the international community, sharing of benefits for the whole of humankind, peaceful purposes and preservation for future generations. While issues of who has standing to bring damage claims are usually linked to who owns the resources in question, this issue is not easily resolved in relation to the deep seabed. However, what is clear is that the CHM principle incorporates both

¹⁰⁶ See Tara Davenport, “Responsibility and Liability for Damage Arising Out of Activities in the Area: Potential Claimants and Possible Fora” CIGI, *Liability Issues for Deep Seabed Mining Series*, forthcoming 2019 (discussing status of CHM).

¹⁰⁷ LOSC, *supra* note 1, art 162(w); see e.g. RPEN, *supra* note 21, art 33.

¹⁰⁸ See e.g. Code Project Response to Questions Posed by the ISA Secretary-General Regarding the Draft Exploitation Regulations – August 2017, ISBA/23/C/12.

¹⁰⁹ See Davenport, *supra* note 106.

private or individual interests of the contractor and *collective or communitarian interests* of humankind.

The contractors are given exclusive rights to explore the seabed under the Exploration Regulations and the current draft Exploitation Regulations also envisage that the contractor will have the exclusive right to explore and exploit the concession area, as well as exclusive and permanent title to resources mined in its concession block. Consequently, to the extent that damage to CHM resources is sustained to resources subject to an exploitation contract, the relevant contractor would have sufficient legal interest to commence a claim against those responsible for the damage. However, under section 5 of Part XI, the SDC only has jurisdiction over disputes between the contractor and the ISA under article 187(a) and 187(e) of the LOSC. Claims by contractors against others would likely need to be pursued in other (domestic) fora.

If damage is sustained to CHM resources, whether subject to a contract for exploration or exploitation, not allocated yet, or part of a reserved area, this would implicate the collective interests of humankind. “Mankind as a whole” has not been defined in the LOSC, and it is *prima facie* not clear who is entitled to represent humankind from a legal point of view in the event there is damage to CHM resources. That said, article 137(2) of the LOSC indicates that “all rights in the resources in the Area are vested in mankind as a whole, on whose behalf the ISA shall act.” The SDC recognized in its advisory opinion that article 137(2) implicitly entitles the ISA to bring a claim for damage to CHM resources, and this is consistent with the ISA’s role as the trustee for CHM resources. The ISA has standing to bring a claim before the SDC against contractors (and the Enterprise) under article 187(c)(ii) and against a sponsoring state under article 187(b)(i). While the ISA is the most logical entity to bring a claim for damages to CHM resources, it should also be borne in mind that there may be several issues, such as how the ISA should distribute compensation received, what happens when the ISA’s actions contribute to the damage, and whether there should be any external mechanisms in place to ensure that the ISA institutes a claim for damage to CHM resources.

While there is widespread acceptance that the CHM principle protects the common or collective interest of humankind, it is not clear that this is sufficient to confer *erga omnes partes* status (see article 48[1][a] of the ILC Draft Articles on State

Responsibility),¹¹⁰ entitling all states parties to sue even though they have not suffered direct damage. However, there are legal arguments in favour of such an interpretation. Such states parties would be able to claim against the ISA under article 187(b) (i), against the sponsoring states under article 187(a) and against a contractor who is a state party under article 187(a). States parties do not have standing under Part 5 to bring a claim against a contractor who is a state enterprise or privately owned company. There is some uncertainty around whether remedies such as monetary compensation would be available to states claiming an *erga omnes* obligation. In previous cases, such as the *Whaling Case* and the *South China Sea Case*, the claimants did not seek damages.¹¹¹

It is more difficult to argue that CHM resources are *erga omnes* obligations owed to the international community as a whole (see article 48[1][b] of the ILC Draft Articles on State Responsibility). It has been argued that only *jus cogens* norms have the status of *erga omnes* obligations owed to the entire community, and there is significant debate as to whether the CHM principle amounts to a *jus cogens* norm. Consequently, it is unlikely that non-states parties to the LOSC would have sufficient legal interest to bring a claim, nor would they have standing under section 5 of Part XI.

Non-state actors such as non-governmental organizations (NGOs), or even individuals, do not appear to have standing to bring a claim for damage to CHM resources. The *erga omnes partes* nature of the CHM regime would *prima facie* only entitle states parties to the LOSC to claim for damage to such resources. Further, non-state actors (except for contractors who are state enterprises or privately owned companies) have no standing before the SDC under section 5 of Part XI. International law does not recognize public interest standing that would permit organizations to pursue claims on behalf of humankind or other public interests. It should also be borne in mind that while non-state actors are increasingly being given standing to a multitude of international courts and tribunals, direct NGO participation as parties before international courts and tribunals

110 ILC, *Draft Articles*, *supra* note 6 at para 48.

111 *Whaling in the Antarctic, Australia and New Zealand (intervening) v Japan*, Judgment, ICJ GL No 148, ICGJ 471 (ICJ 2014), 31 March 2014; *South China Sea Arbitration, Philippines v China*, Award, PCA Case No 2013-19, ICGJ 495 (PCA 2016), 12 July 2016.

has been relatively limited, although they appear to have more extensive rights of standing in domestic courts and tribunals. This raises questions as to whether the ISA or states parties as representatives of humankind should espouse such claims of non-state actors, akin to the doctrine of *parens patriae*.

Standing to Bring Claims for Damage to the Marine Environment in ABNJ

The marine environment in ABNJ is not considered to be part of the CHM. However, the SDC Advisory Opinion has recognized that each state party may also be entitled to claim compensation in light of the *erga omnes* character of the obligations relating to the preservation of the environment of the high seas and in the Area. It did not distinguish between *erga omnes partes* and *erga omnes*, and did not elaborate as to how it came to the conclusion that the preservation of the environment of the high seas and the Area are *erga omnes*.

The ISA would seem to be the most logical actor to bring a claim for damage to the marine environment, including claims for the costs of assessing environmental damage; the costs of preventive measures (i.e., any reasonable measures taken after an incident has occurred to prevent or minimize loss or damage); claims for the costs of measures of reinstatement actually undertaken or to be undertaken; and in the event that *in situ* reinstatement is not feasible, claims for reinstatement by equivalent, compensatory or monetary compensation. This is on the basis of the *erga omnes partes* character of the protection of the marine environment in ABNJ, as well as article 145 of the LOSC, which gives the ISA a broad mandate to protect the marine environment. The ISA clearly can bring a claim against the contractor who is responsible for environmental damage under article 187(c)(ii) and against a sponsoring state under article 187(b)(i).

On the basis of the *erga omnes partes* character of the protection of the marine environment in ABNJ, states parties would also *prima facie* have sufficient legal standing to bring a claim for damage to the marine environment. Such states parties would be able to claim against the ISA under articles 187(b)(i) and 187(e) of the LOSC, against the sponsoring states under article 187(a) of the LOSC, and against a contractor who is a state party under article 187(a) of the LOSC. A question arises as to whether

a state party can bring a claim for damage to the marine environment against a contractor who is a state enterprise or privately owned company, given that *erga omnes partes* obligations apply between states. The SDC does not have jurisdiction over disputes between states parties and non-state contractors. States parties may be able to pursue claims for environmental damage against non-state contractors in national courts.

Given the uncertainty as to whether the SDC's description of the marine environment as *erga omnes* was *erga omnes* owed to the whole international community or *erga omnes partes* confined to states parties of the LOSC, it is not clear whether non-states parties would have sufficient legal interest to bring a claim for damage to the marine environment. The same considerations for non-state actors having standing in relation to damage to CHM resources would also apply in relation to damage to the marine environment in ABNJ.

Standing to Bring Claims for Persons and Property in the Area

Where the claims relate to damages to persons or property (for example, personal injuries from accidents), the person who suffers the injury has sufficient legal interest to bring a claim. The SDC acknowledged that "other users of the sea" would be subjects entitled to claim compensation.¹¹² The possible entities that could potentially suffer direct damage to property or persons who are operating in ABNJ include:

- ship owners;
- marine scientific research institutions;
- fishing companies;
- cable owners;
- vessel crews;
- owners/operators of installations and artificial islands; and
- states parties, including flag states.

¹¹² SDC Advisory Opinion 2011, *supra* note 3 at para 179.

Non-state Parties to the LOSC Operating in ABNJ

The only entity that has access to the SDC would be states parties who may be able to bring claims for damage to persons and property against state contractors and sponsoring states under article 187(a) and against the ISA under article 187(b). There is presently no recourse under section 5 of Part XI for states parties to bring claims against contractors who are state enterprises or privately owned enterprises. Private individuals and non-states parties may be able to sue the ISA, sponsoring states and contractors in national courts.

Standing to Bring Claims for Damage to Coastal State Interests

Activities in the Area could also result in damage to living and non-living resources, the marine environment, persons and property (for ease of reference, referred to as coastal state “interests”) in areas under coastal state jurisdiction (the territorial sea, the Exclusive Economic Zone and continental shelf). In this case, the coastal state would *prima facie* be considered the injured state with sufficient legal interest to bring claims, a point acknowledged by the SDC in its advisory opinion. Currently, there is no explicit provision in section 5 that would entitle the coastal state to bring claims for damage to its interests, although articles 187(a) and 187(b) may allow it to bring claims against a state contractor or a sponsoring state and the ISA, respectively.

The objectives of any liability and compensation regime include, *inter alia*, the need to compensate parties that have suffered damage and to provide effective deterrence for the avoidance of such damage. At the same time, liability and compensation regimes cannot be so onerous as to discourage all economic activity. Devising effective rules on standing should achieve a balance between ensuring compensation to victims that have suffered damage and ensuring that the costs and risks of carrying out an activity are not so prohibitive as to act as a disincentive for those carrying out the activity and for those insuring the activity.

It is clear that there is uncertainty as to which actor has sufficient legal interest to bring a claim, in particular for damage to CHM resources and the marine environment in ABNJ, which implicates the collective interest of humankind. Further, even if there were strong legal arguments supporting

the right of certain actors to bring claims, the jurisdiction of the SDC may not cover such claims.

Policy decisions must be made on whether it would be beneficial to clarify the rights of the ISA and states parties to pursue certain claims, as well as whether it is necessary to give other potential claimants that have suffered damage standing to initiate claims before the SDC or to leave it to the discretion of national courts.

Claims Fora

Deep seabed mining poses unique challenges for deciding on an appropriate forum to adjudicate claims for damages arising from activities in the Area because of the involvement of an international organization (the ISA), states parties and non-state actors, and the traditional exclusion of non-state actors from international dispute settlement.¹¹³ The potential fora include the SDC (under article 187), an ad hoc chamber of the SDC, special chamber of the ITLOS, or commercial arbitration tribunals (under article 188) and national courts. Determining the proper fora will be driven by the structure of any liability regime, but it is useful to consider the extent of the competences of these various venues to accept jurisdiction over liability claims.

The SDC

The jurisdiction of the SDC is set out in section 5 of Part XI of the LOSC. The SDC only recognizes the capacity of the ISA, states parties and contractors to be parties to disputes before the SDC. Article 187 further delineates the kinds of disputes over which it has jurisdiction. The only subsection that addresses liability directly requires claims against the ISA under Annex III, article 22, to be brought before the SDC. Other claims, such as claims against the contractor, may be brought as a dispute under the contract under article 187(c), but arguably, this provision is restricted to claims from those who are party to the contract (the ISA). Disputes concerning the application of the contract may be brought before a commercial arbitration tribunal under article 188(2)(a), although jurisdiction to resolve questions of interpretation

¹¹³ Davenport, *supra* note 52.

of Part XI and the Annexes is reserved for the SDC. The jurisdictional assertions under article 187 can be interpreted as being exclusive in nature, preventing other bodies from asserting jurisdiction over the enumerated claims.

National Courts

The most likely fora for disputes not addressed in article 187 would be domestic courts, a point affirmed by article 235(2). Article 235 obligates sponsoring states to ensure that they have suitable procedures and substantive rules to allow for prompt and adequate compensation, including access to the court system by potentially affected claimants. As discussed above in relation to the broader approaches taken, treatment under different national legal systems is unlikely to be uniform, and there are no articulated minimum standards for treatment at present. The status of the ISA (to be sued or to sue) under domestic law is uncertain in light of the immunities given to international organizations in domestic legal systems, including those granted expressly to the ISA under article 178. There may be similar immunities in relation to states and state entities under the rules on state immunity.

In the absence of channelled liability, there may be complex disputes over which court or tribunal has comprehensive jurisdiction, resulting in claimants having to pursue compensation in multiple fora, a state of affairs that may frustrate the goal of prompt compensation. If there is a system that incorporates insurance and compensation funds, there would be a requirement to implement the adjudication of claims accessing those funds in national legal systems, as exists for the oil pollution liability regime, or to channel claims to some other competent body.

The determination of appropriate fora for adjudicating claims will be driven by other features of a liability regime, such as the degree of channelling and the use of compensation funds, but consideration ought to be given to the desirability of a reasonable degree of uniformity across claim processes and the avoidance of a multiplicity of proceedings.

Use of Compensation Funds, Insurance and Other Financial Security in Environmental Liability Schemes

An important model for addressing liability issues in international law is the establishment of sector-specific civil liability regimes. In order to assess the potential utility of incorporating features of these regimes, the LWG conducted an overview of the main features of the prominent schemes developed by the international community and considered their applicability to deep seabed mining.¹¹⁴ The regimes considered in this analysis included the civil liability schemes developed to address oil pollution, including bunker oil; transportation of hazardous and noxious substances; and nuclear installations and the Antarctic.

While each scheme responds to a specific context, a number of common elements can be identified.

- **Channelling:** as discussed above, liability is typically channelled to the owner/operator, although some schemes provide for residual damages to be claimed against other actors, such as states with oversight responsibilities. In some cases, such as with nuclear installations and the Antarctic, states remain potentially liable for their own wrongful acts and for damages uncompensated by the operator.
- **Standard of liability:** civil liability regimes tend to employ a strict liability approach in relation to the operator.
- **Damages:** the range of compensable damage is defined and typically includes losses to persons and property, as well as environmental damage, including reinstatement costs incurred, but typically not awarding compensation for pure environmental loss.
- **Insurance and compensation funds:** mandatory insurance is required to be held by the

¹¹⁴ Xue, *supra* note 24.

operator. Where insurance may be insufficient, compensation funds have been established.

- **Liability caps:** the amount of damages available per claim is limited, although the practice has been to try to match the amounts to reasonably anticipated claims.
- **Exclusions:** each scheme contains exceptions to the imposition of liability, which typically include damages arising from:
 - armed conflict;
 - intentional damage by a third party;
 - contributory negligence (the incident resulted from the intentional or negligent actions of the claimant);
 - damage caused by government negligence;
 - the result of “a natural phenomenon of exceptional, inevitable, unforeseeable and irresistible character;”¹¹⁵ or
 - damage caused by compliance with a compulsory measure of a public authority.¹¹⁶
- **Procedures for adjudication of claims:** this typically occurs in the courts of the operator, requiring implementation of common rules and procedures.

Specific considerations arise in connection with insurance and compensation funds in relation to deep seabed mining. First, inquiries would need to be made regarding the availability of insurance on commercially feasible terms, and whether insurance coverage is available for the range of potential claims (or would insurers seek to exclude certain forms of damages) and the amounts claimed. If compensation funds are seen as desirable, there will be a need to determine who should contribute to the compensation scheme. For example, under the oil pollution funds, receivers of the shipped product contribute based on the amount received. A similar, albeit more complicated, structure exists for hazardous wastes. The potential options for funders for deep seabed mining include the contractors, processing firms that receive the ore, sponsoring states, or even

¹¹⁵ *Basel Protocol*, supra note 89, art 4(5); *HNS Convention*, supra note 89, art 7.

¹¹⁶ *Basel Protocol*, supra note 89, art 4(5)(b).

all states that benefit from benefit sharing, all of which benefit in different ways from the activity.

It is useful to distinguish between compensation funds, which are aimed at providing compensation to injured parties and require causal links between the harm and compensation, and trust funds, which may be used to disburse funds to a defined class of beneficiaries, but on a broader basis than direct injury. Trust funds potentially could be used to fund environmental benefits, such as offsets, in recognition of the loss of environmental function caused by mining activities.

Mechanisms to ensure that there are funds available to provide adequate compensation are a central feature of civil liability schemes that ought to be investigated, including the commercial availability and scope of insurance, and how any compensation fund may be financed and administered.

Key Issues for Policy Makers

The LWG was of the view that substantive recommendations regarding the form and substance of a liability regime were premature, pending further consideration of the regulatory requirements for mineral exploitation and consultation with key stakeholder groups, including insurance providers. However, to assist in focusing the discussions on liability, the LWG has identified key issues and policy determinations that will need to be addressed as the liability rules are formulated. The overarching consideration in determining the contours of a liability scheme should be the ability of the rules and procedures to provide prompt and adequate compensation, and to protect and remediate the marine environment. This will, in the view of the LWG, require the development of further rules and procedures on liability:

- In relation to the overall approach taken, it will be necessary to consider whether the principal rules respecting liability will be formulated within domestic legal systems, with the possibility of international minimum standards/requirements, or whether the approach will be more centrally

driven by the ISA, adopting common rules and mechanisms for compensation.

- Consideration should be given to the suitability of alternative approaches to addressing environmental damage that rely on administrative mechanisms, such as emergency orders or other remediation orders, and the use of trust funds.
- Liability rules will address harm from “activities in the Area,” but legal certainty will require careful delineation of the boundaries of any liability scheme.
- Given the complex constellation of actors involved in deep seabed mining, liability rules will need to establish rules on attribution, including consideration of:
 - whether channelling of liability should be adopted and, if so, whether liability would be channelled exclusively to contractors;
 - whether channelling would provide for a full exclusion from liability from some or all other actors, or would recourse by the contractors against other responsible parties be permitted;
 - whether channelling would need to be accompanied by other features, such as strict liability and mandatory insurance; and
 - treatment of subcontractors and other potentially responsible actors, including how allocation of liability may be privately arranged between those parties.
- Specific attention will need to be paid to the role of parent companies and states that directly, or through their nationals, have effective control over contractors. This will require a clarification of the meaning of the concept of “effective control” as it appears in the LOSC.
- Whether the standard of liability should require fault, recognizing that different approaches to liability may be imposed on sponsoring states, the ISA and contractors, respectively, and may be accompanied by other rules and procedures, such as exceptions to liability, liability caps and the use of insurance and compensation schemes.
- The scope of compensable damages should be clearly identified and should reflect the particular features of the marine environment

of the Area, and the status of the Area and its resources as the CHM. Key issues in determining the scope of compensable damages include:

- whether, in order to require compensation, damages must exceed a threshold, such as “serious” or “significant” harm; and
 - whether pure environmental losses will be recoverable, and if this is desirable, whether there are adequate tools for quantifying this form of damages.
- Clarity on which parties have standing to claim for damages to the marine environment, including damages to the Area and its resources, is needed.
 - Assessment of the adequacy of existing dispute settlement mechanisms and the potential for a multiplicity of proceedings or lack of an available forum for claims.
 - Investigation of mechanisms to ensure that funds are available to provide adequate compensation, including the commercial availability and scope of insurance, and how any compensation funds may be funded and administered.

About the International Law Research Program

The International Law Research Program (ILRP) at CIGI is an integrated multidisciplinary research program that provides leading academics, government and private sector legal experts, as well as students from Canada and abroad, with the opportunity to contribute to advancements in international law.

The ILRP strives to be the world's leading international law research program, with recognized impact on how international law is brought to bear on significant global issues. The program's mission is to connect knowledge, policy and practice to build the international law framework — the globalized rule of law — to support international governance of the future. Its founding belief is that better international governance, including a strengthened international law framework, can improve the lives of people everywhere, increase prosperity, ensure global sustainability, address inequality, safeguard human rights and promote a more secure world.

The ILRP focuses on the areas of international law that are most important to global innovation, prosperity and sustainability: international economic law, international intellectual property law and international environmental law. In its research, the ILRP is attentive to the emerging interactions among international and transnational law, Indigenous law and constitutional law.

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We are the Centre for International Governance Innovation: an independent, non-partisan think tank with an objective and uniquely global perspective. Our research, opinions and public voice make a difference in today's world by bringing clarity and innovative thinking to global policy making. By working across disciplines and in partnership with the best peers and experts, we are the benchmark for influential research and trusted analysis.

Our research programs focus on governance of the global economy, global security and politics, and international law in collaboration with a range of strategic partners and support from the Government of Canada, the Government of Ontario, as well as founder Jim Balsillie.

À propos du CIGI

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Nos programmes de recherche ont trait à la gouvernance dans les domaines suivants : l'économie mondiale, la sécurité et les politiques mondiales, et le droit international, et nous les exécutons avec la collaboration de nombreux partenaires stratégiques et le soutien des gouvernements du Canada et de l'Ontario ainsi que du fondateur du CIGI, Jim Balsillie.

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