

Deep Seabed Mining: Implications of Seabed Disputes Chamber's Advisory Opinion

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Abstract

In February 2011, the Seabed Disputes Chamber unanimously adopted an advisory opinion: *Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area*. This opinion is significant as it provides guidance on the governance of activities in the Area and clarifies the obligations of a sponsoring state, and its potential liabilities, in circumstances where damage is caused by the activities of the sponsored entity in the Area. Importantly, the opinion sets the highest standards of due diligence for all sponsoring states, irrespective of whether it is a developed or developing state and its financial capabilities. While not absolutely protecting the Area from the risk of environmental harm, the opinion will ensure that deep seabed mining activities operate within strict limits with the aim of preventing harm to the common heritage of mankind.

I Introduction

On 1 February 2011, the Seabed Disputes Chamber ("Chamber") of the International Tribunal for the Law of the Sea ("ITLOS") delivered its first advisory opinion in *Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area*.¹ The *Advisory Opinion* represents the first proceedings before the Chamber and the first time that ITLOS has invoked its advisory opinion jurisdiction under art 191 of the *United Nations Convention on the Law of the Sea*.²

The *Advisory Opinion* is significant because it clarifies the obligations of a sponsoring state, and its potential liabilities, in circumstances where damage is caused by the activities

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¹ *Responsibilities and Obligations of State Sponsoring Persons and Entities with Respect to Activities in the Area* (Advisory Opinion) (International Tribunal for the Law of the Sea, Seabed Disputes Chamber, Case No 17, 1 February 2011) <http://www.itlos.org/fileadmin/itlos/documents/cases/case_no_17/adv_op_010211.pdf> ('*Advisory Opinion*'). For further commentary see Tim Stephens and Georgina Hutton, 'What Future for Deep Seabed Mining in the Pacific?' (2011) 13 *Asia Pacific Journal of Environmental Law* 151; David Freestone, 'Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area' (2011) 105 *American Journal of International Law* 755; Donald Anton, Robert Makgill and Cymie Payne, 'Seabed Mining — Advisory Opinion on Responsibility and Liability' (2011) 41 *Environmental Policy and Law* 60; Duncan French, 'From the Depth: Rich Pickings of Principles of Sustainable Development and General International Law on the Ocean Floor — the Seabed Disputes Chamber's 2011 Advisory Opinion' (2011) 26 *International Journal of Marine and Coastal Law* 525; Peter Henley, 'Minerals and Mechanisms: The Legal Significance of the Notion of the "Common Heritage of Mankind" in the Advisory Opinion the Seabed Disputes Chamber Case Note' (2011) 12 *Melbourne Journal of International Law* 373.

² *United Nations Convention on the Law of the Sea*, opened for signature 10 December 1982, 1833 UNTS 397 (entered into force 16 November 1994) ('*LOS Convention*').

of a sponsored entity in the Area.³ Despite the fact that exploration activities have been carried out in the Area since at least the mid-19th century,⁴ the *Advisory Opinion* is timely given that the development of new mining technologies and the rising price of minerals may mean that the exploitation of the deep seabed resources will soon be possible and commercially viable.

In addition to the greater likelihood of the deep seabed resources being exploited, the *Advisory Opinion* is timely and highly relevant and important because of the real risk that harm is likely to be caused to the Area in circumstances where the sponsored state or entity fails to comply with its legal obligations and/or industry best practice. Through the destruction of seabed habitat or the effects of pollution and disposal of waste, it is likely that mining activities will cause harm to marine environments, including affecting protected fish species or marine parks in the vicinity of such activities. The *Advisory Opinion* confronts the risk of harm by imposing stringent limits on mining activities in the Area with the aim of preventing the risk of harm being caused to the Area. The primary reason for this stringency is the recognition by the Chamber of the importance of the Area as a common heritage of mankind.

This article aims to outline the background facts relevant to the *Advisory Opinion*, the findings of the Chamber and its implications for the effective protection of the marine environment, the exploitation of resources in the Area and the requirement for sponsoring states to adopt appropriate laws and regulations. This is followed by an examination of the adequacy of German legislation relating to deep seabed mining to fulfil a sponsoring state's obligations under international law in light of the findings of the Chamber in the *Advisory Opinion*.

II Background

The International Seabed Authority ('ISBA') is responsible for organising and controlling activities in the seabed, ocean floor and subsoil beyond the limits of national jurisdiction (known as 'the Area'), particularly with a view to administering the resources of the Area.

The regime for exploration and exploitation of the seabed in the Area is set out in pt XI of the *LOS Convention* and the *Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea*.⁵

Under the *LOS Convention* art 153(2), activities in the Area may be carried out by:

- (i) ISBA (called 'the Enterprise' in the *LOS Convention*), on its own behalf or in a joint venture arrangement; or

³ The 'Area' is defined by art 1(1) of the *LOS Convention* as 'the seabed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction'.

⁴ Polymetallic nodules were discovered during the 19th century in the Arctic Ocean off Siberia (1868). During scientific research expeditions of the *HMS Challenger* (1872–77), polymetallic nodules were found to occur in most of the oceans of the world: see International Seabed Authority ('ISBA'), *Polymetallic Nodules* <<http://www.isa.org/jm/files/documents/EN/Brochures/ENG7.pdf>>.

⁵ *Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea*, opened for signature 28 July 1994, 1836 UNTS 42 (entered into force 28 July 1996) ('1994 Agreement'). For discussion relating to the deep seabed mining regime see Robin Warner, *Protecting the Oceans Beyond National Jurisdiction* (Martinus Nijhoff, 2009).

- (ii) State Parties, state enterprises or natural or judicial persons through sponsorship by a State Party.

This paper only considers the carrying out of activities in the Area in the latter circumstance whereby an entity ('sponsored entity') is sponsored by a State Party ('sponsoring state').

Seeking to rely on the sponsorship provisions of the *LOS Convention*, on 10 April 2008 two Pacific island developing states, Nauru and Tonga, applied to ISBA for approval to obtain contracts to explore for polymetallic nodules. Nauru is a small island of around 21 square kilometres, and has a population of around 10 085, per capita GDP of US\$5462 (having once boasted the second highest per capita GDP as a result of now depleted phosphate reserves) and a very small private sector responsible for fewer than 300 employees.⁶ Tonga is an archipelago approximately 747 square kilometres in area, and has a population of a little over 105 000 people and per capita GDP of US\$3518.⁷

Like many developing states, Nauru and Tonga do not have the technical and financial capacity to undertake deep seabed mining in the Area alone and, for this reason, may choose to engage entities in the global private sector to participate in these activities.⁸ Nauru sought to participate in activities in the Area through the sponsorship of Nauru Ocean Resources Incorporated ('NORI') to explore for polymetallic nodules across an area of 74 830 square kilometres in the Clarion-Clipperton Zone in the Pacific Ocean.⁹ The proposed site for the activities is a 'reserved area'¹⁰ under the *LOS Convention*. Similarly, Tonga sponsored Tonga Offshore Mining Limited ('TOML') for exploration activities across an area of 74 713 square kilometres in the Clarion-Clipperton Zone.

At the time of lodgment of the application with ISBA, NORI was a Nauruan incorporated subsidiary of Nautilus Minerals Incorporated ('Nautilus').¹¹ Nautilus has among its largest shareholders two of the world's leading international resource companies (Teck Cominco Limited and Anglo American Limited) and is publicly listed on the Toronto Stock Exchange and the Alternative Investment Market, a submarket of the London Stock Exchange. TOML is a Tongan incorporated subsidiary of Nautilus.¹²

While NORI is now wholly owned by two Nauruan Foundations, whose purpose is to advance education, training, health and environmental rehabilitation in Nauru,¹³ it is apparent that 'there remains significant foreign interest in Nauru Ocean Resources Inc,

⁶ United States Department of State: Bureau of East Asian and Pacific Affairs, *Background Note: Nauru* (13 March 2012) <<http://www.state.gov/r/pa/ei/bgn/16447.htm>>.

⁷ United States Department of State: Bureau of East Asian and Pacific Affairs, *Background Note: Tonga* (31 October 2011) <<http://www.state.gov/r/pa/ei/bgn/16092.htm>>.

⁸ ISBA, *Proposal to Seek an Advisory Opinion from the Seabed Disputes Chamber of the International Tribunal for the Law of the Sea on Matters Regarding Sponsoring State Responsibility and Liability* (ISBA/16/C/6) (5 May 2010) 1 <<http://www.isa.org.jm/files/documents/EN/16Sess/Council/ISBA-16C-6.pdf>>.

⁹ ISBA, *Nauru Ocean Resources Inc: Application for Approval of a Plan of Work for Exploration* (ISBA/14/LTC/L.2) (21 April 2008) <<http://www.isa.org.jm/files/documents/EN/14Sess/LTC/ISBA-14LTC-L.2.pdf>>.

¹⁰ *LOS Convention*, annex III art 8.

¹¹ ISBA, above n 9.

¹² ISBA, *Report and Recommendations to the Council of the International Seabed Authority Relating to an Application for the Approval of a Plan of Work for Exploration for Polymetallic Nodules by Tonga Offshore Mining Limited* (ISBA/17/C10) (8 July 2011) <<http://www.isa.org.jm/files/documents/EN/17Sess/Council/ISBA-17C-10.pdf>>.

¹³ Nauru Ocean Resources Inc <<http://www.nauruoceanresources.com/>>.

with one of the company's board of directors being a former CEO of Nautilus Minerals Inc.¹⁴

On 5 May 2009, Nauru and Tonga requested that ISBA postpone consideration of their applications. The reason for postponement is apparent from Nauru's proposal to ISBA on 1 March 2010 seeking an advisory opinion from the Chamber relating to the responsibilities and potential liabilities of sponsoring states.¹⁵ Nauru had originally sponsored NORI on the assumption that it:

could effectively mitigate (with a high degree of certainty) the potential liabilities or costs arising from its sponsorship. This was important, as these liabilities or costs could, in some circumstances, far exceed the financial capabilities of Nauru.¹⁶

Further, Nauru suggested that, if sponsoring states were exposed to potential liabilities for damage caused to the Area by activities of the sponsored entity, Nauru and other developing states may, in effect, be precluded from participating in such activities, contrary to the purposes and principles of pt XI of *LOS Convention*.¹⁷

On 6 May 2010, ISBA decided to request an advisory opinion from the Chamber on three specific questions of law:

1. What are the legal responsibilities and obligations of States Parties to the *LOS Convention* with respect to the sponsorship of activities in the Area in accordance with the *LOS Convention*, in particular pt XI, and the 1994 Agreement relating to the Implementation of pt XI of the United Nations Convention on the Law of the Sea of 10 December 1982?
2. What is the extent of liability of a State Party for any failure to comply with the provisions of the *LOS Convention*, in particular pt XI, and the 1994 Agreement, by an entity whom it has sponsored under art 153, para 2(b), of the *LOS Convention*?
3. What are the necessary and appropriate measures that a sponsoring state must take in order to fulfil its responsibility under the *LOS Convention*, in particular art 139 and annex III, and the 1994 Agreement?¹⁸

The Chamber received written submissions from 12 State Parties, ISBA, three organisations (the Interoceanmetal Joint Organisation, International Union for Conservation of Nature and Natural Resources and United Nations Environment Programme) and a joint submission from Stichting Greenpeace Council (Greenpeace International) and the World Wide Fund for Nature, which the Chamber excluded from the case file.¹⁹ At four public sittings held in September 2010, the Chamber heard a

¹⁴ Stephens and Hutton, above n 1, 152.

¹⁵ ISBA, above n 8.

¹⁶ ISBA, above n 8, 1.

¹⁷ *LOS Convention*, arts 148, 150(c) and 152.

¹⁸ ISBA, *Decision of the Council of the International Seabed Authority Requesting an Advisory Opinion Pursuant to Article 191 of the United Nations Convention on the Law of the Sea* (ISBA/16/C/13) (6 May 2010) <<http://www.isa.org.jm/files/documents/EN/16Sess/Council/ISBA-16C-13.pdf>>. See also ITLOS, Letter from Nii Allotey Odunton, Secretary General of ISBA, to Judge Tullio Treves, President of the Chamber (11 May 2010) <http://www.itlos.org/fileadmin/itlos/documents/cases/case_no_17/Letter_from_ISBA_14_10_2010_E.doc.pdf>.

¹⁹ For written submissions, see ITLOS, *Case No 17: Written Proceedings* <<http://www.itlos.org/index.php?id=109&L=0#c582>>.

number of oral statements from State Parties, ISBA, the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organisation, and the International Union for Conservation of Nature and Natural Resources.²⁰

III The Advisory Opinion

Jurisdiction of the Chamber

The Chamber observed that, in order for it to have jurisdiction to provide an advisory opinion under the *LOS Convention* art 191, three preconditions must first be established. These include: a request from ISBA; the request must concern legal questions; and the legal questions must arise within the scope of the activities of ISBA.

The Chamber decided that it had jurisdiction to provide the *Advisory Opinion* on the following grounds:

- the decision by ISBA to request the opinion was made in accordance with the internal rules of procedure of ISBA;
- the questions before the Chamber concern the interpretation of provisions of the *LOS Convention* and raise issues of general law and, therefore, are of a legal nature; and
- the questions relate to the exercise of ISBA's powers and functions, including to:
 - establish specific policies to be pursued by ISBA;²¹
 - supervise and coordinate the implementation of provisions of pt XI of the *LOS Convention*;²²
 - approve plans of work;²³ and
 - exercise control over activities in the Area in accordance with art 153.²⁴

Admissibility

In light of the wording of art 191 of the *LOS Convention* that the advisory opinion 'shall be given' by the Chamber, as opposed to the words 'may give' in art 65(1) of *Statute of the International Court of Justice*, some participants in these proceedings argued that, once the Chamber has established its jurisdiction, it has no discretion to decline the request, contrary to the discretionary powers of the International Court of Justice ('ICJ'). However, the Chamber declined to consider the effect of this distinction and deemed it appropriate to render the *Advisory Opinion*.

²⁰ For transcripts and webcasts see ITLOS, *Case No 17: Oral Proceeding* <<http://www.itlos.org/index.php?id=109&L=0#c585>>.

²¹ *LOS Convention*, art 162(1).

²² *Ibid* art 162(2)(a).

²³ *Ibid* annex III art 6; 1994 *Agreement* ss 1(6)–(11), 3(11)(a).

²⁴ *Ibid* art 162(2)(l).

Supplementary instruments

The Chamber indicated that other instruments (not being treaties) ‘play an important role’ in the interpretation of treaties.²⁵ In these proceedings, the Chamber confirmed that the following regulations, adopted by ISBA as part of the *Mining Code*,²⁶ provide guidance on the interpretation of the *LOS Convention* pt XI and the *1994 Agreement*:

- a. Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area;²⁷ and
- b. Regulations on Prospecting and Exploration for Polymetallic Sulphides in the Area.²⁸

Question 1: Responsibilities and obligations of sponsoring states

Importantly, the Chamber clarified that the breadth of the phrase ‘activities in the Area’ (defined by the *LOS Convention* art 1(1)(3) as including ‘all activities of exploration for, and exploitation of, the resources of the Area’) did not extend to all activities associated with seabed exploration and exploitation. To reach this conclusion, the Chamber confined the interpretation of the word ‘activities’ to such activities contemplated by the *LOS Convention* art 145, namely ‘drilling, dredging, excavation, disposal of waste, construction and operation or maintenance of installations, pipelines and other devices related to such activities’.²⁹ On this basis, the Chamber advised that the processing and marketing of the minerals on land and the transportation of the resources to land, to the extent that such transportation is not directly connected to the recovery of minerals from the seabed and the lifting of the minerals to the surface, are excluded from the phrase ‘activities in the Area’.

This is a significant development as the definitions of the terms ‘exploration’ and ‘exploitation’ in the *Nodules Regulation* and *Sulphides Regulation* (collectively, ‘*Regulations*’) imply that processing facilities and transportation systems constitute ‘activities in the Area’.³⁰ As the *Regulations* are subordinate to and inconsistent³¹ with the *LOS Convention*, the Chamber limited the phrase ‘activities in the Area’ to those directly related to the extraction and lifting of minerals. In light of the *Advisory Opinion*, ISBA will need to consider whether it is necessary to amend the definitions of ‘exploration’ and ‘exploitation’ in the *Regulations*, and should ensure that the definitions of these terms are consistent with the views of the Chamber in the *Regulations for Prospecting and Exploration of Cobalt-Rich Crusts* (currently being prepared) and other regulations in the future.

With respect to activities in the Area, the Chamber advised that the primary responsibilities and obligations of sponsoring states (‘Primary Obligations’) are to:

²⁵ *Advisory Opinion*, above n 1, [57]–[59].

²⁶ ISBA, *Mining Code* <<http://www.isa.org.jm/en/mcode>>.

²⁷ ISBA, Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area (adopted 13 July 2000) (*‘Nodules Regulation’*) <<http://www.isa.org.jm/files/documents/EN/Regs/PN-en.pdf>>.

²⁸ ISBA, Regulations on Prospecting and Exploration for Polymetallic Sulphides in the Area (adopted 7 May 2010) (*‘Sulphides Regulation’*) <<http://www.isa.org.jm/files/documents/EN/Regs/PolymetallicSulphides.pdf>>.

²⁹ *Advisory Opinion*, above n 1, [85].

³⁰ *Nodules Regulation*, above n 27, reg 1(3)(a)–(b); *Sulphides Regulation*, above n 28, reg 1(3)(a)–(b).

³¹ *LOS Convention*, art 145, annex III art 17(2)(f) and annex IV art 1(1).

- (i) ensure that such activities undertaken by its nationals are carried out in accordance with the *LOS Convention* pt XI;³²
- (ii) assist ISBA by taking all measures necessary to ensure compliance with art 139 (being (i) above);³³ and
- (iii) ensure, within its domestic legal system, that the sponsored entity carries out such activities in conformity with the terms of its contract with ISBA and its obligations under the *LOS Convention*.³⁴

With respect to the sponsoring state's 'responsibility to ensure', the Chamber indicated this responsibility is not an obligation to achieve, in every instance, the result that the sponsored entity complies with pt XI (being an obligation 'of result'); rather it is an obligation to deploy adequate means and best efforts to obtain the result (being an obligation 'of conduct' and 'of due diligence').

Applying the findings of the ICJ in *Pulp Mills on the River Uruguay (Argentina v Uruguay)*,³⁵ the Chamber said that the notions 'of due diligence' and 'of conduct'³⁶ are connected and impose an obligation on the sponsoring state to 'adopt regulatory or administrative measures ... and to enforce them is an obligation of conduct' in order to prevent, as far as possible, damage resulting from the contractor's activities. The Chamber noted that the precise nature and scope of the 'due diligence' obligation is difficult to describe as it will vary depending on the particular activity or the development of new scientific or technological knowledge over time.

For this reason, the Chamber refrained from elaborating on the precise nature of the level of due diligence required other than to indicate that the standard of due diligence is more severe for activities involving higher environmental risks. For instance, prospecting for minerals is generally less risky than exploitation of these minerals and, therefore, the standard of due diligence in the case of the former would be less onerous than the standard for the latter.

In addition to the Primary Obligations, the Chamber identified further 'Direct Obligations' incumbent on sponsoring States under the *LOS Convention* and the related Regulations, including to:

- (i) assist ISBA in the exercise of control over activities in the Area.³⁷ This obligation will be met through compliance with the due diligence obligation;
- (ii) apply a precautionary approach, according to the sponsoring state's capabilities, to ensure effective protection for the marine environment from harmful effects.³⁸ This obligation applies in circumstances where the

³² Ibid art 139(1).

³³ Ibid art 153(4).

³⁴ Ibid annex III art 4(4).

³⁵ [2010] ICJ Rep 14 ('*Pulp Mills*').

³⁶ Ibid [187].

³⁷ *LOS Convention*, art 153(4).

³⁸ *Nodules Regulation*, above n 27, reg 31(2); *Sulphides Regulation*, above n 28, reg 33(2); *United Nations Declaration on Environment and Development*, UN Doc A/CONF.151/5/Rev.1 (1992), principle 15 ('*Rio Declaration*').

scientific evidence relating to the impact of the activity is insufficient and there are plausible indications of risk.³⁹ If a sponsoring state were to disregard those risks, it would fail to meet its obligation of due diligence. Importantly, the Chamber noted that there is a trend towards making this approach part of customary international law;

- (iii) apply best environmental practices;⁴⁰
- (iv) take measures to ensure the provision of guarantees in the event of an emergency order by ISBA for the protection of the marine environment.⁴¹ This obligation only arises if the sponsored entity has not provided ISBA with a guarantee of its financial and technical capability to comply with emergency orders;
- (v) adopt laws and regulations to ensure that recourse is available in the sponsoring state's legal system for prompt and adequate compensation or other relief in respect of damage to the marine environment caused by pollution.⁴² This mechanism aims to ensure that the sponsored entity meets its obligations under the *LOS Convention* annex III, art 22; and
- (vi) conduct environmental impact assessments ('EIA') for all applications for approval of a plan of work.⁴³ The sponsoring state is under a direct obligation to ensure compliance that the sponsored entity carries out an EIA to discharge its due diligence obligation and obligation to assist ISBA under art 153(4). ISBA has indicated that specified exploration activities, having no potential for causing serious harm to the marine environment, do not require EIAs.⁴⁴ However, other exploration activities, such as dredging or testing of collection systems, require prior EIA and an environmental monitoring program to be carried out during and after the specific activity. Significantly, the Chamber noted that the obligation to conduct an EIA is a general obligation under customary international law.⁴⁵

The Chamber then endorsed the principle of equality whereby all sponsoring states are subject to the Primary and Direct Obligations and rejected the notion that developing sponsoring states enjoy preferential treatment. The Chamber recognised that, if commercial entities based in developed states were free to set up companies in developing states with less burdensome regulations and controls to avoid more stringent regulations (a phenomenon called 'sponsoring states of convenience'), the application of the highest

³⁹ *Advisory Opinion*, above n 1, [131].

⁴⁰ *Sulphides Regulation*, above n 28, reg 33(2). While the phrase 'best environmental practices' is not referred to in the *Nodules Regulation*, the Chamber noted that the *Nodules Regulation* should be interpreted to impose this obligation on the sponsored entity: *Advisory Opinion*, above n 1, [137].

⁴¹ *Nodules Regulation*, above n 27, reg 32(7); *Sulphides Regulation*, above n 28, reg 35(8).

⁴² *LOS Convention*, art 235(2).

⁴³ *1994 Agreement*, annex s 1(7); *Nodules Regulation*, above n 27, reg 31(6); *Sulphides Regulation*, above n 28, reg 33(6).

⁴⁴ ISBA, *Recommendations for the Guidance of the Contractors for the Assessment of the Possible Environmental Impacts Arising from Exploration for Polymetallic Nodules in the Area* (ISBA/7/LTC/1/Rev.1) (13 February 2002) <http://www.isa.org.jm/files/documents/EN/7Sess/LTC/isba_7ltc_1Rev1.pdf>.

⁴⁵ See also *Pulp Mills* [2010] ICJ Rep 14 [204].

standards of protection of the marine environment, the safe development of activities in the Area and protection of the common heritage of mankind would be jeopardised. However, the Chamber did indicate that there may be scope for different treatment of developed and developing sponsoring states in rules setting out the Direct Obligations, such as the application of the precautionary approach.

Question 2: Extent of liability of a sponsoring state

Under art 139(2), a State Party is liable for damage caused by its failure to carry out its responsibilities under the *LOS Convention* pt XI. However, if the damage is caused by a failure of the sponsored entity to comply with pt XI, a sponsoring state may avoid liability if it can establish that ‘all necessary and appropriate measures’ were taken to secure effective compliance by the sponsored entity. This exemption from liability contemplates that the sponsoring state has adopted laws and regulations, and taken administrative measures reasonably appropriate for securing compliance.⁴⁶

First, the Chamber addressed its understanding of the term ‘liability’ in art 139(2) as the consequences resulting from the failure of the sponsoring state to carry out its own responsibilities (that is, the Primary and Direct Obligations). Therefore, if the sponsoring state complies with the Primary and Direct Obligations, it will not be liable for the failure of the sponsored entity to meet its obligations. Despite submissions to the contrary, the Chamber concluded that the standard of liability of a sponsoring state is not one of strict liability (that is, liability without fault). Instead, sponsoring state liability will only arise when damage is caused by activities in the Area if the sponsoring state has failed to carry out the Primary and Direct Obligations and, as a consequence of this failure, damage has occurred (that is, a causal link requirement).

Second, in respect of the damage, the Chamber noted that neither the *LOS Convention* nor the Regulations⁴⁷ specify what constitutes compensable damage. However, the Chamber observed that the term ‘damage’ would include damage to the Area and its resources which constitute the common heritage of mankind, and damage to the marine environment. Importantly, the *Advisory Opinion* confirmed that ISBA, entities engaged in activities in the Area, other users of the high seas, and coastal states, are entitled to claim compensation. Further, relying on art 48 of the International Law Commission’s *Articles on Responsibility of States for Internationally Wrongful Acts*,⁴⁸ the Chamber pointed out that:

Each State Party may also be entitled to claim compensation in light of the *erga omnes* character of the obligations relating to preservation of the environment of the high seas and in the Area.⁴⁹

Third, in respect of quantum and form of compensation, ISBA and the sponsored entity are liable ‘in every case for the actual amount of damage’.⁵⁰ Further, under customary

⁴⁶ *LOS Convention*, annex III art 4(4).

⁴⁷ *Nodules Regulation*, above n 27, reg 30; *Sulphides Regulation*, above n 28, reg 32.

⁴⁸ Report of the International Law Commission, 53rd Session, UN Doc A/56/10 (2001) (*Articles on State Responsibility*).

⁴⁹ *Advisory Opinion*, above n 1, [180].

⁵⁰ *LOS Convention*, annex III art 22; *Nodules Regulation*, above n 27, reg 30; *Sulphides Regulation*, above n 28, reg 32; ISBA, *Standard Clauses for Exploration Contract*, s 16.1 (*Standard Clauses*) <<http://www.isa.org/im/files/documents/EN/Regs/Code-Annex4.pdf>>.

international law, there is an obligation for a state to provide for full compensation or *restituto in integrum*.⁵¹ The Chamber observed that the form of reparation will depend on both the actual damage and the technical feasibility of restoring the situation to the *status quo ante*.

Finally, the Chamber identified two potential gaps in the liability regime that may lead to damage of the Area being inadequately redressed, if:

- the sponsoring state discharges the Primary and Direct Obligations and the sponsored entity is unable to meet its liability in full; or
- the sponsoring state fails to discharge the Primary and Direct Obligations, but the failure is not causally linked to the damage.⁵²

A further gap in liability may arise if damage is caused, but both the sponsoring state and the sponsored entity have fully complied with their obligations⁵³ or if, as suggested by Nauru, a sponsoring state's liability exceeds its financial capacity and the sponsored entity is a two dollar company or is otherwise unable to meet its liability.

To eliminate these potential gaps in liability, the Chamber points out that ISBA could establish a trust fund under the *LOS Convention* art 235(3) or develop a liability regime in its rules or regulations under art 304 to compensate for damage not covered by the sponsoring state or sponsored entity.

Question 3: Necessary and appropriate measures of a sponsoring state

The Chamber observed that the phrase 'necessary and appropriate measures' requires sponsoring states to adopt laws and regulations, and to take administrative measures to secure the sponsored entity's compliance with its obligations.⁵⁴ The Chamber indicated that this may include the establishment of enforcement mechanisms for active supervision of the activities of the sponsored entity. The establishment of such mechanisms is an essential prerequisite for the exemption from liability provision to apply and may need to be kept under review to ensure compliance with current standards. Significantly, contractual obligations between the sponsoring state and sponsored entity are not considered to be an effective substitute for adopting laws and regulations, and taking administrative measures.

Despite the fact that the Chamber concluded that the content of the measures to enable discharge of the Primary and Direct Obligations must be determined by sponsoring states as such measures constitute 'policy choices'; it also recognised that states do not have an absolute discretion.⁵⁵ The Chamber was careful not to encroach on the policy choices of sponsoring states but, nevertheless, provided some indicative factors and general considerations that sponsoring states may consider when implementing such measures, including:

- (i) the obligation to:

⁵¹ *Advisory Opinion*, above n 1, [194].

⁵² *Ibid* [203].

⁵³ Stephens and Hutton, above n 1, 156.

⁵⁴ *LOS Convention*, arts 139(2), 153 and annex III art 4(4).

⁵⁵ *Advisory Opinion*, above n 1, [227].

- (a) act in good faith, reasonably and non-arbitrarily;
- (b) ensure that the obligations of the sponsored entities are enforceable;
- (iii) in respect of its domestic legal system, considerations whether to:
 - (a) implement more stringent environmental laws than the rules and regulations imposed by ISBA;
 - (b) include provisions relating to the financial viability and technical capacity of sponsored entities, conditions for issuing a certificate of sponsorship and penalties for non-compliance;
 - (c) cover that any decision of ITLOS relating to the rights and obligations of ISBA and the sponsored entity is enforceable in the sponsored state; and.
 - (d) establish mechanisms relating to the Direct Obligations.⁵⁶

Although the Chamber was reluctant to provide specific legal advice regarding the content of necessary and appropriate measures, should damage be caused by activities in the Area, the Chamber will ultimately be required to consider the adequacy of the sponsoring state's laws, regulations and administrative measures, and determine whether the state is liable or absolved from liability under the *LOS Convention* art 139(2). In the circumstance, it is unclear the weight that the Chamber would give to each indicative factor and whether the absence of any particular factor(s) would result in a sponsoring state being unable to rely on the exemption from liability.

IV Implications

Protection of the Marine Environment

The *Advisory Opinion* is a landmark decision as it unanimously endorsed a legal obligation on sponsoring states to apply a precautionary approach and best environmental practices, and to ensure that EIAs are prepared. These are positive developments for the protection of the marine environment in the Area from the impacts of exploration and exploitation activities. With respect to the precautionary approach, the *Advisory Opinion* is significant because it recognised that there was a 'trend' towards making this approach part of customary international law. However, if states do not implement appropriate and necessary legislative and administrative measures, then they are unlikely to be able to apply a precautionary approach or ensure that contractors undertake EIAs. In the circumstances, the level of protection for the marine environment would be questionable.

The *Advisory Opinion* did leave open the possibility that different standards may be applied to developed and developing sponsoring states regarding the application of the precautionary approach in light of the limiting words 'according to their capabilities' contained in principle 15 of the *Rio Declaration*. The Chamber indicated that the term

⁵⁶ Ibid [230]–[236].

‘capabilities’ refers to the ‘level of scientific knowledge and technical capacity’⁵⁷ available to the sponsoring state.

Having regard to the fact that a sponsoring state is under a duty to ensure that the sponsored entity prepares an EIA setting out the impacts of the proposed activities on the marine environment, it is hoped that any scientific uncertainty relating to such impacts would be apparent on the face of the EIA and, therefore, the application of the precautionary approach will seldom rely on the sponsoring state’s capabilities. In any event, there is an obligation on sponsoring states to follow ‘best environmental practices’,⁵⁸ which does not differentiate between states based on capabilities.

Liability of State Parties — Development of the Area

Freestone has pointed out that there will be some disappointment among commentators that the Chamber did not advise that ‘sponsoring States are strictly liable for the actions of their sponsored entities’⁵⁹ which may give rise to gaps of liability. Nevertheless, the Chamber indicated that these deficiencies may be addressed through the establishment of a trust fund or imposition of a strict liability scheme on sponsoring states.

Significantly, the Chamber applied the principle of equity to derive that all states (irrespective of financial capacity) must follow the highest standards of due diligence and, in the event of non-compliance with the Primary and Direct Obligations, face the same liabilities. The clear intention of the Chamber was to stymie the spread of sponsoring states ‘of convenience’⁶⁰ and implement the highest standard of protection for the marine environment equally among State Parties. The question that follows is whether developing states have the capacity to implement measures to ensure the highest standards of due diligence. To confront this issue, developing states could consider imposing a requirement on the sponsored entity to finance its engagement of expert consultants and lawyers from developed states with experience in the deep seabed mining industry.

Also of importance was the Chamber’s view that all states may be entitled to claim compensation from a sponsoring state that has failed to fulfil the Primary and Direct Obligations and where damage has occurred. This is the first clear recognition of art 48 of the Articles on State Responsibility as a statement of law by an international court.⁶¹ In practice, this seems unlikely because the areas in which deep seabed mining is undertaken are so remote that states are not likely to be directly impacted and, therefore, will be unaware of damage occurring to the marine environment. It is unlikely that state responsibility would be enlivened even if damage is caused to the Area.

It has been argued that, in light of the Chamber’s position with respect to state responsibility and liability, the commercial viability of deep seabed mining activities in the Area is likely to be further strained and ‘may prompt potential sponsoring states —

⁵⁷ *Advisory Opinion*, above n 1, [162].

⁵⁸ *Sulphides Regulation*, above n 28, reg 33(2). Regarding the *Nodules Regulation*, see above n 40.

⁵⁹ Freestone, above n 1, 759.

⁶⁰ *Advisory Opinion*, above n 1, [159].

⁶¹ Stephens and Hutton, above n 1, 158.

developing and developed alike — to think twice before entering into sponsorship arrangements with contractors?⁶²

However, since the *Advisory Opinion* was delivered in February 2011, four applications for exploration contracts have been approved by ISBA, including the applications of NORI (sponsored by Nauru) and TOMI (sponsored by Tonga).⁶³ This may suggest that Nauru exaggerated its position that it would be precluded from participating in activities in the Area if it was potentially faced with the same liabilities as developed states. Further, it may indicate that Nauru is committed and able to discharge the Primary and Direct Obligations in full.⁶⁴

Alternatively, Nauru may have formed the view that the risk of damage to the Area resulting from NORI's exploration activities was relatively low. For instance, at least during the initial phase of exploration, there will be little (if any) impact on the marine environment as it is generally non-invasive.⁶⁵ However, the risk of damage to the marine environment is higher during the more invasive secondary phase of exploration, comprising the commencement of testing collecting systems and processing operations, as evidenced by the requirement for the sponsored entity to submit an EIA and proposal for environmental monitoring, and provide a guarantee to comply promptly with ISBA's emergency orders.⁶⁶ Having regard to the limited resources available to Nauru and the short-term and potential long-term benefits of sponsoring NORI, Nauru may simply have deemed it to be an acceptable level of risk.

It is recognised that the risk of damage to the marine environment varies depending on the type of activity: for instance, prospecting activities are expected to have lower risks than full exploitation activities. The main environmental impacts of mining polymetallic nodules are expected at the seafloor, with less intense and persistent effects in the water column.⁶⁷ There is a real possibility that large-scale nodule mining operations will considerably impact ferromanganese nodule fauna, being fauna attached to the nodules, and the habitat to a number of unique and undiscovered species on the seafloor, which may result in some species being lost permanently.⁶⁸ Considering the potential impacts of mining, and our limited scientific understanding of the seafloor ecosystems, it is imperative

⁶² K Russell Lamotte, *Introductory Note to the International Tribunal for the Law of the Sea: Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area* (Request for Advisory Opinion Submitted to the Seabed Disputes Chamber) (2011) 50 *International Legal Materials* 455, 457.

⁶³ ISBA, *Seabed Council Approves Four Applications for Exploratory Contracts with Authority in the Deep Seabed Area* (SB/17/11) (19 July 2011) <<http://www.isa.org/jm/files/documents/EN/Press/Press11/SB-17-11.pdf>>.

⁶⁴ Nauru has given ISBA a commitment to implement legislation to ensure that NORI fulfils its obligations: ISBA, *Report and Recommendations to the Council of the International Seabed Authority Relating to an Application for the Approval of a Plan of Work for Exploration by Nauru Ocean Resources Inc* (ISBA/17/C/9) (11 July 2011), 5 <<http://www.isa.org/jm/files/documents/EN/17Sess/Council/ISBA-17C-9.pdf>>.

⁶⁵ Satya Nandan, 'Administering the Mineral Resources of the Deep Seabed' in David Freestone, Richard Barnes and David Ong (eds), *The Law of the Sea: Progress and Prospects* (Oxford University Press, 2006) 88.

⁶⁶ See, eg, *Standard Clauses*, above n 50, s 5.5; *Nodule Regulation*, above n 27, reg 32(7). For discussion about the impacts of dredging see Dmitry Miljutin et al, 'Deep-Sea Nematode Assemblage has not Recovered 26 Years after Experimental Mining of Polymetallic Nodules (Clarion-Clipperton Fracture Zone, Tropical Eastern Pacific)' (2011) 58 *Deep-Sea Research I* 885.

⁶⁷ ISBA, *A Summary of Available Information in the Public Domain on the Likely Impact of Exploration and Mining Activities for Nodules on the Marine Environment* <http://www.itlos.org/fileadmin/itlos/documents/cases/case_no_17/ISA_1.pdf>.

⁶⁸ Julie Veillette et al, 'Ferromanganese Nodule Fauna in the Tropical North Pacific Ocean: Species Richness, Faunal Cover and Spatial Distribution' (2007) 54 *Deep-Sea Research I* 1912; Miljutin et al, above n 66.

that ISBA continually strengthens and vigilantly reviews the *Mining Code*, to ensure adequate protection for the marine environment.

Stephens and Hutton have argued that the limited scientific understanding of the Area's habitat and ecosystem may act as a catalyst for efforts to place a moratorium on deep seabed mining.⁶⁹ However, any effort to impose a moratorium would likely be resisted by ISBA, given that one of its primary aims is to encourage development of the Area,⁷⁰ and states engaged or interested in becoming engaged in activities in the Area. Irrespective of the position with respect to a moratorium, it is imperative that ISBA and sponsoring states ensure that damage to the marine environment caused by activities in the Area is minimised and all adverse impacts are avoided to the fullest extent practicable.

V Case Study: Adequacy of German Legislation to Adopt Necessary and Appropriate Measures

There are currently 12 contractors for the exploration of polymetallic nodules,⁷¹ yet the *Advisory Opinion* implied that only two State Parties (Germany and the Czech Republic) have adopted relevant domestic laws and regulations. The author has not investigated whether this is correct. However, assuming this to be the case, one may ask why so few states have implemented internal legislation. A future study could look at the reason(s) for the low rate of adoption of domestic legislation by sponsoring states. The absence of sponsoring states, particularly those in consortiums, could one day lead to interesting liability claims in the Chamber.

The Chamber advised that, while the existence of such laws, regulations and administrative measures is 'not a condition precedent' for concluding a contract with ISBA, 'it is a necessary requirement for compliance with the obligation of due diligence of the sponsoring State and for its exemption from liability'.⁷² This suggests that a number of sponsoring states may not be able to rely on the exemption from liability should their sponsored entities cause damage to the Area. Despite this exemption, sponsoring states should be implementing legislation and administrative measures in any event to ensure the marine environment is protected, and to lead by example. That is, states should adopt the highest standards of due diligence not only to avoid potential liability, but to protect the Area — the common heritage of mankind — more generally. For these reasons, the author calls for sponsoring states to ensure that appropriate mechanisms are adopted, not because such states will have an exemption from liability, but to give the Area the best chance of surviving mining activities.

⁶⁹ Stephens and Hutton, above n 1, 157.

⁷⁰ *LOS Convention*, art 153(1), annex III art 2. For discussion of the mandate of ISBA see Tullio Scovazzi, 'Mining, Protection of the Environment, Scientific Research and Bioprospecting: Some Considerations on the Role of the International Sea-Bed Authority' (2004) 19 *International Journal of Marine and Coastal Law* 383.

⁷¹ The contractors are State Enterprise Yuzmorgeologiya (Russian Federation), Interoceanmetal Joint Organisation (consortium formed by Bulgaria, Cuba, Czech Republic, Poland, Russian Federation and Slovakia), Government of the Republic of Korea, China Ocean Mineral Resources Research and Development Association (China), Deep Ocean Resources Development Company (Japan), Institut Francais de Recherche pour l'Exploitation de la Mer (France), Government of India, Federal Institute for Geosciences and Natural Resources of the Federal Republic of Germany (Germany), Ministry of Natural Resources and the Environment (Russian Federation), NORI (Nauru) and Tonga Offshore Mining Limited (Tonga): see ISBA, *Contractors* <<http://www.isa.org.jm/en/scientific/exploration/contractors>>.

⁷² *Advisory Opinion*, above n 1, [219].

While the *Advisory Opinion* provides useful guidance on the content of the measures to enable discharge of the Primary and Direct Obligations, it merely noted that deep seabed mining legislation had been implemented in Germany and the Czech Republic without any examination or analysis of the adequacy of such legislation to meet the Primary and Direct Obligations, contrary to such a suggestion by Germany regarding its legislation.⁷³

It is the aim of this part of the article to examine whether the mechanisms contained in the German *Meeresbodenbergengesetz* ('*Seabed Mining Act*')⁷⁴ are sufficient to discharge the Primary and Direct Obligations. The *Seabed Mining Act* was first enacted in Germany in 1995, between the coming into force of the *LOS Convention* and the *1994 Agreement*. It was later amended in 2006, presumably following ISBA's decision to approve a German sponsored entity to undertake exploration activities on 23 August 2005.⁷⁵

In July 2005, ISBA had received an application for the approval of a plan of work for exploration for polymetallic nodules by Germany, represented by the German Federal Institute for Geosciences and Natural Resources ('IGNR'), across an area of 149 976 square kilometres in the Clarion-Clipperton Zone.⁷⁶ IGNR is the current geoscientific institution of Germany and the successor to the data and information obtained by a 'pioneer investor' in the 1970s and 1980s.

Under Resolution II para 1(a) of the Third United Nations Conference on the Law of the Sea ('UNCLOS III'), a 'pioneer investor' refers to:

- (i) France, India, Japan and the Soviet Union or their enterprises;
- (ii) four multinational consortiums effectively controlled by Belgium, Canada, Germany, Italy, Japan, Netherlands, United Kingdom and the United States of America; and
- (iii) any developing State or their enterprises.

Germany has been involved in exploration activities in the Area since the late 1960s, through its national enterprises Metallgesellschaft AG ('MAG') and Preussag AG ('PAG'). In 1974, the 'Arbeitsgemeinschaft meerestechnisch gewinnbare Rohstoffe' ('AMR') was founded by a joint venture between MAG, PAG and Deutsche Schachtbau-und Tiefbohrgesellschaft mbH for the exclusive purpose of developing nodule deposits.⁷⁷

Then, in 1975, the international joint venture Ocean Management Incorporated ('OMI') was established by AMR, Deep Ocean Mining Corporation (a consortium of 22 Japanese exploration companies) and two North American companies: International

⁷³ *Advisory Opinion*, above n 1, [237]. For German legislation, see Germany, *Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the International Seabed Area (Request for Advisory Opinion): Written Statement of the Republic of Germany* (18 August 2010) <http://www.itlos.org/fileadmin/itlos/documents/cases/case_no_17/Statement_Germany.pdf>.

⁷⁴ *Seabed Mining Act*, 6 June 1995 (Federal Law Gazette I, 778, 782), most recently amended by art 160 of the Ordinance of 31 October 2006 (Federal Law Gazette I, 2407). See Germany, above n 73.

⁷⁵ ISBA, <<http://www.isa.org.jm/files/documents/EN/11thSession/Council/ISBA11-C-10.pdf>>.

⁷⁶ ISBA, *Report and Recommendations to the Council of the International Seabed Authority Relating to an Application for Approval of a Plan of Work for Exploration by the Federal Republic of Germany Represented by the German Institute for Geosciences and Natural Resources* (ISBA/11/C/7) (18 August 2005), 1 <<http://www.isa.org.jm/files/documents/EN/11thSession/Council/ISBA11-C-7.pdf>>.

⁷⁷ K J Derkmann, R Fellerer and H Richter, 'Ten Years of German Exploration Activities in the Field of Marine Raw Materials' (1981) 7 *Ocean Management* 1, 2.

Nickel Corporation (Canada) and South Eastern Drilling Company (USA).⁷⁸ The OMI consortium falls within the definition of 'pioneer investor' by virtue of Resolution II para 1(a)(ii) of UNCLOS III. Within OMI, AMR was the responsible partner for carrying out the exploration activities.⁷⁹

Despite the fact that the United Nations General Assembly adopted the Moratorium Resolution,⁸⁰ which prohibited unilateral seabed mining pending agreement on an international regime, Germany, along with other developed states,⁸¹ introduced interim seabed mining legislation dealing with exploration and exploitation of minerals in the Area, pending the entry into force of an international agreement, called the *Act of Interim Regulation of Deep Seabed Mining*.⁸² Under the *Interim Mining Act* s 4, Germany could issue licences to its nationals, or international consortiums with German nationals, to undertake exploration and exploitation activities in deep seabed.

The enactment of unilateral legislation in numerous developed states concerned many developing states as they felt that their interests would not be adequately protected unless an international agreement was reached.⁸³ Fortunately, the *LOS Convention* and *1994 Agreement* have been widely ratified by the State Parties and now provide a uniform regulatory scheme for the exploration and exploitation activities in the Area. However, in reaching international agreement, certain preferential treatment was given to pioneer investors.

Pursuant to the *1994 Agreement*,⁸⁴ a plan for work for exploration submitted on behalf of a state or entity, or any component of such entity, referred to in Resolution II para (a)(ii) or (iii) of UNCLOS III, other than a registered pioneer investor, which had already undertaken substantial activities in the Area prior to the entry into force of the *LOS Convention*, or its successor in interest, is considered to have met the financial and technical qualifications necessary for approval of that work provided the sponsoring state(s) certifies that the applicant has expended:

- (i) at least US\$30 million in research and exploration activities; and
- (ii) no less than 10 per cent of that amount in the location, survey and evaluation area referred to in the plan of work.

⁷⁸ P Halbach and Prof Dr Ing, 'The Metallic Minerals of the Pacific Floor' (1980) 4 *GeoJournal* 407, 419.

⁷⁹ Derkmann, Fellerer and Richter, above n 77, 2.

⁸⁰ United Nations General Assembly, 'Question of the Reservation Exclusively for Peaceful Purposes of the Sea-Bed and the Ocean Floor, and the Subsoil Thereof, Underlying the High Seas Beyond the National Limits of Present National Jurisdiction, and the Use of their Resources in the Interests of Mankind', Resolution 2574 D (XXIV) (1969), Basic Documents No 16.

⁸¹ Including the United States of America, United Kingdom, France, Japan, Soviet Union and Italy: see Lee Kimball, 'Belgium-Canada-Italy-Netherlands-Union of Soviet Socialist Republics: Agreement on the Resolution of Practical Problems with Respect to Deep Seabed Mining Areas, and Exchange of Notes Between the United States and the Parties to the Agreement' (1987) 26 *International Legal Materials* 1502. See also John Kindt, 'Deep Seabed Exploitation' (1985) 4 *UCLA Journal of Environmental Law and Policy* 1.

⁸² *Act of Interim Regulation of Deep Seabed Mining*, 22 August 1980 (Federal Law Gazette I, 9080, p 1457) translated in Bruno Ristau, 'Federal Republic of Germany: Act of Interim Regulation of Deep Seabed Mining' (1981) 20 *International Legal Materials* 393 (*Interim Mining Act*).

⁸³ David Hegwood, 'Deep Seabed Mining: Alternative Schemes for Protecting Developing Countries from Adverse Impacts' (1982) 12 *Georgia Journal of International and Comparative Law* 173, 174.

⁸⁴ *1994 Agreement* annex s 1(6)(a)(i).

The purpose of Resolution II was to allow pioneer investors immediately to carry out prospecting and exploration activities;⁸⁵ for example, the recovery of polymetallic nodules with a view to the designing, fabricating and testing of mining equipment, despite the coming into force of the *LOS Convention* and *1994 Agreement*.

In its application for a contract with ISBA, Germany declared that IGNR was the successor institution of PAG and the German consortium AMR and certified that an amount in excess of US\$30 million was expended in substantial research and exploration activities in the Area.⁸⁶ On this basis, IGNR is considered a pioneer investor. While IGNR is subject to special treatment under the terms of the *1994 Agreement*, because the application was made subsequent to the adoption of the *Nodules Regulation*, Germany was required to submit a certificate of sponsorship.⁸⁷

According to Germany, the *Seabed Mining Act* (as amended) is ‘one possible means’ of fulfilling the obligation to adopt necessary and appropriate measures to ensure that IGNR and other nationals engaged in prospecting, exploration or exploitation activities in the Area, although it is certainly not the only one.⁸⁸ The *Seabed Mining Act* s 1(1)(1) provides that the purpose of the Act is to, among other things, ensure compliance with the Primary and Direct Obligations under the *LOS Convention*, the *1994 Agreement* and the *Regulations*. However, the critical question is whether or not Germany, through the *Seabed Mining Act*, fully discharges the Primary and Direct Obligations.

The provisions of the *Seabed Mining Act* apply to German nationals, persons or commercial partnerships engaged in prospecting activities in the Area and activities in the Area under a contract with ISBA alike. Under s 4(1) of the *Seabed Mining Act*, prospectors must register with the Secretary-General of ISBA and report the registration to the Oberbergamt (‘High Mining Office’) before commencing any prospecting activities.⁸⁹ Similarly, under s 4(2), contractors must enter into a contract with ISBA and obtain approval from High Mining Office before engaging in activities in the Area. Holders of licences under s 4 of the *Interim Mining Act* are also required to submit an application for approval by the High Mining Office.⁹⁰

The *Seabed Mining Act* implements a number of mechanisms aimed at discharging the Primary and Direct Obligations, including:

- (i) clearly indicating that prospectors and contractors must comply with the *Seabed Mining Act* and its associated ordinances, the *LOS Convention*, the *1994 Agreement*, the *Regulations* and the relevant contract with ISBA;⁹¹
- (ii) expressly authorising the Federal Government and the Federal Ministry of Economics and Technology to enact ordinances on prospecting, exploration and exploitation of minerals in the Area that are adopted by ISBA (such as the

⁸⁵ E D Brown, ‘Neither Necessary nor Prudent at this Stage: The Regime of Seabed Mining and the Impact on the Universality of the UN Convention on the Law of the Sea’ (1993) 17 *Marine Policy* 81, 85.

⁸⁶ Germany, above n 73, 5.

⁸⁷ ITLOS, Letter from Michael Lodge, Legal Counsel of ISBA, to Registrar M Philippe Gautier, Registrar of ITLOS (17 September 2010) <http://www.itlos.org/fileadmin/itlos/documents/cases/case_no_17/ISA_2.pdf>.

⁸⁸ Germany, above n 73, 7.

⁸⁹ See also *Nodules Regulation*, above n 27, reg 2(1); *Sulphides Regulation*, above n 28, reg 2(1).

⁹⁰ *Seabed Mining Act*, 6 June 1995 (Federal Law Gazette I, 778, 782), most recently amended by art 160 of the Ordinance of 31 October 2006 (Federal Law Gazette I, 2407) s 13.

⁹¹ *Ibid* s 1(1)(3).

Regulations)⁹² and/or necessary for supervision of such activities (such as reporting and recording requirements).⁹³ It has been argued that this allows Germany to implement stricter standards than those imposed by ISBA;⁹⁴

- (iii) allowing the High Mining Office to impose conditions of approval on contractors in order to attain the objects of the *Seabed Mining Act*.⁹⁵ This may include, for instance, requirements to complete environmental impact assessments and to monitor and evaluate the impacts of the activities in the Area on the marine environment;⁹⁶
- (iv) providing the High Mining Office with broad powers to demand information, enter facilities and seize objects from prospectors and contractors;⁹⁷ and
- (v) creating administrative offences for deliberately or negligently breaching the *Seabed Mining Act*, ordinances enacted under the *Seabed Mining Act*, conditions of approval imposed by High Mining Office and the contract with ISBA by prospectors (where applicable) and contractors.⁹⁸ Penalties range from €5,000 to €50,000 depending on the particular offence. However, if the prospector or contractor negligently or recklessly endangers the life or health of another, stocks of living resources and marine life or assets of a third party, it may be liable for a higher fine and imprisoned for a term of up to five years.

It is, however, questionable whether Germany has fully discharged the Primary and Direct Obligations by enacting the *Seabed Mining Act* and, therefore, whether it can rely on the exemption from liability contained in art 139(2) of the *LOS Convention*.

Assessment of application for approval

Under the *Seabed Mining Act*, an application for approval to High Mining Office must be supported by the application for the conclusion of the contract with ISBA, the draft plan of work and all other necessary documentation.⁹⁹ The draft plan of work is then provided to the Federal Maritime and Hydrographic Agency and Federal Environmental Agency for comment regarding matters of shipping and environmental protection.¹⁰⁰ When determining the application, these comments must be considered by the High Mining Office.

The High Mining Office will approve the application for approval if:¹⁰¹

- (i) the application and plan of work meets the preconditions of the *LOS Convention* (in particular, art 4(6)(a)–(c)), the *1994 Agreement* and the *Regulations*; and

⁹² Ibid s 7(1) and (2).

⁹³ Ibid s 8(5).

⁹⁴ Germany, above n 73, 7.

⁹⁵ *Seabed Mining Act*, 6 June 1995 (Federal Law Gazette I, 778, 782), most recently amended by art 160 of the Ordinance of 31 October 2006 (Federal Law Gazette I, 2407) s 4(9).

⁹⁶ As required by the *1994 Agreement*, above n 5, annex s 1(7); *Nodules Regulation*, above n 27, reg 31(6); *Sulphides Regulation*, above n 28, reg 33(6).

⁹⁷ *Seabed Mining Act*, 6 June 1995 (Federal Law Gazette I, 778, 782), most recently amended by art 160 of the Ordinance of 31 October 2006 (Federal Law Gazette I, 2407) s 8(1)–(4).

⁹⁸ Ibid ss 11 and 12.

⁹⁹ Ibid 4(3).

¹⁰⁰ Ibid s 4(4).

¹⁰¹ Ibid s 4(6).

- (ii) the contractor:
 - (a) is sufficiently reliable and able to guarantee that the proposed activities in the Area will be implemented in an orderly manner. The contractor is ‘reliable’ if, for example, it has the ‘necessary expertise and has not previously come to the attention of the authorities for violating environmental norms’;¹⁰² and
 - (b) has the financial capacity to carry out the proposed activities in the Area in an orderly manner; and
 - (c) demonstrates that the proposed activities in the Area are commercially viable.

On the other hand, the High Mining Office must refuse the application if a contract has already been issued by ISBA to a third party regarding the exploration or exploitation of the same minerals.¹⁰³

Despite these legislative requirements, the High Mining Office is not expressly required to consider and apply a precautionary approach. Further, the High Mining Office is not required to refuse the application if it is inconsistent with the precautionary approach. Under reg 31(2) of the *Nodules Regulation* and reg 33(2) of the *Sulphides Regulation*, sponsoring states are required to apply a precautionary approach and, in respect of the latter, best environmental practices. For this reason, the *Seabed Mining Act* s 4 should be amended to require the High Mining Office to consider the precautionary approach when determining applications and, in circumstances where there are scientific uncertainties and there are plausible indications of risk, the application must be refused. A similar provision could also be included regarding considering and applying best environmental practices.

Measures to ensure provision of guarantee

Under the *Nodules Regulation* reg 32(7) and the *Sulphides Regulation* reg 35(8), prior to the commencement of testing of collecting systems and processing operations the contractor must provide ISBA with a guarantee of its financial and technical capability to comply promptly with emergency orders. At the request of the Secretary-General of ISBA, a sponsoring state must take necessary measures to ensure that the contractor provides such a guarantee. The *Seabed Mining Act* does not expressly contemplate this direct obligation nor implement measures to ensure the provision of the guarantee by the contractor. Although this measure may be imposed on the contractor through the enactment of an ordinance or a condition of approval, a statutory requirement to provide such a guarantee is preferable.

Prompt and adequate compensation

Pursuant to the *LOS Convention* art 235(2), State Parties must ensure through their domestic legal systems that recourse is available to ‘prompt and adequate compensation’ in respect of damage caused by pollution to the marine environment. The *Seabed Mining Act* does not directly provide such recourse nor refer to pollution events more generally. While recourse

¹⁰² Germany, above n 73, 7.

¹⁰³ *Seabed Mining Act*, 6 June 1995 (Federal Law Gazette I, 778, 782), most recently amended by art 160 of the Ordinance of 31 October 2006 (Federal Law Gazette I, 2407) s 4(8).

may ordinarily be available under German law for damage caused to the marine environment by pollution, it may not necessarily be 'prompt' or 'adequate'.

Responsibility

Interestingly, the *Seabed Mining Act* s 4(7) provides that, in circumstances where the contractor is a member of an international partnership or consortium from several State Parties and the plan of work has been approved by another State Party, the application may be approved by the High Mining Office without any further scrutiny. The limitation on this exemption from full assessment by the High Mining Office is that the other relevant State Party must have equal preconditions and standards for the examination of the proposed plan of work. Presumably the onus is on the contractor to establish, to the High Mining Office's satisfaction, that the other relevant State Party has equivalent or more rigorous legislation in force. This may be an attempt by Germany to avoid the situation of 'sponsored state of convenience'.

However, the author notes that this exemption potentially exposes Germany to liability because international partnerships or consortiums sponsored by multiple states bear joint and several liability and, in order to be exempt from liability, it is imperative that each State Party has taken all necessary and appropriate measures to secure compliance with the Primary and Direct Obligations. If the other relevant State Party responsible for the assessment of the activities fails to discharge the Primary and Direct Obligations, all sponsoring states may be potentially liable. While it is recognised that duplication of the assessment regime should be reduced for a contractor (being an international partnership or consortium) with multiple sponsored states, each state must also ensure that its domestic legal systems is aimed at securing compliance with the Primary and Direct Obligations. Therefore, thorough consideration must be given by sponsoring states intending to rely upon another State Party's assessment and monitoring regime to the adequacy of that regime to discharge the Primary and Direct Obligations and whether an exemption from assessment should be given.

The *Seabed Mining Act* s 5 provides that prospectors and contractors are responsible for fulfilling their obligations, complying with the contract with ISBA, the *Seabed Mining Act* and associated ordinances, and providing for the safety of the operating facilities and protection of the environment. As set out by the Chamber in the *Advisory Opinion*, sponsoring states are nevertheless responsible for discharging the Primary and Direct Obligations, including the due diligence obligation. If the deficiencies identified above are not remedied, Germany may potentially be liable for damage caused by IGNR.

VI Conclusion

The *Advisory Opinion* is significant as it provides useful guidance in relation to activities in the Area. In particular, the *Advisory Opinion* imposed high standards on sponsoring states to fulfil the due diligence obligation and to take a precautionary approach. Further, sponsored entities must prepare EIAs and apply best environmental practices. As a result of the *Advisory Opinion*, sponsoring states and sponsored entities alike have more certainty regarding their obligations and potential liabilities. However, the Chamber did identify potential gaps in the liability regime that ISBA must immediately seal to avoid situations

arising whereby there is inadequate redress for damage caused to the marine environment by activities in the Area.

The German case study demonstrates how onerous it is for sponsoring states to discharge fully their Primary and Direct Obligations and how relevant legislation will require ongoing review, particularly in circumstances of new legal developments. In the author's view, the German legislation falls short of discharging the Primary and Direct Obligations and it is suggested that various amendments to the legislation are necessary in order to strengthen the rigour of the assessment process. By strengthening the *Seabed Mining Act*, Germany could take the lead in implementing the highest standards of due diligence to protect the marine environment from seabed mining and provide a legislative model for both developing and developed states. Only through adopting these standards can we be sure that sponsoring states are taking appropriate and necessary measures to avoid damage to the marine environment and are ensuring and monitoring the activities of its contractors.

As pointed out by Anton et al, 'for most States it will be necessary to introduce new laws to provide the requisite rules, regulations and procedures'.¹⁰⁴ It is vital that sponsoring states implement such measures to prevent or minimise the risk of harm to the Area. Mining activities in the Area, through the destruction of seabed habitat or the effects of pollution and disposal of waste, will inevitably have an impact on the marine environment. The strict limits imposed on deep seabed miners by the Chamber are necessary in order to minimise the risk of harm being caused to the Area, particularly because it is a common heritage of mankind.

¹⁰⁴ Anton, Makgill and Payne, above n 1, 65.

