Notes and Commentaries

China's Deep Seabed Law: Towards "Reasonably Appropriate" Environmental Legislation for Exploration and Exploitation of Deep Sea Minerals in the Area

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I Introduction

Due to the rising demand for minerals or metals and the decline of land-based mineral resources, there has been an emerging surge of interest in exploration and exploitation of deep-sea mineral resources.² Existing marine scientific research shows that a large number of mineral resources can be found in the international deep seabed area.³ The United Nations Convention on the Law of the Sea (hereafter "UNCLOS or the Convention")⁴ gives legal effect

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- 2 For discussions on this account, see P.A.J. Lusty and A.G. Gunn, *Challenges to global mineral resource security and options for future supply*, 393 GEOLOGICAL SOCIETY 265–276 (2015); STUDY TO INVESTIGATE THE STATE OF KNOWLEDGE OF DEEP-SEA MINING' (Final Report under FWC MARE/2012/06 - SC E1/2013/04).
- 3 There are commonly four categories of mineral resources in the Area, which include: (1) liquid and gaseous substances, such as petroleum, gas, condensate, helium, nitrogen, and carbon dioxide; (2) minerals which occur under the seabed at depths greater than three meters; (3) ore-bearing silts and brines containing iron, zinc and copper; and (4) useful minerals occurring on the surface of the seabed or at depths of less than three meters, which include calcareous and siliceous oozes, and phosphorite and manganese nodules. See Victor Prescott, *The Deep Sea Bed*, in R.P. BARSTON, PATRICIA BIRNIE (EDS.), *THE MARITIME DIMENSION* (1980), pp. 54–55.
- 4 United Nations Convention on the Law of the Sea, opened for signature 10 December 1982, entered into force on 16 November 1994, 1833 UNTS 397.

to the notion that “the Area” and its resources are the “common heritage of mankind”,⁵ which entitles all States to explore and exploit minerals in the International Seabed Area (hereafter “the Area”) with the permission of International Seabed Authority (ISA),⁶ potentially provides an exciting opportunity for those States to seek ways to address economic vulnerability and to expand a narrow resource base.

Currently, increasing numbers of exploration activities are taking place in the Area.⁷ There is no doubt that China is one of the most active States that are interested in deep seabed activities.⁸ This interest of China can be dated back to 1984. In this year, China initially established a strategic plan, in which China intended to apply for an exploration area regarding polymetallic nodules in the Area no later than 1990.⁹ To this end, China Ocean Mineral Resources R & D Association (COMRA) was established¹⁰ in 1990 and then registered as an international seabed pioneer investor in the United Nations in August 1991.¹¹ As of now, COMRA has become the contractor conducting exploration activities in the Area with all three mineral deposit types.¹² Moreover, China Minmetals

5 UNCLOS, Art. 136.

6 The ISA has its headquarters in Kingston, Jamaica, functioning as a representative of mankind as a whole for the management of deep seabed mining. The ISA is an autonomous international organization under the UNCLOS, and the 1994 Agreement relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982 [hereinafter “1994 Implementing Agreement”].

7 As of 27 April 2016, 24 contracts for exploration had entered into force: 15 for exploration for polymetallic nodules; 5 for exploration for polymetallic sulphides and 4 for exploration for cobalt-rich ferromanganese crusts. See *Status of contractors for exploration in the Area* (ISBA/22/C/5, 10 May 2016), para. 2.

8 J Qiu, *China Outlines Deep-Sea Ambitions* 466 NATURE 166 (2010).

9 See China Ocean Mineral Resources R&D Association, earnestly study and implement the Deep Seabed Law, promote the new development of China's deep seabed industry, available at: http://www.comra.org/2016-03/16/content_8638524.htm.

10 China Ocean Mineral Resources R & D Association, referred to as “COMRA”, was established on 9 April 1990 approved by the state council, its purpose was: through international seabed resources research and development activities, opened up new sources of resources in our country, promoted the formation and development of seabed high and new technology industry in China, safeguarded the rights and interests of China's developing international seabed resources, and made great contribution to human development and utilization of international seabed resources.

11 See China Ocean Mineral Resources R&D Association, Brief Introduction, available at: http://www.comra.org/2013-09/23/content_6322477.htm.

12 Contract for polymetallic nodules in Clarion-Clipperton Fracture Zone (22 May 2001–21 May 2016); Contract for polymetallic sulphides in South-west Indian Ridge (18 November

Corporation (CMC) submitted a new plan of work for exploration for polymetallic nodules in 2014¹³ and was approved in 2015.¹⁴ Consequently, China becomes one of the few States who sponsored more than one contractor. It is conceivable to imagine how difficult and complex for China as a sponsoring State to regulate its sponsored contractors to ensure their compliance of international environmental obligations arising from UNCLOS and related international instruments in the process of deep seabed exploration or even exploitation activities in the Area. In doing so, China has made quite a few legislative efforts.¹⁵ The People's Republic of China's (PRC) recent Deep Seabed Area Resource Exploration and Exploitation Law (China's Deep Seabed Law) is a significant action in this field.

The present article examines whether China's Deep Seabed Law is a "reasonably appropriate" environmental legislation for exploration and exploitation of deep sea minerals in the Area pending any Chinese Contractors

2011–17 November 2026); Contract for cobalt-rich ferromanganese crusts in Western Pacific Ocean (29 April 2014–28 April 2029), see 'Status of contractors for exploration in the Area' (ISBA/22/C/5, 10 May 2016). It should be noted that the contract for polymetallic nodules which expired on 21 May 2016, has been approved to extend another 5 years since 22 May 2016, see *Draft decision of the Council of the International Seabed Authority relating to an application by the China Ocean Mineral Resources Research and Development Association for extension of a contract for exploration for polymetallic nodules between the China Ocean Mineral Resources Research and Development Association and the Authority* (ISBA/22/C/L.7, 14 July 2016).

- 13 *Application for approval of a plan of work for exploration for polymetallic nodules in the Area by China Minmetals Corporation* (ISBA/21/LTC/5, 19 January 2015).
- 14 *Decision of the Council relating to an application for the approval of a plan of work for exploration for polymetallic nodules submitted by China Minmetals Corporation* (ISBA/21/C/17, 20 July 2015).
- 15 Since 1992, China has promulgated a series of laws and regulations concerning mining activities and environmental protection. However, they are applicable either to onshore mineral resources mining or to offshore oil and gas resources, rather than exploration and exploitation for international deep seabed mineral resources. Those laws are as follows: Law of the People's Republic of China on Safety in Mines (adopted 7 November 1992); Mineral Resources Law of the People's Republic of China (adopted 19 March 1986 and amended 29 August 1996); Rules for the Implementation of the Mineral Resources Law of the People's Republic of China (adopted 26 March 1994); Marine Environmental Protection Law of the People's Republic of China (adopted 25 December 1999 and amended 1 April 2000); Decision of the State Administration of Work Safety on Amending the Provisions on the Safety Training of Production and Operation Entities and Other Ten Regulations (adopted 29 August 2013); Administrative Regulation on the Prevention and Treatment of the Pollution and Damage to the Marine Environment by Marine Engineering Construction Projects (adopted 9 September 2006).

conducting deep seabed mining in the Area. It begins with an overview of China's Deep Seabed Law to present its legislative background, preliminary issues as well as main contents of this law. Next, the Seabed Disputes Chamber (hereinafter "the Chamber") of the International Tribunal for the Law of the Sea's (ITLOS) advisory opinion *Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area* (hereinafter "ITLOS Advisory Opinion") that clarifies the contents of sponsoring States' international environmental obligations and the scope of sponsoring States' liabilities when sponsored persons and entities cause damages during the process of mining in the Area,¹⁶ provides quite a few indicating hints and suggestions and thus needs closely studying. Based on above research, merits and major problems of China's Deep Seabed Law can be figured out. Finally, proposals for improvement of China's Deep Seabed Law will be put up in the last section.

II Overview of China's Deep Seabed Law

1 *The Legislative Background of China's Deep Seabed Law*

a Legal Background

Pursuant to UNCLOS, States Parties "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 the Convention".¹⁷ UNCLOS requests the State Parties to carry out this obligation by way of adopting laws and regulations and taking administrative measures within the framework of its legal system.¹⁸ Thus, laying down national deep seabed mining legal instruments means sponsoring States carry out their international responsibilities and obligations under the UNCLOS. Also, it is a reflection of the principle of *pacta sunt servanda*.¹⁹ Otherwise, national legislation for deep seabed mining in the Area also has

16 *Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area*, Case No. 17, Advisory Opinion (ITLOS Seabed Disputes Chamber 1 February 2011), 50 ILM 458 (2011).

17 UNCLOS, Art. 139 (1).

18 UNCLOS, Art. 139(1); Annex III, Art. 4(4).

19 With regard to details of this principle, see A. Aust, *Pacta Sunt Servanda*, in MAX PLANCK ENCYCLOPEDIA OF PUBLIC INTERNATIONAL LAW [MPEPIL].

the function of exempting the sponsoring State from liability deriving from damage caused by the sponsored Contractors. According to the UNCLOS, State Parties shall bear joint and several liabilities once damage arising from their failure to carry out responsibilities. But it further provides that sponsoring States who has adopted necessary and appropriate measures shall not be liable for the damage caused by contractors. However, with regard to necessary and appropriate measures, the Convention refers to Article 153, paragraph 4 and Annex III, Article 4, paragraph 4, instead of explicit explanation. Those two provisions do not give, nevertheless in fact contain, an explanation of “necessary and appropriate measures”, which at least includes laws and regulations and administrative measures as to activities in the Area adopted by sponsoring States and those legal instruments should be “reasonably appropriate”. Thus, in order to carry out international obligations and exempt from unnecessary liability, China has to adopt a “reasonably appropriate” legislation for regulating its sponsored Contractors’ exploration and exploitation activities in the Area. That is the legal causation of China’s Deep Seabed Law. The explanation of “reasonably appropriate” which could make reference to ITLOS Advisory Opinion will be provided in Section 3 of this paper.

b Process of Legislation

Preparing work for China’s deep seabed legislation substantively started in 2013. In April 2013, Environment and Resources Committee of the National People’s Congress (ERC)²⁰ held a symposium regarding ocean legislation, exploring legislative work of deep seabed mining in the Area. Then, the plan for deep seabed legislation was included in the secondary-class legislation plan of the NPC standing committee in October 2013.²¹ In December 2013, ERC set up a drafting leading group and working group (hereinafter “the legislative drafting group”) specializing in deep seabed legislative work, which made deep seabed legislative work step into substantive stage. The legislative drafting group spent at least one year conducting legislative research and investigation at

20 Environment and Resources Protection Committee of National People’s Congress (NPC), is one of the special committees of the NPC, led by the council of NPC; when the NPC is not in session, it is under the leadership of the standing committee of the NPC. Environment and Resources Protection Committee of NPC is composed of one chairman of committee, several vice-chairman of committee and several committee members.

21 See *State Oceanic Administration honors the personnel standing out in legislative work of the Deep Seabed Law*, CHINA OCEAN NEWS, 1766th edition, available at: <http://epaper.oceanol.com/shtml/zghyb/20160415/>.

home and abroad. Members of the legislative drafting group visited quite a few domestic prestigious research institutes in this regard and many practitioners located in coastal cities such as Guangzhou, Xiamen and Qingdao for high-frequency investigation and discussion. Moreover, in September 2014, the legislative drafting group respectively visits ITLOS headquartered in Hamburg and ISA headquartered in Kingston, asking for their opinions.²² After more than two years' preparatory work, the First Draft of China's Deep Seabed Law came out in June 2015, which sought the views and opinions on the content and structure of the draft from stakeholder base in the following one month. Afterwards, after twice review, the Standing Committee of the NPC adopted China's Deep Seabed Law by vote on 26 February 2016, which came into force on 1 May 2016.²³

2 *Preliminary Issues of China's Deep Seabed Law*

a Legal Framework

China's Deep Seabed Law contains 29 articles in 7 chapters (See Table 10.1 below). The first chapter provides general provisions, including legislative objective, legislative principles, applicable scope, administrative authority, etc; supplementary provisions are given in Chapter 7, incorporating terminologies mentioned in this law and their definitions, tax matters and date of entry into force of the law. The main body of China's Deep Seabed Law consists of contents as to Exploration and Exploitation (Chapter 2), Environmental Protection (Chapter 3) and Scientific Research and Resource Survey (Chapter 4), followed by provisions of Supervision (Chapter 5) and Liability (Chapter 6), which will be introduced in following sections.

b Legislative Objective and Applicable Scope

China's Deep Seabed Law has two main objectives. The first objective aims to safeguard China's national interests, i.e. regulating the exploration and exploitation of resources in deep seabed areas conducted by China-sponsored Contractors as well as promoting deep sea scientific and technological research and resource investigation. Second objective focuses on maintaining

22 See Permanent Mission of the People's Republic of China to the International Seabed Authority, China oceanic legislative study group's access to international seabed management, available at: <http://china-isa.jm.china-embassy.org/chn/xwdt/t1191407.htm>.

23 The NPC is responsible for legislating and amending of the constitution law, civil law, criminal law, national institutional law and other basic laws, while the NPC's Standing Committee is responsible for legislating and amending of all the other national laws. See Legislation Law of the People's Republic of China (adopted on 15 March 2000 and amended on 15 March 2015), Art. 7.

TABLE 10.1 *The structure of the China's deep seabed law*

General Provisions (Chap. 1)		Supplementary Provisions (Chap. 7)	
legislative objective	art. 1	terms and definitions	art. 27
legislative principles	art. 3	tax issues	art. 28
applicable scope	art. 2	date of entry into force	art. 29
supporting policies	arts. 4 & 6	–	–
administrative authorities	art. 5	–	–
Explorations & Exploitations (Chap. 2)		Environmental Protection (Chap. 3)	Scientific Research & Resource Survey (Chap. 4)
application & review procedure	arts. 7, 8 & 10	pollution & hazard prevention	art. 12
contractor's rights & obligations	art. 9	marine environment monitoring	art. 13
contingency management	art. 11	ecological sustainable development	art. 14
			DSPP operation art. 16
			data & sample management art. 18
			incentive policies arts. 15 & 17
Supervision & Inspection (Chap. 5)			
supervision authority			art. 19
contractor's periodical reports & other obligations			arts. 20 & 22
contents of inspection			art. 21
Legal Liability (Chap. 6)			
licence revocation & liability of compensation			art. 23
finances & confiscation of illegal gains			arts. 24, 25 & 26
criminal responsibility			art. 26

SOURCE: G. ZHANG AND P. ZHENG, *A NEW STEP FORWARD: REVIEW OF CHINA'S 2016 LEGISLATION ON INTERNATIONAL SEABED AREA EXPLORATION AND EXPLOITATION*, 73 MARINE POLICY, PP. 244–255, (2016).

the benefit of all mankind by means of protecting the marine environment and promoting the sustainable utilization of resources in the Area.²⁴

The applicable scope of China's Deep Seabed Law can be divided into three aspects: eligible subjects, applicable activities and applicable area. The eligible subjects of the China's Deep Seabed Law refer to citizens, juridical person or other organizations of the PRC.²⁵ At present, there are two Chinese subjects signing the exploration contract with ISA, respectively COMRA and CMC, both of which are state-owned entities. In the future, there will be more business enterprises and individuals to participate in the deep seabed activities. The China's Deep Seabed Law was enacted to regulate investigation, exploration and exploitation of deep-sea resource and also intends to boost marine scientific research and marine environmental protection.²⁶ The applicable area is depicted as "deep seabed area". It is further explained as seabed, ocean floor and subsoil beyond the jurisdiction of the PRC and other countries.²⁷

Three interesting observations are found in this part. First, this law uses "resource investigation" rather than "prospecting" although they have almost identical explanation. Second, the term "resources" is mentioned in the law. However, there is no explanation as to what constitutes "resources". It is speculated that "resources" in this law not only refer to mineral resources but also other resources such as genetic resources. Third, in this law, the term "deep seabed area" is used instead of the term "the Area" enshrined in UNCLOS. It is still obscure whether there exists any difference between the two.²⁸

3 *The Main Contents of China's Deep Seabed Law*

a Exploration and Exploitation

There are four main points in the chapter. First, China's Deep Seabed Law sets up a dual-track system for application of exploration and exploitation in the Area, namely, licensing in China and granting a contract in the ISA. The former procedure is the prerequisite of the latter. Moreover, licensing can also be seen as China's procedure of assessment regarding provide sponsorship. To apply for engaging in resources exploration or exploitation activities in the Area,

²⁴ China's Deep Seabed Law, Art. 1.

²⁵ China's Deep Seabed Law, Art. 2 (1).

²⁶ China's Deep Seabed Law, Art. 2 (1).

²⁷ China's Deep Seabed Law, Art. 2 (2).

²⁸ Pursuant to China's Deep Seabed Law, Art. 2 (2), "For the purpose of this Law, 'deep seabed areas' means seabed, ocean floor and their subsoil outside the jurisdiction of the People's Republic of China and other countries." Literally, the two terms should be identical. This article will use "the Area" referring both of two.

applicants must submit materials which the Marine Administrative Department under the State Council (MAD) identifies. The MAD shall examine the materials submitted by the applicant. If the application is in national interest and the applicant has sufficient funds, technologies, equipment and other capabilities and conditions, the MAD shall grant a license to the applicant within 60 working days.²⁹

Second, the Contractor enjoys the corresponding exclusive rights of exploration or exploitation for specific resources in contract area. China's Deep Seabed Law also specifies obligations of Contractors. Specifically, the contractors shall fulfill the contractual obligations of exploration or exploitation contracts. Otherwise, they must guarantee personal safety and protect marine environment. Importantly, Contractors engaging in exploration and exploitation activities in the Area shall protect objects of an archaeological or historical nature as well as submarine cables, etc. Finally, Contractors engaging in exploration and exploitation activities also shall abide by the PRC's laws and administrative regulations in relation to production safety and labor protection.³⁰

Third, the contractor may transfer the rights and obligations of exploration and exploitation contract, or change contract, but shall report to the MAD for approval.³¹

Fourth, the Deep Seabed Law stipulates the emergency system. The contractor, in the process of exploring or exploiting international seabed resources, if happen or may happen accidents seriously damaging marine environment, the contractor shall immediately start emergency plans, and take effective measures.³²

b Marine Environmental Protection

China's Deep Seabed Law attaches great importance to protection of the marine environment, which can be seen from setting up the special chapter of

29 China's Deep Seabed Law, Art. 7 & 8. The following materials should be submitted: (1) Basic information on the applicant; (2) An explanation on the location, size and categories of minerals that the applicant intends to explore and exploit; (3) Certificates of financial status and investment abilities as well as an explanation on technical capabilities; (4) An exploration and exploitation plan, including the materials on the possible impact of exploration and exploitation activities on the marine environment, and an emergency response plan for serious damage to marine environment; (5) Other materials required by the MAD.

30 China's Deep Seabed Law, Art. 9.

31 China's Deep Seabed Law, Art.10.

32 China's Deep Seabed Law, Art. 11.

environmental protection. This part draws lessons from the international customary law and relevant regulations of the ISA on environmental protection, aiming to reach the international standards and requirements.³³ It requires the contractors, within the reasonable and feasible scope, utilize available advanced technologies and take the necessary measures to prevent, reduce and control pollution and other hazards on the marine environment.³⁴ In particular, the contractor shall, in accordance with the provisions of the exploration and exploitation contract and requirements, and regulations of MAD, investigate and study the ocean conditions in exploration and exploitation area, collect environmental baseline data, evaluate exploration and exploitation activities' impact on the marine environment; formulate and implement environmental monitoring plan on exploration and exploitation activities. Moreover, the normal operation of monitoring equipment should be guaranteed to keep original monitoring record.³⁵ Contractors engaged in exploration and exploitation activities shall take necessary measures, protect and preserve rare or fragile ecosystems, as well as exhausted, threatened or endangered species and other marine creatures' living environment, protect the marine biodiversity, maintain the sustainable utilization of marine resources.³⁶

c Scientific Research and Resources Investigation

Chapter 4 of China's Deep Seabed Law on scientific and technological issues sets out provisions to facilitate deep seabed research and resources investigation. China supports training of professional talents and encourages research cooperation between relevant industries. Specifically, China supports enterprises to conduct deep sea scientific and technological research as well as R&D of technical equipment.³⁷ The Deep Seabed Law stresses on the construction and operation of the deep sea public platform, providing professional services for deep sea scientific and technological research and resource investigation activities, and promoting deep sea scientific and technological exchange, cooperation and result sharing.³⁸ Furthermore, the duplicates of relevant materials, and physical samples or catalogue of investigation of resources shall be submitted to the MAD and other relevant departments for public utilization.³⁹

33 See Jia Yu, Deep Seabed Law laying the cornerstone of our country's Deep Seabed legal system, available at http://www.comra.org/2016-03/08/content_8620847.htm.

34 China's Deep Seabed Law, Art. 12.

35 China's Deep Seabed Law, Art. 13.

36 China's Deep Seabed Law, Art. 14.

37 China's Deep Seabed Law, Art. 15.

38 China's Deep Seabed Law, Art. 16.

39 China's Deep Seabed Law, Art. 18.

Last but not least, scientific publicity in deep seabed mining, such as opening vessels for scientific investigation, laboratories, exhibition rooms and other places and facilities, holding seminars and providing consulting services, are encouraged.⁴⁰

d Supervision and Legal Responsibility

The State organ, which is responsible to supervise and inspect contractors' exploration and exploitation activities is the MAD.⁴¹ The MAD can inspect the contractor's ships, facilities, equipment used for exploration and exploitation activities as well as logbooks, records, data.⁴² The contractors shall provide assistance and cooperation for supervision and inspection by the MAD.⁴³

The Deep Seabed Law also stipulates the liability borne by the contractor in violation of the law. If contractors submit false materials to obtain the license, or fail to perform its contractual obligations, or transfer the rights and obligations of exploration and exploitation contract without approval of the MAD, or make significant changes to exploration and exploitation contract, the MAD may revoke the license.⁴⁴

If the contractor (1) fails to file a copy of the contract to the MAD for the record; (2) fails to file on record to the MAD for reference in case of assignment, modification, or termination of the contract; (3) fails to submit data copies, material object samples or the catalogue coming from resource survey, exploration and exploitation to the MAD; (4) fails to report the contract performance status to the MAD; or (5) rejection of supervision and inspection or fail to coordinate with the MAD's supervision and inspection, the MAD shall order it to correct its action and impose a fine of CNY 20,000 to 100,000.⁴⁵

If the contractor engages in deep seabed area resources exploration and exploitation activities, without permission, or failing to conclude a contract for the exploration and exploitation, the MAD shall order it to cease the illegal activities and impose a fine CNY 100,000 to 500,000. If illegal income exists, it shall be confiscated.⁴⁶ If the contractor causes pollution or damage to the marine environment or damage to objects of an archaeological or historical nature as well as submarine cables, the MAD shall order to stop illegal activities

40 China's Deep Seabed Law, Art. 17.

41 China's Deep Seabed Law, Art. 19.

42 China's Deep Seabed Law, Art. 21.

43 China's Deep Seabed Law, Art. 22.

44 China's Deep Seabed Law, Art. 23.

45 China's Deep Seabed Law, Art. 24.

46 China's Deep Seabed Law, Art. 25.

and impose a fine CNY 500,000 to 1,000,000. If any crime is constituted, it shall subject to criminal liability according to relevant law.⁴⁷

III Implications from ITLOS Advisory Opinion

It is impossible to judge whether a law is “reasonably appropriate” without a benchmark. The ITLOS Advisory Opinion provides a reference to China. It elucidates the responsibilities and obligations of the sponsoring States through three interrelated questions put up by ISA Council.⁴⁸ The first part provides two categories of obligations a State Party to UNCLOS shall carry out for deep seabed mining activities, i.e. “primary obligations” and “direct obligations”; the second part explains the extent of liability of a State Party for any failure to carry out its obligations elucidated in Part 1. It should be noted that if the State has taken all “necessary and appropriate measures” to ensure its sponsored Contractors’ effective compliance of environmental obligations within the framework of its legal system, the State should be not liable even damage happens in the process of deep seabed mining. Part 3 gives some suggestions with regard to “necessary and appropriate measures”. The three parts of the ITLOS Advisory Opinion are interrelated to guide sponsoring States by adopting domestic legislation. Following that, sponsoring States may avoid unpredictable liability arising from Contractor’s negligence. Although advisory opinion is not a legally binding instrument, seeking an advisory opinion is a routine to assist in the consideration of the legal aspect of a tricky problem.⁴⁹ In this respect,

47 China’s Deep Seabed Law, Art. 26.

48 The three questions are as follows: a. What are the legal responsibilities and obligations of States Parties to the LOS Contention with respect to the sponsorship of activities in the Area in accordance with the LOS Convention, in particular Part XI, and the 1994 Agreement relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982? b. What is the extent of liability of a State Party for any failure to comply with the provisions of the LOS Contention, in particular Part XI, and the 1994 Agreement, by an entity whom it has sponsored under article 153, para 2(b), of the LOS Convention? c. What are the necessary and appropriate measures that a sponsoring State must take in order to fulfill its responsibility under the LOS Convention, in particular art 139 and Annex III, and the 1994 Agreement? See 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).

49 See H. Thirlway, *Advisory Opinions*, in MAX PLANCK ENCYCLOPEDIA OF PUBLIC INTERNATIONAL LAW [MPEPIL].

ITLOS Advisory Opinion is worthy of closely reading and give reference to a sponsoring State's national legislation.

1 *Sponsoring State's International Environmental Obligations*

a The Primary Obligations

In the Advisory Opinion, the primary legal responsibility and obligation of a State sponsoring is so called "Responsibility to ensure", which can be revealed in Art. 139, para. 1; Art. 153, para. 4; and Annex III, Art. 4, para. 4. The first provision reveals directly "Responsibility to ensure", it reads:

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.

Otherwise, sponsoring States shall assist the ISA to ensure such compliance is in accordance with Article 139. Further, under Annex III, Article 4, paragraph 4, sponsoring States are obliged to take laws and regulations and administrative measures within their systems, to ensure their sponsored contractors' compliance pursuant to Article 139.

Having recognized "Responsibility to ensure" of UNCLOS, the Advisory Opinion clarified the constituent elements of this concept, pointing out that it is an obligation of conduct rather than result. It is an obligation of due diligence and of conduct.⁵⁰ With regard to the content of "due diligence", as the ITLOS Advisory Opinion said, "the sponsoring States are not requested to achieve the result in each and every case, rather, they should deploy adequate means to exercise best possible efforts, to do the utmost, to obtain this result".⁵¹ Here, two points should be emphasized. First, the concept, due diligence, "is variable, which means measures are considered as sufficiently diligent at a certain moment but as oppositely at another moment, or measures taken in exploration phase are considered sufficiently diligent but not diligent enough in exploitation phase".⁵² Second, "due diligence" requires the sponsoring States to take measures within its legal system and that the measures must be "reasonably appropriate".

⁵⁰ ITLOS Advisory Opinion, paras. 110–112.

⁵¹ ITLOS Advisory Opinion, para. 110.

⁵² ITLOS Advisory Opinion, para. 117.

b Direct Obligations

In addition to the Primary Obligations, the Chamber identified further “Direct Obligations” incumbent on sponsoring States under UNCLOS and the related Regulations,⁵³ including to:

- i) The obligation to assist ISA. This obligation is a direct obligation but will be met through compliance with the due diligence obligation.
- ii) Apply a precautionary approach. In the Advisory Opinion, precautionary approach is a binding obligation of sponsoring States, which means they must take all appropriate measures to prevent damage that might result from the activities of contractors that they sponsor, in situations where scientific evidence concerning the scope and potential negative impact of the activity in question is insufficient but where there are plausible indications of potential risks. That is an integral part of sponsoring States’ due diligence obligations. Moreover, the Chamber noted that under Principle 15 of the 1992 Rio Declaration on Environment and Development, States are to apply precaution “according to their capabilities”, which might indicate a less strict standard for developing States.
- iii) Apply best environmental practices. “Best environmental practices” certainly appear to be a much higher and broader concept than best technology used in the Nodules Regulations. It should be looked as a specific obligation of precautionary approach.
- iv) Ensure the sponsored contractor to provide guarantees in the event of an emergency order by ISA for the protection of the marine environment. This obligation only arises if the sponsored entity or person has not provided ISA with a guarantee of its financial and technical capability to comply with emergency orders.
- v) Availability of recourse for compensation. That requires the sponsoring States to 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.

53 *Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area* (adopted 13 July 2000 and updated 25 July 2013); the *Regulations on Prospecting and Exploration for Polymetallic Sulphides in the Area* (adopted 7 May 2010) and the *Regulations on Prospecting and Exploration for Cobalt-Rich Crusts* (adopted 27 July 2012), (hereafter “Nodules Regulation”, “Sulphides Regulation” and “Cobalt-Rich Crusts Regulation” respectively).

- vi) Conduct environmental impact assessments (EIA). The Chamber recognizes that the sponsoring State is under a due diligence obligation to ensure a potential contractor undertakes such an assessment prior to the submission of an application for a plan of work to ISA. ISA has indicated that some exploration activities, such as dredging or testing of collection systems, require prior EIA and an environmental monitoring program needed during and after the specific activity. Importantly, the Chamber indicated that the obligation to conduct an EIA is a general obligation under customary international law.

2 *Suggestions to Sponsoring State's National Legislation*

According to UNCLOS, the sponsoring States are required to adopt laws and regulations and to take administrative measures⁵⁴ and thus those "laws and regulations and to take administrative measures" are "necessary".⁵⁵ However, the specific scope and content of the relevant legislation depends on the legal system of each State, and the sponsoring States have the rights to decide independently. Nevertheless, such legislation should include at least a monitoring mechanism for the effective monitoring of contractor activities and a coordination mechanism to coordinate the activities of the sponsoring State and those of the ISA in order to exclude avoidable duplication of work.⁵⁶

The abovementioned laws and regulations and to take administrative measures shall remain in force after the period of validity of the exploration contract signed between the Contractor and the ISA. Although this is not a prerequisite for a Contractor to enter into a contract with the ISA, "it is a necessary requirement for compliance with the obligation of due diligence of the sponsoring State and for its exemption from liability".⁵⁷ After completion of the exploration phase, the contractor shall continue to be liable for any damage caused by its misconduct during the course of the operation, in particular to the marine environment.⁵⁸ The laws, regulations and administrative measures of the sponsoring State should be kept under review and kept in order to ensure that they meet the prevailing standards.⁵⁹

54 UNCLOS, Annex III, Art. 4, para. 4.

55 Advisory Opinion, Paragraph 218.

56 *Ibid.*

57 Advisory Opinion, Paragraph 219.

58 Advisory Opinion, Paragraph 221.

59 Advisory Opinion, Paragraph 222.

The contractual obligations in the sponsoring agreement between the sponsoring State and the contractor cannot replace the legal, regulatory and administrative measures. There is only a contractual obligation and cannot be considered as fulfilling its obligations under the Convention.⁶⁰ The sponsoring State does not enjoy the absolute discretion of its domestic laws and regulations, and the sponsoring State must be based on the principle of good faith and take reasonable, relevant and conducive manner taking into account of benefit mankind as a whole.⁶¹ The provisions as to environmental protection in the sponsoring State's national legislation shall take ISA regulations as minimum standards and the domestic legislation of the sponsoring State shall be more stringent than that of the ISA.⁶²

The necessary measures to be incorporated into the legislation by the sponsoring State include the following: the applicant's financial and technical capacity, the conditions for granting the guarantee and the penalties for the contractor not to comply with the requirements.⁶³ Finally, the ITLOS Advisory Opinion is specifically mentioned, and the decisions of the Chamber shall be enforced in the territory of the State party in the same manner as the Supreme Court's decision or order.⁶⁴

iv Proposals for Improvements of China's Deep Seabed Law

A "reasonably appropriate" environmental legislation for exploration and exploitation of deep sea minerals in the Area shall assume both "primary obligations" and "direct obligations", together with adopting ITLOS Advisory Opinion's suggestions especially reflected in Question 3. China's Deep Seabed Law basically covers the "direct obligations" in ITLOS Advisory Opinion. Furthermore, it makes efforts to fulfill its primary obligation, *inter alia*, through setting up chapters regarding supervision and liability. In particular, China's Deep Seabed Law attaches great importance to the spirit of marine environmental protection, as it sets up a special chapter as to marine environmental protection. In addition, marine scientific research and resource survey activities are encouraged and emphasis is also given on collection and sharing of information. Otherwise, the importance of the protection of seafloor relics. They

60 Advisory Opinion, Paragraph 223.

61 Advisory Opinion, Paragraph 230.

62 Advisory Opinion, Paragraph 240.

63 Advisory Opinion, Paragraph 234.

64 Advisory Opinion, Paragraph 235.

all reflects the provisions of the UNCLOS and the 1994 Implementing Agreement, the ISA regulations and the ITLOS Advisory Opinion. Nevertheless, there is still room in the future to go further.

1 *Providing Operationalizing Details of EIA*

Although it is applauded that there is one chapter as to environmental protection in China's Deep Seabed Law, relevant provisions are quite vague and general, which is difficult to operationalize in practice if no further elaboration of details. For instance, it is noted that there are no specific rules regulating environment impact assessment (EIA) in deep seabed mining. In Chinese legal system, there is the EIA Law of the PRC, but it only applies to mining activities within China's jurisdiction.⁶⁵ Unfortunately, the China's Deep Seabed Law does not provide more detailed stipulations on EIA and its procedures. Also, other issues, such as collection of baseline data, best environmental practice and details for granting a licence, lack details for operationalization. Those parts which lack details of operationalization need complementary regulations and guidelines to provide more information.

2 *Amending the Law to Add Missing Components*

Admittedly, China's Deep Seabed Law is a good starting point to protect marine environment in the process of mining in the Area. Nevertheless, certain crucial components are missing in China's Deep Seabed Law. It does not provide provisions as to rights of a contractor and right relief issues. Contractors' significant rights, e.g. extension and reservation of a contractor's license, cannot be found in China's Deep Seabed Law. Also, there is no any provisions regarding right relief if a contractor's right is infringed. Besides, there is no provisions in relation to fiscal arrangement. Notwithstanding that commercial exploitation has not yet begun, with the development of science and technology and the temptation of a large number of deep seabed minerals, it is likely to be mined in the future.⁶⁶ Before exploitation activities commence, regime as to fiscal issues should be in place.

Under the framework of China's Deep Seabed Law, complementary regulations and guidelines will make sense to provide details, dealing with the problem of lacking operationalizing details. However, in response to missing components of China's Deep Seabed Law, the approach of lodging complementary regulations and guidelines doesn't make sense as they can only confine the

65 Art. 33, Environmental Impact Assessment Law of the People's Republic of China (adopted on 28 October 2002 and amended on 2 July 2016).

66 C.L. Van Dover, *Tighten Regulations on Deep-sea Mining*, 470 NATURE, No.7332, (2011), 32.

law under the framework of law, rather than stipulating new components that doesn't exist in the law. Against this background, there are no other ways but amending the law in order to add new component to China's Deep Seabed Law.

3 *Institutional Improvements*

It is not adequate to achieve the desired result of ensuring Contractor's compliance of its international environmental obligations only by creating relevant legislation by sponsoring States. Besides, implementation and enforcement of the regimes are also paramount. Strong institutional structure is of significance to implement legal, fiscal and environmental matters and to oversee deep seabed mining activity in the Area. Accordingly, a "reasonably appropriate" national legislation needs a necessary ponderation of the institutional arrangement. Ideally, the institutional structure as least includes: legislative body, regulatory agency, monitoring body and oversight body of decision-making. The ideal model is that each body is standalone with crystal clear functions and duties to ensure its operationalization and independence. Alternatively, some bodies could be merged according to sponsoring States' actual conditions and administrative capacities. Whatever model is followed, the institutional system should be complete with each body performing its duties.

That is no doubt that there is a clear legislative system in China.⁶⁷ With regard to Chinas' deep seabed legislation, the National People's Congress (NPC) and its Standing Committee are the legislative bodies of "Law". Several other bodies are qualified to issue "national administrative regulations and orders" to complement China's Deep Seabed Law in details with lower hierarchy. Consequently, there is nothing to worry about in legislative issues. Regarding regulatory agency, there is a MAD in China's Deep Seabed Law and its function is presented in Article 5, it stipulated:

The MAD shall be responsible for the supervision and administration of the exploration, development and investigation of resources in deep seabed areas. Other relevant departments of the State Council shall be responsible for the relevant administration according to the functions prescribed by the State Council.

It can be concluded that the MAD is both regulatory agency and monitoring body for China's mining activities in the Area. However, there is no any

67 With regards to China's legal system, see J. Wang *China: Legal Reform in an Emerging Socialist Market Economy*, in E.A. BLACK, G.F. BELL (EDS.), *LAW AND LEGAL INSTITUTIONS OF ASIA: TRADITIONS, ADAPTATIONS AND INNOVATIONS* (2011), pp. 33–41.

description of oversight of decision-making. Consequently, procedural fairness will not be guaranteed.

V Conclusion

China's Deep Seabed Law is the first piece of specific national legislation for deep seabed mining activities in the Area, which is of significance for China to gradually pave the way towards law-based governance and effective participation to international affairs of the resource-related activities in the Area. However, the law is mere a framework, under which numerous issues should be further considered and a series of supplemented instruments are needed. Prudent attention should be generated to take "necessary and appropriate measures" to ensure the sponsored contractors' compliance of obligations promulgated in the UNCLOS and related legal instruments so as to avoid State's liability. The ITLOS Advisory Opinion specifies the responsibilities and obligations of States sponsoring persons and entities with respect to activities in the Area. It also provides specific advice for sponsoring States to cover relevant issues in their national legislations. By following these rules, China may be able set up a "reasonably appropriate" environmental legislation for exploration and exploitation of deep sea minerals in the Area.