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Abstract: Companies and legal persons intending to conduct activities in the Area must be sponsored by a State Party of the UNCLOS, which constitute a "dual-track mechanism" with ISA as a primary regulator and sponsoring state as a secondary regulator. This regime setting places companies and legal persons subject to international and national legislation simultaneously. The sponsoring state's national legislation is thus an integrated part of the DSM regime. This resolves the defects that private entities in DSM are not subject to international law and weak enforcement of international organizations. However, UNCLOS neither draws a clear line of competence between the sponsoring state and the ISA nor provides compulsory components that national legislation should contain, resulting in the disparity between the objective of the establishment of sponsorship and the status quo of the sponsoring state's role and its national legislation. This paper analyzes the competence of a sponsoring state and regulatory aspects it should focus on to assist the ISA and further proposes such components of the national legislation contributing to the DSM regime.

Keywords: law of the sea; deep seabed mining; national legislation; sponsoring state

1. Introduction

The United Nations Convention on the Law of the Sea (UNCLOS) [1] and the Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea (1994 Implementing Agreement) [2] provide the framework of the international Deep Seabed Mining (DSM) regime. The Area and its resources are designated as the common heritage of mankind (CHM) [1] (art. 136). CHM implies that all activities in the Area not only consider for the current generation but also respect the future generation [3] (p. 195), which requires sustainable exploitation or use of mineral resources in the Area. The International Seabed Authority (ISA) is mandated to manage activities in the Area on behalf of mankind as a whole. However, the contractors are those private or state-owned companies and persons that are not subjects under international law, and thus the UNCLOS made use of the mechanism, sponsorship, under which companies and persons intending to explore or exploit resources in the Area must be sponsored by states parties [1] (art. 153(2)). A sponsoring state has the responsibility to ensure its sponsored contractor's compliance with provisions under the UNCLOS and to assist the ISA to ensure such compliance by adopting laws and regulations and taking administrative measures concerning DSM within its domestic legal framework [1] (arts. 139(1), 153(4), and Annex III, art. 4(4)). Therefore, the sponsoring state, as far as its sponsored contractor is concerned, is also a regulator. The Seabed Disputes Chamber (SDC) concludes in its first Advisory Opinion regarding responsibility and liability of the sponsoring state that the inclusion of sponsorship serves to achieve the goal of ensuring entities' compliance with the obligations set out in the UNCLOS and related instruments by way of transferring them from international convention to states parties' national legislation [4] (para. 75). Furthermore, the ISA needs the sponsoring state's assistance in controlling and supervising the contractor's activities by establishing monitoring and enforcement measures within



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Copyright: © 2021 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https:// creativecommons.org/licenses/by/ 4.0/). its domestic legal system. In this sense, the sponsoring state's national legislation is an integrated part of the DSM regime, i.e., national legislation and international convention and regulations together contribute to the DSM regime. Interestingly, at the end of June 2021, Nauru requested the ISA Council to complete the adoption of the rules, regulations, and procedures necessary to facilitate the approval of plans of work for exploitation in the Area pursuant to Section 1(15) of the Annex to the 1994 Implementing Agreement [5], triggering the so-called "two-year rule" [6]. Under this rule, the Council must consider a submitted application for exploitation activities and provisionally approve it regardless of whether the exploitation regulations have been completed in two years pursuant to Section 1(15) of the Annex to the 1994 Implementing Agreement. If the exploitation regulations are not in place in two years and one of the contractors applies for an exploitation contract, potential applications would need to be reviewed based on the general principles and provisions in the UNCLOS and 1994 Implementing Agreement [2] (Annex, Section 1(15)(c)). Under the circumstance of lacking detailed rules for exploitation at the international level, a sponsoring state's national legislation could be essential to block unqualified applicants, even to control the potential contractors' activities.

According to article 139(2) of the UNCLOS, a sponsoring state that adopts the necessary and appropriate measures to ensure its sponsored contractor's compliance with international obligations can be exempted from liability even if its sponsored contractor incurs damage. 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." [4] (para. 110) The SDC concludes that it is an obligation of conduct, and of "due diligence" [4] (para. 110). Such a stipulation gives sponsoring states the impetus to take action on the one hand and makes them confused due to a lack of further instructions on the other hand. Neither the UNCLOS nor the 1994 Implementing Agreement stipulates the division of competence between the sponsoring state and the ISA as well as compulsory components that national legislation shall contain, resulting in the disparity between the objective of the establishment of sponsorship and status quo of the sponsoring state's role and its national legislation. An unintended scenario is that most sponsoring states have national legislation required by the UNCLOS, but they are still not certain about their competence and components that their legislation shall contain to assume the obligation of assisting the ISA to ensure its sponsored contractors' compliance with the UNCLOS and related legal instruments. Evidence as such is that only the legislation of Japan, Nauru, and Singapore have the most explicit provisions regarding access for third parties to domestic courts for settlement of claims for environmental harm [7] (p. 8). In contrast, most sponsoring states do not include such a provision in their legislation [7] (pp. 6–7). That is partially because the fora for settlement of DSM disputes is still under discussion [8] so that the sponsoring state is unsure whether such a dispute is within its competence. This paper dwells on the regime per se, analyzing the competence and regulatory focus of a sponsoring state (Section 2) and components of the national legislation that should be included in the sponsoring state's legislation to achieve such control by referring to state practice (Section 3). A comparative method is used in this section. Section 4 provides concluding remarks.

2. Sponsoring State's Competence and Regulatory Focus

The sponsoring state's competence comes from the mandate of the UNCLOS. The UNCLOS indicates that the ISA is mandated to manage and control activities in the Area as is necessary for the purpose of securing compliance with the relevant provisions of UNCLOS, 1994 Implementing Agreement, rules and regulations of the ISA, and the plans of work approved, whereas state parties shall assist the ISA in ensuring such compliance [1] (art. 153(4)). It is clear that the ISA is the primary regulator, whereas the sponsoring state is the secondary regulator and is being mandated to "assist" the ISA. Under the "dual-track mechanism", division of the regulatory burden between the two regulators must be clear, avoiding waste of administrative resources caused by duplicated regulatory

burdens. Further, that the sponsoring state is the secondary regulator determines that the sponsoring state has no absolute decision-making power. To be specific, even if the sponsoring state approves the application, the application is invalid without the approval of the ISA. Similarly, even though the sponsoring state wants to add more to its domestic legislation, it is ineffective if it is inconsistent with the UNCLOS and rules and regulations of the ISA. In other words, the legislation of the sponsoring state must be carried out within the framework of the UNCLOS and the rules and regulations of the ISA. For example, in the Draft Exploitation Regulations (March 2019), there is no mechanism as to appeal for the cancellation of preference and the priority of an applicant who has an approved exploration contract and wants to apply for an exploitation activity in the same area. If the sponsoring state is willing to set up such a mechanism, it can only have effect at the national level and cannot change the decision of the ISA. However, the objection of the sponsoring state is absolute if the objection means no sponsorship is provided. Its regulatory tool is granting or withdrawing the sponsorship. Without the sponsorship, the application cannot be approved since sponsorship is the necessary requirement of the application. From this point of view, the sponsoring state has absolute power over negative matters and only partial powers for affirmative matters and rights-giving matters (subject to the decision of the ISA).

Regarding the regulatory aspects a sponsoring state should focus on, the SDC Advisory Opinion provides some reference. Assisting the ISA is a direct obligation of a sponsoring state, which requires the sponsoring state to take necessary and appropriate measures to ensure its sponsored contractor's compliance. The reference provided by SDC in its advisory opinion lies in its answers to the third question, i.e., the necessary and appropriate measures that a sponsoring state must take. Although it is not comprehensive and systematic, the SDC gave some specific examples. For instance, (1) the financial viability and technical capacity of sponsored contractors; (2) conditions for issuing a certificate of sponsorship; and (3) penalties for non-compliance by such contractors. They may also include the establishment of enforcement mechanisms for active supervision of activities of the sponsored contractor and for co-ordination between the activities of the sponsoring state and those of the ISA [4] (paras. 21–241).

Moreover, to assume the obligation of assisting the ISA, the sponsoring state has to know which aspects of an international organization need the assistance of a state, i.e., shortcomings of the international organization in regulating a private actor. As is known, the international organization has limited mechanisms to enforce compliance, such as persuasion, incentives, disincentives, force, and legally binding sanctions [9] (p. 837). The enforceable power of the ISA is related to its oversight mandate. Annex III, article 18 describes the enforcement jurisdiction of the ISA, which includes three categories of penalties (warning, monetary penalty, suspend or terminate a contract). The UNCLOS strictly stipulates two circumstances under which the ISA has competence to suspend or terminate a contract: (a) the contractor's operations result in serious, persistent, and willful violations of the fundamental terms of the contract, Part XI and the rules, regulations, and procedures of the ISA; and (b) the contractor has failed to comply with a final binding decision of the dispute settlement body on it [1] (Annex III, art. 18(1)). The ISA Exploration Regulations further develop this article by specifying the competent organ for imposing penalties (Council) and by adding a third circumstance in which a contract may be suspended or terminated [10-12] (Annex IV, Section 21.1). The third circumstance refers to the contractor's bad financial situation [10–12] (Annex IV, Section 21.1(c)). Not all cases of non-compliance, but only violation of "fundamental terms", can result in the suspension or termination of a contract. In case of other violations, the ISA may impose monetary penalties in proportion to the seriousness of non-compliance [1] (Annex III, art. 18(2)). As Gwénäelle Le Gurun said, "grave penalties such as suspension and even more termination of a contract will be imposed as a last resort, as the ultimate point of an escalation process, in case of very grave and repeated violations by a contractor of its essential contractual undertakings." [13] (p. 2253). Additionally, even if one of these

three circumstances does occur, the Council "may", but not "shall", suspend or terminate this contract [1,10–12] (art. 18(1); Annex IV, Section 21.1). Suspension or termination may be substituted by monetary penalties under the discretion of the ISA [1] (art. 18 (2)). In any case, no penalty may be executed until the contractor has had the possibility to exhaust the judicial remedies available under Part XI, Section 5, of the UNCLOS [1] (art. 18 (3)). The ISA's enforceable competence is highly restricted by those provisions. By contrast, a state is able to utilize incremental approaches, which is all the state practice for sponsoring the state's legislation [14] (p. 21). Likewise, the contractor's behavior needs to be monitored, which the ISA may lack capacity for due to limited personnel. The ISA only requests the contractors to submit an annual report and modify the plan of work every five years [11] (reg. 30). Regarding the inspections, the organs of the ISA have discrete responsibilities, i.e., the Council shall "establish appropriate mechanisms for directing and supervising a staff of inspectors" [1] (art. 162(2)(z)); the Legal and Technical Commission (LTC) is responsible for making such recommendations [1] (art. 162(2)(m)). It is noteworthy that the ISA, as of now, has not carried out any inspection activities. Therefore, a sponsoring state should focus on monitoring and enforcement in its national legislation for the purpose of assisting the ISA. To sum up, to assist the ISA, national legislation should be centered on assessing qualified applicants and taking procedural measures to ensure sponsored contractors' compliance with the UNCLOS, 1994 Implementing Agreement and ISA Regulations, including monitoring, corrective measures and sanctions for non-compliance, compensation, and enforcement of decisions of international courts or tribunals.

3. Potential Elements of National Legislation Contributing to the DSM Regime

Sound national legislation incorporates a wide range of elements, such as objectives, obligations and rights of a contractor, monitoring, and liability. Literature and policy papers have discussed a favorable model for national legislation [15–18]. This paper focuses on the sponsoring state's role assisting the ISA and national legislation's potential contribution to the DSM regime. Hence, this section illustrates five main components by referring to existing sponsoring states' national legislation in this regard.

3.1. Conditions to Issue a Certificate of Sponsorship

The first irreplaceable function of the sponsoring state and its national legislation is that it sets an initial threshold for the potential applicants by way of issuing a certificate of sponsorship, although approval of a plan of work is beyond its competence. In this procedure, a sponsoring state issues a pass to the controllable company or person with sufficient financial and technological capability, assisting the ISA to block unqualified applicants.

3.1.1. Controllable Applicants

The most important requirement for applicants, whether they are a natural or legal person, is that they must be nationals of or controlled by a state party, which is also the essence of sponsorship. Thus, in a sponsoring state's national legislation, the applicants who want to access to deep seabed mining activities must be controllable. The specific requirements of being "controllable" may vary according to the individual situation of the sponsoring state. Nationality is an easy parameter. Most states, such as Belgium, China, Czech Republic, Fiji, Japan, Kiribati, Nauru, New Zealand, Singapore, Tonga, and Tuvalu, adopt "nationality" or registration in those states as a necessary requirement to apply for a certificate of sponsorship [14] (para. 33). By contrast, only Belgium and Germany include "effective control" as a criterion of the applicant [14] (para. 33). Obviously, the criterion of "nationality" is easy to check, whereas the criterion of "effective control" is difficult to check since there is no explicit definition in the UNCLOS and any other relevant legal instruments. At first glance, taking "nationality" as a criterion of the applicants seems to be a very effective way to control applicants. However, this approach ignores a situation where an applicant is registered in a developing state yet remains a wholly owned

subsidiary of an experienced mining company in a developed state [19] (para. 6). Such an entity may repatriate profits to the parent company. Under this situation, the sponsoring state must be very careful about the controllability of such an entity despite nationality or registration. Regarding the definition of "effective control", the LTC of the ISA is of the view that the definition of "effective control" needs to be clarified but it falls "under the competence of the State that exercises it" and it "is left to municipal law" [19] (para. 21). This being said, the sponsoring state that utilizes this criterion is obliged to clarify this concept.

Rojas and Phillips propose two interpretations of "effective control" from the analysis of comparative legal sources and of the way in which ISA organs have treated the issue: an economic approach (control or influence over the entity) or a regulatory approach (jurisdiction of incorporation) [20] (p. 9). The economic control approach considers factors, such as ownership of a majority of the applicant's shares, ownership of a majority of the applicant's voting rights, holding the right to elect a majority of the applicant's board of directors or equivalent body, having an influence over the applicant sufficient to determine its decisions, or any combination or variation of the above [20] (p. 9). Under the regulatory control approach, the LTC notes that nationality, "combined with the undertakings given as a sponsoring State" can be sufficient [21] (para. 22). It should be pointed out that these two approaches are not mutually exclusive. On the contrary, the sponsoring state can combine the two approaches to different degrees according to the actual situation.

3.1.2. Financial and Technological Capability

The financial capability of the applicant is an important factor considered by the LTC when approving an application. It determines whether an applicant has the capacity to consistently use the best available technology in the process of mining; whether it is capable of committing or raising sufficient financial resources to cover the costs of the mining activities, monitoring plan, and closure plan; whether it can promptly and effectively deal with emergencies or damages; and whether it can afford insurance products [22] (reg. 13(2)). The SDC Advisory Opinion highlights that the financial viability and technical capacity of sponsored contractors are necessary components of the domestic law of sponsoring states [4] (para. 234). However, merging this requirement into domestic law is problematic due to the lack of off-the-shelf quantitative standards. The UNCLOS does not set out specific standards for the financial and technical capabilities of the applicant, albeit that Annex III, article 4 (4) of UNCLOS stipulates that qualification standards shall relate to such capabilities. Based on this instruction, the ISA Exploration Regulations further developed standards in which provisions do not quantify financial standards. Instead, it requires discrete financial information according to the nature of the firms [10-12] (reg. 12(4)–(7); reg. 13(3) and (4); reg. 13(3)–(6)). To be specific, a state or a state enterprise merely provides a statement by the state or the sponsoring state certifying the applicant's financial capacity; members of the private sector must provide audited financial statements for three years, certified by a duly qualified firm of public accountants in conformity with internationally accepted accounting principles. Borrowing for supporting approval of a plan of work for exploration is permitted if detailed information, such as the amount, the repayment period, and the interest rate, is submitted [10–12] (reg. 12(4)–(7); reg. 13(3) and (4); reg. 13(3)–(6)). Since the ISA Regulations shifted the burden of checking an enterprise's financial capability to the sponsoring state (in case of a state enterprise as an applicant), the sponsoring state should have several mechanisms to ensure it. The sponsoring state can also check the financial capability of private enterprises, as it has a clear understanding of the national economic level and enterprise strength under its control. Hence, the legislation of a sponsoring state must be designed to set specific financial standards for applicants. These might include a minimum amount of operating capital, appropriate insurance, or other certification of financial responsibility, undertakings that relevant industry standards are adhered to by the operator. It is worth mentioning that the relevant national legislation

of Germany and Japan requires the applicant to submit credibility records as one means of ensuring the applicant's financial capability [23,24] (Section 4(6)2(a); article 29(ii)(iii)). Importantly, it is suggested for the sponsoring state to check the sponsored contractor's financial situation regularly even after issuing a certificate of sponsorship, by reviewing its audit reporting, to ensure a contractor's continued financial capability of carrying out mining activities. Once the contractor's financial capability is found to have a problem, appropriate and incremental measures should be taken, from warning to terminating the contractor's certificate of sponsorship, if deemed necessary.

The requirements of an applicant's technological capability have been stipulated by the ISA Draft Exploitation Regulations (March 2019) [22] (reg. 13(3)) stipulate Execution of the plan of work, the Environmental Management and Monitoring Plan (EMMP), and the closure plan requires a certain degree of technical ability, the standard of which is the capability to meet the good industry practice, best available techniques, and best environmental practices [25]. The most important aspect is the technology that the applicant acquires, including the technology at the time of application and the potential to apply advanced technology, which needs the sponsoring state's scrutiny. At the time of application, the applicant must have the appropriate technical skills as well as the potential to make adjustments as the standards of good industry practice change. In addition to the technology, per se, financial capability and the expertise of personnel are also fundamental to being able to meet the standards of good industry practice. Personnel are essential as people are operators of equipment and technologies. All the staff should be systematically trained. Sponsoring states' legislation should require applicants to provide evidence of technological capabilities. For instance, a general description of the applicant's previous experience, knowledge, skills, technical qualifications, expertise, equipment, and methods is the main reference of technical capacity. The Czech Republic Act gives an example in this regard. It sets a specific provision regarding the expertise of personnel [26] (art. 6).

3.2. Monitoring

The second field that the ISA needs the assistance from the sponsoring state is monitoring. According to the UNCLOS, the contractor is expected to prepare a monitoring program, based on the recommendations of the LTC, to observe, measure, evaluate, and analyze the risks or effects of pollution on the marine environment resulting from activities in the Area, from which the adequacy of existing regulations is examined as well [1] (arti. 165(2)(h)). Additionally, whether the contractor complies with these regulations can be monitored [1] (arti. 165(2)(h)). This provision is reiterated and developed by the ISA Exploration Regulations and Draft Exploitation Regulations (March 2019), from which the latter provide useful details [10–12,22] (reg. 32 and Annex IV, Section 5; reg. 34 and Annex IV, Section 5; reg. 34 and Annex IV, Section 5; reg. 38(2)(9) and Annex VII, Section 2 (g)). Under the Draft Exploitation Regulations (March 2019), three methods are used to monitor the environmental impacts of mining activities and the contractor's compliance, namely self-reporting, inspection, and remote monitoring.

The main monitoring method is self-reporting. The contactor is required to submit annual reports with details of the exploitation work and many other reports [22] (regs. 38(1) and (2), 48(1), 52(3)). If it appears to the Secretary-General, on reasonable grounds, that a contractor is in breach of the terms and conditions of its exploitation contract, he will issue a compliance notice describing the alleged breach and the factual basis for it. He will request that remedial action or other appropriate steps be taken within a specified time period. Failure to implement the measures set out in a compliance notice as to result in serious, persistent, and willful violation of the fundamental terms of the UNCLOS and ISA Regulations may lead to the suspension or termination of the contract [22] (reg. 103). However, the operational factors of mining activities require the contractor to "perform some degree of self-regulation" especially in monitoring, since "it would be almost impossible, and certainly cost prohibitive, for [the ISA] to analyze such a large amount of data in a meaningful way" [25] (p. 4). Likewise, it is difficulty for the ISA to assess the authenticity for dozens of reports from contractors. Instead, the sponsoring state is able to pre-scrutiny these reports as it has the capacity.

Self-reporting from the deep seabed mining operator should be supplemented with other methods of oversight, including a complaints/whistle-blower procedure, inspection by the monitoring agency, or remote monitoring [17] (para. 14.42). The UNCLOS indicated the "Authority shall have the right to inspect all installations in the Area used in connection with activities in the Area" and further indicated the Council to establish appropriate mechanisms for directing and supervising a staff of inspectors; the LTC is mandated to make such recommendations. Annex 4, Section 14, of the ISA Exploration Regulations provides procedures of inspection. The Draft Exploitation Regulations (March 2019) provide a full description of the appointment and responsibilities of the inspector [22] (regs 96–100). The sponsoring state is required to assist the Council, the Secretary-General, and inspectors to discharge their functions [22] (reg. 96(2)). However, the above legal instruments do not specify how an inspection can be invoked. The sponsoring state can play a more significant role in this regard if the national legislation of the sponsoring state authorizes the monitoring body to conduct inspections regularly, or when it deems them necessary, or under complaint.

3.3. Corrective Measures and Sanctions for Non-Compliance

The third aspect that a sponsoring state and its national legislation assist the ISA is regarding corrective measures and sanctions for non-compliance. It does not mean the ISA's shortage of such power. The advantage is, in the face of a contractor's non-compliance, that the sponsoring state is able to incrementally utilize corresponding mechanisms in the national legislation to adequately respond. It includes incentives to compliance and sanctions against non-compliance [17] (para. 14.46). When the national monitoring agency finds that the contractor has breached the provisions of sponsoring states' legislation, it should submit a written warning to the contractor to correct its wrongful act, which might include a request to undertake, or to cease, or to not undertake a specific activity within a certain period. Specified actions or outcomes, picked up by the reporting and monitoring measures or by a third-party complaint, are assessed as providing evidence of non-compliance, such as (a) waste and pollution not being properly managed, (b) exploration or exploitation activities being conducted outside of the boundaries of approval, (c) performance assessments or reports not being submitted, (d) environmental monitoring not being done, (e) unauthorized mining methods being used, or (f) other material and un-notified deviation from the plan of work or certificate of sponsorship terms [17] (para. 14.48).

Where there is continued non-compliance or breaches are not remedied or there are new breaches of the action plan, sanctions would have to be imposed, namely, further and more serious enforcement action, such as, suspension, termination, or amendment of the certificate of sponsorship. Most states expressly illustrate situations that lead to suspension, revocation, and termination of a license or certificate of sponsorship. For example, the national legislation of Japan, Singapore, and the United Kingdom indicates that the violation of the conditions of the license or provisions of national laws leads to suspension or revocation of license; Kiribati, Nauru, and Tonga indicate where there has been a serious, persistent, or willful breach by the rules of the ISA or national laws [14] (para. 49). On the other hand, the Czech Republic indicates where the contractor refuses to submit to an inspection, the regulatory agency shall revoke the certificate of sponsorship [26] (art. 17(1)(b)). The authors believe this is an effective incentive to encourage the sponsored contractor to comply with the relevant international and national regulations, since without certificate of sponsorship it is impossible to conduct activities in the Area. However, it should be noted that those actions will lead to serious results. Not only is the appeal process extremely complex and rigorous, and even though a certificate of sponsorship is withdrawn, the contractor remains subject to any ongoing obligation or liability previously incurred.

Financial penalty mechanisms are used by almost all sponsoring states that have relevant legislation, excluding France and Russia. The amounts of the fines can vary depending on the sponsoring state and type of offence. In addition, the failure to comply with an enforcement order made by the regulating agency may lead to the suing or prosecution of the operator's directors or other personnel. In any case, "the approach to sanctions is incremental ... and is subject to the principle of proportionality (the fines are always given as a maximum amount)" [14] (para. 77).

3.4. Enforcement of Decisions of International Court and Tribunal

Providing procedure to enforce decisions of an international court and tribunal is an indispensable function of the sponsoring state and its national legislation. Article 187 together with article 289(2) of the UNCLOS grant the SDC a compulsory jurisdiction in some regard. Furthermore, some cases could be delivered to commercial arbitration [1] (art. 188(2)(a)). As far as cases before the international court or tribunal are concerned, the issue is related to the implementation of the decision of the international court or tribunal at the national level. In practice, the compliance record with decisions of international courts and tribunals is relatively good, and most non-compliance can be solved through an enforcement mechanism at the international level, mostly a political process [27] (p. 349). Nevertheless, it is suggested that a sponsoring state should provide a legal basis for such enforcement in the relevant national legislation so that the decision can be enforced successfully. Among existing national legislation of sponsoring states on activities in the Area, the United Kingdom and Singapore expressly stipulate that the decision of the SDC and an arbitral award of the commercial arbitral tribunal referred to in article 188(2)(a) of the UNCLOS can be enforced internally [28,29] (arts 18–20; art 8A–C). New Zealand, a non-sponsoring state, also stipulates that every decision of the SDC "shall be enforceable in New Zealand as if it were a decision of the High Court, and all the provisions of the law of New Zealand shall apply accordingly with any necessary modifications" [30] (art. 14(3)).

3.5. Prompt Compensation: Access to Domestic Courts

Given that the UNCLOS does not exhaust situations of disputes for activities in the Area, and thus, apart from cases to the international courts or tribunals, a domestic court may also have jurisdiction of some disputes arising from activities in the Area [8]. Ensuring "recourse is available under their legal systems for prompt and adequate compensation" [1] (art. 235(2)) is another important assistance that a sponsoring state provides. The SDC denotes that that article ensures that the contractor can live up to its obligation to provide compensation for damages caused by its wrongful acts [4] (para. 140). The International Law Commission (ILC) also states "[e]ach State should take all necessary measures to ensure that prompt and adequate compensation is available for victims" [31] (principle 4(1)). All these international instruments require the sponsoring state to establish mechanisms to ensure promptness and adequacy of compensation within its domestic legal system.

Promptness refers to "the procedures that would govern access to justice, and that would influence the time and duration for the rendering of decisions on compensation payable in a given case" [31] (comment 7 to the principle 4). In general, damage claims may be brought in the courts of the place where damage occurs (i.e., the transboundary victim's own state), or in the place where harmful activity occurred, or in the place where the defendant is domiciled [32–34] (p. 312). Although jurisdiction is the court of the defendant's residence, domicile, or place of business [35] (Chapters 1,4,12), the claim brought by foreigners may be declined in some legal systems due to the principle of forum non conveniens [32] (p. 313). When claims are brought in the early stage of the deep seabed mining, it is not clear whether that situation will apply. In any case, in the context of deep seabed mining, the national court could be the court in the injured party's state or in the contractor's state, namely, the sponsoring state [8] (p. 3). Currently, only three sponsoring states, namely, Japan, Nauru, and Singapore, have provisions that give the claimant the right to access domestic courts for environmental damage in their national legislation [7]

(p. 8). They, respectively, empower a national court (Japan) [36] (art. 27–28), the Supreme Court (Nauru) [37] (Section 46), and the national high court (Singapore) [28] (Section 17) to hear third-party claims made against its sponsored contractor. Japan also stipulates the limitation of adjudication (three years of becoming aware of the damage or within 20 years of occurrence of damage). It also applies mediation as an approach to the settlement of disputes. An interesting observation on this point is that unlike Nauru and Singapore, Japan does not provide details in its legislation on activities in the Area. Rather, it refers to the relevant parts of the Mining Act [24]. For example, article 27(5) describes issues relating to adjudication, thus "[p]rovisions of Article 11 and Article 113 to Article 116 of the Mining Act (Act No. 289 of 1950) shall apply mutatis mutandis to compensation for damage ... deep seabed mining in Japan". For states with limited legislative capacity or limited practice (early stage of deep seabed mining activities), Japan's example provides a costeffective approach that can be used as a model for other sponsoring states. Furthermore, promptness can be achieved by a clear procedural arrangement. As ILC stated, given the often protracted nature of compensation claims in domestic courts, consideration ought to be given to the establishment of special national environmental courts [31] (commentary 7 to the principle 4). The Law Commission of India made a very persuasive case for the establishment of national environmental courts in India [38]. Australia and New Zealand already have environmental courts [39,40].

Last, but not least, strict liability of the contractor within the national legislation is also an effective way to provide prompt compensation, since "a strict standard relieves the claimant of the burden of proving fault" [41] (p. 327). Annex III, article 21(3) of the UNCLOS stipulating that a sponsoring state's national legislation is allowed to take more stringent conditions than the UNCLOS provides the legal basis for a sponsoring state to apply strict liability. Additionally, the SDC expects the sponsoring state to "further deal with the issue of liability in future regulations on exploitation" [4] (para. 168). Hence, the sponsoring state is encouraged to set strict liability in its national legislation according to its actual situation and legal traditions. The difficulty lies in how to motivate a sponsoring state to do so. One impetus is that it can be deemed solid evidence that the sponsoring state is executing its due diligence obligation. Nevertheless, the decision is the discretion of the sponsoring state.

4. Conclusions

Mining activities in the Area are governed by a complex regime. As far as the contractor is concerned, it is subject to two series of laws, namely, the UNCLOS and related legal instruments and rules, procedures, and regulations of the ISA, and its sponsoring state's national legislation. They together contribute to the DSM regime. It also faces two regulators, i.e., the ISA is the primary regulator with full power, whereas the sponsoring state is the secondary one with restricted power. The role of the assistant of the sponsoring state decides its competence and core of national legislation. As for the competence, the sponsoring state has absolute power over negative matters by rejecting to issue a certificate of sponsorship, since companies and persons are not qualified to apply for approval of a plan of work from the ISA. By contrast, the sponsoring state has only partial powers for affirmative matters and rights-giving matters, since it is subject to the decision of the ISA. As for regulatory aspects, the sponsoring state should focus on assisting the ISA, as it is able to play a role in fixing the shortcomings of the international organization, namely, monitoring and enforcement. Potential elements of national legislation contributing to the DSM regime are therefore deduced: conditions to issuing a certificate of sponsorship, monitoring, corrective measures and sanctions for non-compliance, enforcement of decisions of the international court and tribunal, and accessing the domestic court. Among others, the sponsoring state's national legislation is able to make indispensable contributions in blocking unqualified applicants, enforcement of decisions of international courts and tribunals, and approach accessing domestic courts. It also has important functions in monitoring and

sanctions for contractors' non-compliance, supplementing provisions of the UNCLOS and rules, procedures, and regulations of the ISA.

The sponsoring state's motivation to incorporate the elements mentioned above into its national legislation can be deemed as one of the measures taken to fulfill its obligation of due diligence and obligation of assisting the ISA, and it is also a way for the sponsoring state to be exempt from potential liability. Two potential risks may arise from the unclear boundaries of competence between the ISA and the sponsoring state. First, duplicated regulatory burdens may result in unnecessary waste of administrative resources. Second, it is difficult to determine the responsible party between the ISA and the sponsoring state in case of serious harm to the marine environment attributing to a regulator. However, the sponsoring state needs an explicit instruction of the boundary of its competence and regulatory aspects it should focus on to assist the ISA, which may come from the primary regulator, the ISA. Under such a "dual-track mechanism", both international conventions and regulations and national legislation are essential parts of the DSM regime; working together leads to an effective regulatory synergy.

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