

International Seabed Regime in Southeast Asia: The Lack of ASEAN Member States' Role in Seabed Mining

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Abstract

International Seabed Authority (ISA) as a part of implementation of UNCLOS Part XI has main objective is to foster healthy economic development especially for developing states and to minimize the negative environmental impacts derived from activities in the area. Although ISA had facilitated states to provide legal procedure to establish seabed explorations, the role of developing states are still lacking. For instance, the role of ASEAN member states are still minimum though some of its states rely on maritime resources such as Indonesia and Philippines. This paper argues that there are two main factors that cause minimum roles of ASEAN states in the development of seabed mining; lack of awareness of government officials, academics and its people in development of law of sea, mainly in seabed mining matters and the excessive cost and high technology requirements to explore and later to exploit seabed materials. To overcome the issue, ASEAN states should increase its stakeholder awareness in law of sea progress and the importance of seabed mining. In addition, ASEAN states could wait the Enterprise as an economic arm of The Authority to come into account to facilitate developing states in seabed exploitation for commercial value. In order to overcome environmental issue regarding seabed mining, ASEAN should maximize its own body of institution which already been built.

Keywords: *International Seabed Authority, seabed mining, ASEAN*

Abstrak

International Seabed Authority (ISA) sebagai implementasi dari UNCLOS Part XI memiliki tujuan utama untuk mendorong pembangunan ekonomi khususnya bagi negara-negara berkembang serta mengurangi dampak negatif aktivitas di laut terhadap lingkungan. Meskipun ISA telah memfasilitasi negara untuk menyediakan prosedur hukum terkait eksplorasi di laut, perang negara-negara masih kurang. Sebagai contoh, peran ASEAN masih sangat kecil meskipun negara anggotanya seperti Indonesia dan Filipina sangat tergantung pada laut. Artikel ini berpendapat bahwa ada dua faktor di balik fenomena ini; kurangnya kesadaran pemerintah, akademisi, dan masyarakat tentang hukum laut khususnya dalam hal penambangan di laut serta kebutuhan dana dan sumberdaya yang besar untuk mengeksplorasi hasil-hasil tambang di laut. Untuk mengatasi hal itu, ASEAN harus meningkatkan kesadaran mengenai hukum laut. ASEAN juga perlu mendorong perusahaan-perusahaan untuk memfasilitasi negara-negara berkembang untuk kepentingan komersial. Untuk mengatasi masalah lingkungan ASEAN perlu mengoptimalkan institusinya sendiri.

Kata-kata kunci: *International Seabed Authority, pertambangan di laut, ASEAN*

Introduction

In the last two decade of the international community began to focus on the importance of the oceans as a source of life and as a source that offers the possibility of sustainable development or sustainable development (United Nations Secretary-General, 2003). With the increased interest in the resources offered by the sea, it will also increase the activity of the countries in exploring and exploiting the oceans. Exploration and exploitation of the oceans which aimed to explore and acquire resources and use of the oceans that will be used to meet human needs could be done in various ways and in various places.

One of the important activities in the oceans which are now starting to be taken into account is the seabed mining. Though main purpose of seabed mining is to exploit natural resources from ocean floor, seabed mining is an experimental industrial field, which involves extracting submerged minerals and resources from the sea floor, either by dredging sand or lifting material in any other manner. Minerals and the metals they contain are an essential component of the modern high-tech world. As global stocks of raw mineral resources continue to dwindle due to increasing material consumption, intense demand for valuable metals has pushed up global prices. The result is that manufacturing industries are now seeking access to previously unattainable mineral deposits in the ocean depths. The deep ocean is predicted to hold large quantities of untapped energy resources, precious metals and minerals (Llodra et al., 2010). Though the actual exploitation is yet come into action and still studied by exploration project, but the economic value that predicted to come from seabed mining is enormously high. The material from the seabed is known to have useful mineral resources such as manganese, gold, nickel, cobalt, vanadium, zinc etc.

Table 1
List of minerals in the deep-sea mining

| Source | Depth | Minerals |
|----------------------|---------------|---|
| Polymetallic Nodules | 4000 – 6000 m | Nickel, bronze, cobalt and mangan |
| Ferromanganese-Crust | 800 – 2400 m | cobalt, vanadium, molybdenum and platinum |
| Sulphides Deposit | 1400 – 3700 m | bronze, lead, zinc, gold and silver |

Source: Anert and Borowski, 2000

However, there are two major issue dealing with seabed mining. The first one is about the area location of seabed mining potential and the second one is about the impact on environmental dimension. In terms of area,

mostly the location of seabed mineral potential is located in the high seas area which is outside the jurisdiction of the state or outside the economic exclusive zone (EEZ). The location of potential area for seabed mining mainly located in Clarion-Clipperton Fracture Zone in Pacific Ocean and Mid-Indian Range Basin in Indian Ocean. The location in international area and the promising economic value derived from the seabed mining is feared could cause more dispute among states who had interest on the seabed mining in the international area. The area itself is an area of international high sea whose nature is *res communes* which means able to be used by all states and as the common heritage of mankind.

On the other side, the environmental impacts derived from the activities on the seabed also shadow the seabed mining. Many environmentalist had warned the environmental danger that will cause bad impacts on organism living in the area and on the ocean itself. Related to what happens on the seabed, as the collector unit gathers materials it will seriously destroy the top few centimeters of the seabed, causing major disturbance and disruption to the flora and fauna in the mining tracks. In addition, the propulsion system of the collector unit will stir up sediments; as a result, organisms in and around the tracks will be partially or entirely buried. In the mining tracks, for instance, a mortality rate of 95–100 per cent may be expected for organisms found there. Related to the discharge of waste water from the mining ship, after the nodules have been gathered by the collector unit, they will be washed clean by water jets. The nodules will then be crushed and brought to the surface as slurry containing both crushed nodules and water. When the slurry reaches the surface, there will be a partial discharge of waste water containing particulate matter and trace metals. This discharge may interfere with light penetration and reduce photosynthesis in the surface layers. Furthermore, the waste water will be considerably colder than the surface water. Related to onshore processing, includes waste water, tailings, and slag roughly the same problems will be encountered as in land-based mining operations (Markussen, 1994).

ISA as an International Regime

In the state of a complex and interdependent world, negotiation, adoption and implementation of international treaties has become a major component in the foreign policy activity of each states (Chayes & Chayes, 1993). Traditionally, the international law was seen as the law of co-existence. Increasingly though, throughout history, the co-existence of the states was being replaced by the need for cooperation which was seen as necessary in order to tackle the arising international problems. The happening issues related to seabed mining about feared international area dispute and environmental problem should be overcome by a strong international

law or regime to manage states behaviors on seabed mining particularly in international deep high seas. The international regime should play role as an international ocean governance which particular subject is the world ocean itself. For instance, along with the development of Law of sea treaty negotiations which held between 1973 and 1982, the UNCLOS (United Nations Convention on the Law of Sea) or also known as LOSC (Law of Sea Convention) managed to come into force in 1994. The Law of the Sea Convention defines the rights and responsibilities of nations with respect to their use of the world's oceans, establishing guidelines for businesses, the environment, and the management of marine natural resources. UNCLOS established sub-institutions to implement the UNCLOS articles such as International Seabed Authority (ISA), Commission on the Limits of the Continental Shelf (CLCS), International Tribunal for the Law of the Sea (ITLOS) and The Meeting of the State Parties (SPLOS). Relating to the seabed mining, the institutions which play the main role is International Seabed Authority.

International Seabed Authority (ISA) or the Authority was an autonomous international organizations established to organize, regulate and control all mineral-related activities in the international seabed area beyond the limits of national jurisdiction (later known as the Area), an area underlying most of the world's oceans. ISA mandated by UNCLOS to inter alia promote the carrying out activities in the Area in such a manner as to foster healthy development of the world economy and balanced growth of international trade, and to promote international cooperation for the overall development of all countries, especially developing states and to adopt rules, regulations and procedures that ensures effective protection of the marine environment from harmful effects which may arise from such activities (UNCLOS, 1994). As a part of UNCLOS, the UNCLOS state parties automatically joined ISA membership and obliged to comply all of ISA regulations related with seabed management.

ISA had managed to establish specific regulations about seabed mining in the area which constituted from UNCLOS as mandate basis. These regulations includes what kind of mineral should be derived from the Area, environmental protections and contract managements to implement UNCLOS mandates. These comprehensive set of rules are later known as "The Mining Codes" which became the legal instrument for ISA member states to conduct the exploration projects in the Area. Through this mining codes, corporations with supporting states able to conduct a contract to explore the seabed for certain area and certain years. The contractors should meet the criteria and comply with the mining codes established by ISA.

Table 2
Polymetallic Nodules

| No. | Contractor | started | ended | Supporting states | location |
|-----|--|------------------|------------------|--|--------------------------------------|
| 1 | UK Seabed Resources Ltd. | March 29, 2016 | March 25, 2021 | UK and North Ireland | Clarion-Clipperton Fracture Zone II |
| 2 | Ocean Mineral Singapore Pte. Ltd. | January 22, 2015 | January 21, 2030 | Singapore | Clarion-Clipperton Zone |
| 3 | UK Seabed Resources Ltd. | February 8, 2013 | February 7, 2025 | United Kingdom of Great Britain and Northern Ireland | Clarion-Clipperton Fracture Zone (I) |
| 4 | G-YEC Sea Mineral Resources NV | January 14, 2013 | January 13, 2025 | Belgium | Clarion-Clipperton Fracture Zone |
| 5 | Marawa Research and Exploration Ltd. | January 19, 2015 | January 18, 2030 | Kiribati | Clarion-Clipperton Fracture Zone |
| 6 | Tonga Offshore Mining Limited | January 11, 2012 | January 10, 2027 | Tonga | Clarion-Clipperton Fracture Zone |
| 7 | Nauru Ocean Resources Inc. | July 22, 2011 | July 21, 2026 | Nauru | Clarion-Clipperton Fracture Zone |
| 8 | Federal Institute for Geosciences and Natural Resources of Germany | July 19, 2006 | July 18, 2021 | Germany | Clarion-Clipperton Fracture Zone |
| 9 | Government of India | March 25, 2002 | March 24, 2017 | India | Indian Ocean |
| 10 | Institut français de recherche pour l'exploitation de la mer | June 20, 2001 | June 19, 2016 | Perancis | Clarion-Clipperton Fracture Zone |
| 11 | Deep Ocean Resources Development Co. Ltd. | June 20, 2001 | June 19, 2016 | Japan | Clarion-Clipperton Fracture Zone |
| 12 | China Ocean Mineral Resources Research and Development Association | May 22, 2001 | May 21, 2016 | China | Clarion-Clipperton Fracture Zone |
| 13 | Government of the Republic of Korea | April 27, 2001 | April 26, 2016 | South Korea | Clarion-Clipperton Fracture Zone |
| 14 | Yuzhmorgeologiya | March 29, 2001 | March 28, 2016 | Russia Federation | Clarion-Clipperton Fracture Zone |
| 15 | Interoceanmetal Joint Organization | March 29, 2001 | March 28, 2016 | Bulgaria, Cuba, Republik Ceko, Polandia, Russia and Slovakia | Clarion-Clipperton Fracture Zone |

Source: International Seabed Authority, n.d.

Table 3
Polymetallic Sulphides

| No. | Contractor | started | ended | Supporting states | location |
|-----|--|-------------------|-------------------|-------------------|------------------------|
| 1 | Federal Institute for Geosciences and Natural Resources of the Federal Republic of Germany | May 6, 2015 | May 5, 2030 | Germany | Central Indian Ocean |
| 2 | Institut français de recherche pour l'exploitation de la mer | November 18, 2014 | November 17, 2029 | France | Mid-Atlantic Ridge |
| 3 | Government of the Republic of Korea | June 24, 2014 | June 23, 2029 | North Korea | Central Indian Ridge |
| 4 | Government of the Russian Federation | October 29, 2012 | October 28, 2027 | Russia | Mid-Atlantic Ridge |
| 5 | China Ocean Mineral Resources Research and Development Association | November 18, 2011 | November 17, 2026 | China | Southwest Indian Ridge |

Source: International Seabed Authority, [n.d](#)

Table 4
Cobalt-rich ferromanganese

| No. | Contractor | started | ended | Supporting states | location |
|-----|--|------------------|------------------|--------------------|---------------------------------------|
| 1 | Companhia De Pesquisa de Recursos Minerais | November 9, 2015 | November 8, 2030 | Brazil | Rio Grande Rise, South Atlantic Ocean |
| 2 | Ministry of Natural Resources and Environment of the Russian Federation | March 10, 2015 | March 9, 2030 | Russian Federation | Magellan Mountains, Pacific Ocean |
| 3 | Japan Oil, Gas and Metals National Corporation (JOGMEC) | January 27, 2014 | January 26, 2029 | Japan | Western Pacific Ocean |
| 4 | China Ocean Mineral Resources Research and Development Association (COMRA) | April 29, 2014 | April 28, 2029 | China | Western Pacific Ocean |

Source: International Seabed Authority, [n.d](#)

From the table of contractors above, it is understood that major states that conducted exploration contracts with the Authority mostly are well industrialized states such as UK, China, Japan, Germany and Belgium. The rest are minor composition of Asian and Pacific states and no African states. As seabed mining is happened in international area, it is understood that any state have equal rights to explore and later exploit the Area, not only well industrialized states but also new emerging states.

One of ISA objectives itself is to promote international cooperation for the overall development of all countries, especially developing states. Thus, there should be more role that could be played by more developing states. Though It is confirmed that ISA studies, training programme, endowment funds were held to help developing states to take part in seabed mining development, but in the terms of exploration contract, developing states only have least role. As the exploration finished calculating the economic values and environmental impacts, the exploitation phase would be started. If the developing states did not take any part in exploitation, the developing states would be left in this seabed “gold rush”.

Talking about developing states, the South East Asia states probably became an area which actually should do more in this seabed projects. South East Asia States themselves are state-parties of UNCLOS which automatically became member of International Seabed Authority. South East Asia states were benefited by its location and the regional organization, ASEAN which had just integrated into a new framework of ASEAN Economic Community. The location and the regional organization integration could be a useful advantage to advance Southeast Asia states roles in seabed mining. But, currently South East Asia role in seabed mining still at minimum level even only on training programs. There are only fourteen trainee from five ASEAN states under the endowment fund programs.

Table 5
List of ASEAN personnel in ISA's Project

| No | Name | Nationality | Project | Year |
|----|-----------------------------------|-------------|--------------------|------|
| 1 | <u>Djoko Hartoyo</u> | Indonesia | Rhodes Academy | 2009 |
| 2 | <u>Ranganul Sangadji</u> | Indonesia | Rhodes Academy | 2011 |
| 3 | <u>Rike Octaviana</u> | Indonesia | Rhodes Academy | 2013 |
| 4 | <u>Desiree Simanjuntak</u> | Indonesia | Rhodes Academy | 2015 |
| 5 | <u>Sharifah Nora Syed Ibrahim</u> | Malaysia | Rhodes Academy | 2014 |
| 6 | <u>Rednetor Genetiva</u> | Philippines | Rhodes Academy | 2009 |
| 7 | <u>Jonathan Parson</u> | Philippines | Rhodes Academy | 2011 |
| 8 | <u>Charter Luma-Aung</u> | Philippines | Rhodes Academy | 2012 |
| 9 | <u>Rotshot Osori</u> | Thailand | Rhodes Academy | 2009 |
| 10 | <u>Apitida Wasuwarcharapong</u> | Thailand | EMEP | 2014 |
| 11 | <u>Yodsaphon Nuturichiro</u> | Thailand | Marcopolo Zheng-He | 2015 |
| 12 | <u>Thang Nguyen Dang</u> | Vietnam | Rhodes Academy | 2009 |
| 13 | <u>Lan Nguyen</u> | Vietnam | Rhodes Academy | 2013 |
| 14 | <u>Yen Tran</u> | Vietnam | Rhodes Academy | 2015 |

In the term of organizational structure, ASEAN used to have a great history when Indonesian man rise as a Secretary-General in the first period. Mr. Hasyim Djallal used to be the first president of the Authority in 1996. Currently, three ASEAN states Indonesia, Vietnam and Singapore had secure the places in council groups.

In the term of contracts, there are only one ASEAN states which appears as a contractor for exploration in Clarion-Clipperton Zone. The Singaporean corporation, Ocean Mineral Singapore, Pte. Ltd with its support from Singapore as its supporting states had granted the exploration contract from the Authority. The contract started from 2015 and will be ended in 2030. Though there are only one states to play major role as contractors it could be a great step for ASEAN states to follow Singapore path in the seabed mining which promises high economic values in the future.

The lack of roles presented by ASEAN could be caused by some factors. There are at least two main factors. The first factor is less awareness of ASEAN states governments and its people about the international law regarding to the seas. The second is low funds and low human resources participating in seabed mining projects development.

The first factor, the awareness about the development of Law of Sea in ASEAN states are mostly still low. Indonesia, as the largest state in ASEAN who had proclaimed to be a Maritime axis under the President Joko Widodo picture the condition of low awareness about the sea law. Indonesia who should be the main example of ASEAN states who rely on maritime resources shows contradiction in their development. The demerit of a deep understanding about the latest provisions in The Law of Sea among officials, academics and people representatives impacted on low awareness in the development of seabed mining. This problem is also worsened by additional institutional problems in the field of marine (Djalal, 2014).

The second factor is about the low funds and technology development in ASEAN states. This second factor is strengthened because most of ASEAN states still rely on land resources as the main resources. Though the land resources had started to deplete, most ASEAN states still not changing the focus on oceans as alternative future mineral resources. The lack of technology development in ASEAN also became the strong cause on how ASEAN did not consider seabed mining as a big matters. Indonesia, again, is one of example which shows a bit too confident states. With its richness of natural resources, Indonesia still have not begun considering high seas as its alternative natural resources.

Singapore Deep Seabed Mining Act 2015

Singapore as noted above has been enacted its Deep Seabed Mining

Act (DSMA) 2015. It is aimed to ensure the Singaporean companies that conducting deep seabed mining comply with the environmental rules and regulations. In this regards, the company must carry out a necessary measures to minimize any environmental damage (Section 3 paragraph b DSMA 2015). Therefore the license only been given to the company that fulfill all the required conditions on technologies and financial capacities to carry out deep seabed mining (Section 7 DSMA 2015).

According to the Act, the companies that willing to conduct deep seabed mining must obtain a license from Ministry of Trade and Industry. Then to operate their mining activities the company must establish a contract with ISA. The government sponsorship will be a compulsory, where the absent of such requirement the company will not be granted any contract exploration by ISA (Section 3 paragraph a DSMA 2015). In the Section 6 paragraph 3 of the Act, stated that the license only given to one type of resource.

This Act also regulate concerning fines and punishment for offences. In case there is an offence committed by company or individual, will be fined up to \$300,000 Singaporean Dollars. In the case the offence continued it will be the subject of daily fine not exceeding \$50,000 Singaporean Dollars. The maximum fine given up to \$500,000 Singaporean Dollars. The physical punishment also given as an implementation of deterrent principle, where the individual or member of company board of directors who convicted wrong doing can be imprisoned for maximum 3 months (Section 4 paragraph a DSMA 2015).

The Alternatives

To overcome the matters, the first step that ASEAN states should take is to increase the knowledge for officials, academics, and the people itself about The Law of Sea, and the Sea itself. After that, the importance and awareness about seabed mining should be proceed to them. This could be implemented by sending more human resources in seabed mining trainee programs and endowment funds. As the Authority stated, the programs under the Authority covers large information in the matters of seabed mining in environmental aspects, economic aspects and sociocultural aspects. By acknowledging more personel in Law of Sea and the importance of seabed mining, ASEAN would enlarge its path to the futuristic seabed "gold rush".

It is widely known that the exploration of ocean floor needs significant advanced technology with ultimately expensive cost. To propose the exploration contract to the Authority itself already needed extra cost. The expensiveness of an exploration or exploitation contract and its technology

is absolutely not affordable by a single ASEAN state (except Singapore). To overcome the matters, there are several ways that ASEAN states should take such as establishing cooperation framework among ASEAN member states or make use the Enterprise when it comes into account as a commercial arm of ISA.

The first alternative, building more specific cooperation in the term of seabed mining could be a promising choice for ASEAN states to enhance their activities in seabed mining. It is completely understood that most of ASEAN states are developing states which are still trying so hard to stabilize states internal economy. But, the promising economic values of seabed mining should be considered too by ASEAN states as the resources derived from the seabed is highly valued minerals. ASEAN ultimately should join this gold rush competition.

The shape of cooperation framework that can be established by ASEAN states could be a joint organization or a consortium. ASEAN states could adopt Eastern European states joint organization in seabed mining which is called Interoceanmetal Joint Organization. Interoceanmetal Joint Organization consisted of some eastern European states such as Bulgaria, Ceko, Slovakia, Poland and Russia with additional state Cuba. One thing should be highlighted in that joint organization is the presence of Russia. It is known that Russia had its own contract with the Authority by its Yuzhmorgeologiya and its own Russian Government in exploring polymetallic nodules and polymetallic sulphides. The joint organization that Russia established in Interoceanmetal shows that the ASEAN needs also a great power in ASEAN joint organization. The closest alternative that should be considered by ASEAN states is in ASEAN body itself is Singapore. Singapore is one small yet most successful economic growing states in ASEAN. ASEAN states could establish a cooperation framework that benefited for all sides with Singapore in seabed mining.

The raising of maritime vision of a state should be also taken into account. As Indonesia President Joko Widodo stated that Indonesia will be the maritime pivot under his era, Indonesia should consider seabed mining as one of its priorities to broad the sail of maritim pivot. Along with Philippines, Vietnam, Thailand and Singapore as the team leader, the framework of cooperation relating to seabed mining should be good enough to gain exploration and later exploitation contract for commercial benefits in the future. It is of course possible to include more states of ASEAN in the joint organization, but those states are the states with biggest chance in seabed mining considered from the experience, technology and cost capability.

The next alternative is to wait until the Enterprise come into actual functioning organ of the Authority. As a unique undertaking for an in-

tergovernmental organization, the Enterprise will be the commercial arm of the Authority, empowered to conduct its own mining, initially through joint ventures with other entities. Until seabed mining becomes a commercial reality, the functions of the Enterprise are to be carried out by the Secretariat. During this interim period, by way of preparing for the future role of the Enterprise, the Secretariat monitors trends and developments, assesses prospecting and exploration data and the results of marine scientific research, evaluates data on seabed areas reserved for the Authority, assesses approaches to joint ventures, and studies managerial policy options for administering the Enterprise.

As conducted by the Convention, promoting international cooperation for the overall development of all countries, especially developing states became one of crucial ISA mandate to foster the developing states. By the Enterprise, ASEAN states should be benefited from seabed mining exploitation in the future. But, this alternative is not functional yet because the exploitation phase in seabed mining itself is yet come into action. While waiting for the time when the Enterprise come into action, ASEAN states should prepare themselves by sending more personel and encourage more awareness to its people about the importance of sea as alternative natural resource to foster states economic development.

ASEAN on facing the environmental threat

As stated before that seabed mining is an experimental mining projects which do not only offers economic advances, seabed mining also poses environmental threat which is already issued by many environmentalist or environmental concerned organizations. Most of environmentalist pointed out that environmental risks and impacts of deep sea mining would be enormous and unavoidable, including seabed habitat degradation over vast ocean areas, species extinctions, reduced habitat complexity, slow and uncertain recovery, suspended sediment plumes, toxic plumes from surface ore dewatering, pelagic ecosystem impacts, undersea noise, ore and oil spills in transport, and more (greenpeace.org).

From this environmental issues possessed by seabed mining, an unavoidable collide would be happened between economic interest and environmental issues. The environmental risk possessed by seabed mining will violate the Rio Declaration on Environmental and Development. Rio Declaration was a short document produced at the 1992 United Nations Conference on Environment and Development (UNCED), informally known as the Earth Summit, and signed by over 170 countries. The Rio Declaration consisted of 27 principles intended to guide countries in future sustainable development. Because of this matter, ISA had made some comprehensive

law in its mining codes to balance the economic interest and environmental risk that will be possessed by seabed mining. The Authority has the power to adopt rules, regulations and procedures for the protection of the marine environment, with particular attention being paid to harm caused by drilling, dredging, and excavation (UNCLOS, Art. 145a). One regulation requires companies to apply a precautionary approach in regard to the marine environment as reflected in principle 15 of the Rio Declaration* (ISA, 2002). This is notable that UNCLOS nor the 1994 Agreement even mentions "precautionary approach" — a principle that requires absolute scientific certainty that an action will not cause environmental harm.

All states of ASEAN which are both member states of ISA and Rio Declaration should also taking role on balancing both of interest between economic and environmental. The environmental issue must also be considered by ASEAN states and ASEAN itself as an organization because of seabed mining impacts would be global which means South-East Asia states will be the first region to be impacted first. This is because of high seabed mining locations are mainly in Pacific Ocean and in Indian Ocean which South-East Asia is located between the two oceans.

Though ASEAN states role in ISA organizational and project are still low, ASEAN still had a chance to play its role in balancing the economic and environmental matters of seabed mining. As ASEAN states are the member of ISA, it means that all ASEAN states are the member of ISA assembly. The Assembly of the Authority is supreme organ with the power to establish general policies, consists of all ISA members. Following adoption by the Council, it approves the rules, regulations and procedures that the Authority may establish from time to time, governing prospecting, exploration and exploitation in the Area. By this, ASEAN states could play their roles on establishing the general policies and approve rules which is suitable for balancing economic and environmental issues (ISA Assembly, 2012). But, it can only by strengthen its position in consensus which was held by assembly to determine its decision.

From the organizational body of ASEAN, as ASEAN community started to begin, ASEAN should consider the matter of seabed mining into its organization agenda. So far, ASEAN still has not place seabed mining issue in its project or agenda. ASEAN should conduct a meeting in order to resolve this matter of economic and environmental issue in seabed mining. ASEAN already has a good progress on embarking the ASEAN Cooper-

*Principle 15 of the 1992 Rio Declaration states: "In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."

ation on Environment which recognize the importance of protecting the natural resource base for economic and social development, including the sustainable management and conservation of soil, water, mineral, coastal and marine resources as well as the improvement in water and air quality for the ASEAN region. This was included in 40th Anniversary of ASEAN and the 13th ASEAN Summit in Singapore. The resolution of the summit should be implemented well so that it will enhance ASEAN's role to foster the sustainable management and efficient use of mineral resources and environmentally-sound mining practices.

Conclusion

The Authority was an established to organize, regulate and control all mineral-related activities in the international seabed area beyond the limits of national jurisdiction to foster healthy development of the world economy and balanced growth of international trade, and to promote international cooperation for the overall development of all countries, especially developing states. But the developing states role in the Authority and in its exploration projects are still low and was pictured by South-East Asia States.

The lack of roles presented by ASEAN is caused by some factors two main factors. The first factor is less awareness of ASEAN states governments and its people about the importance of seabed mining and the low funds states and low human resources participating in seabed mining projects development. To overcome the factors, ASEAN states should increase its stakeholder's awareness and knowledge in Law of Sea and seabed mining. ASEAN should build specific cooperation in the term of seabed mining to enhance their activities in seabed mining to cover the funds of seabed exploration.

The next alternative is to wait until the Enterprise come into actual functioning organ of the Authority as a commercial arm of the Authority, empowered to conduct its own mining, through joint ventures with other entities. ASEAN also should recognize the importance of protecting the natural resource base for economic and social development, including the sustainable management by balancing the economic needs and environmental issues possessed by seabed mining through its ASEAN Cooperation on Environment.

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