

Research Article

The Implementation of Establishing Marine Protected Area: Lessons Learned From Raja Ampat to Achieve Sustainable Fishery

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ABSTRACT

Raja Ampat has one of the world's richest coral reef, because it is located in the heart of the coral triangle. However, due to human activities, such as overfishing, shipping as well as climate change has caused serious impacts to the existence of the coral reef and its habitats. As the member of the United Nations Law of the Sea Convention and the Biodiversity Convention, Indonesia has obligation to establish Marine Protected Areas (MPAs). The research aims to analyze comprehensively the implementation of establishing the MPA in Indonesia based on international and national law perspective and to examine whether the existence of the MPA in Raja Ampat can be used as a model to develop MPA in other area to achieve sustainable fishery. This study is a normative juridical research by applying conceptual and statutory approaches. The result of the research finds that the establishing of MPA in Raja Ampat has been successfully achieved sustainable Fishery as part of sustainable development. However, there are some challenges that have to be addressed, such as lack of monitoring in the MPAs due to the limitation of the budget as well as the illegal unreported and unregulated fishing conducted by the people outside indigenous community. Thus, it is necessary to conduct monitoring cooperation among the MPAs.

Keywords: Coral Triangle; Marine Protected Area; Sustainable Fishery and Sustainable Development.

ABSTRAK

Raja Ampat merupakan wilayah terkaya terumbu karang, karena Raja Ampat terletak di jantung segitiga terumbu karang dunia. Namun demikian akibat aktivitas yang dilakukan oleh manusia, seperti penangkapan ikan yang berlebihan, kegiatan transportasi laut dan juga akibat perubahan iklim yang memiliki dampak serius terhadap keberadaan terumbu karang dan habitatnya. Sebagai anggota dari UNCLOS dan Konvensi Keanekaragaman Hayati, Indonesia berkewajiban untuk membentuk Kawasan Konservasi Laut (KKL). Artikel ini bertujuan untuk menganalisa secara komprehensif implementasi hukum pembentukan KKL di Indonesia berdasarkan perspektif hukum Internasional dan nasional dan juga untuk mengkaji apakah keberadaan KKL yang dibentuk di Raja Ampat dapat dijadikan model untuk membentuk KKL di wilayah lain dengan modifikasi tertentu untuk mencapai perikanan yang berkelanjutan. Penelitian ini merupakan penelitian hukum normatif dengan pendekatan perundang-undangan dan konseptual. Hasil dari penelitian ini menyatakan bahwa pembentukan KKL di Raja Ampat telah berhasil mencapai perikanan yang berkelanjutan sebagai bagian dari pembangunan berkelanjutan. Namun demikian ada beberapa tantangan yang harus ditangani seperti misalnya, kurangnya pengawasan di wilayah KKL karena keterbatasan budget, demikian juga dengan terjadinya peangkapan ikan yang tidak sah dan tidak dilaporkan pada institusi pengelola perikanan yang dilakukan oleh orang-orang yang berada diluar wilayah KKL. Oleh karena itu, diperlukan kerjasama monitoring antara KKL.

Kata Kunci: Segitiga Terumbu Karang, Kawasan Konservasi Laut, Perikanan Berkelanjutan dan Pembangunan Berkelanjutan.

A. INTRODUCTION

Indonesia is the largest archipelago country in the world. Indonesia's location is very strategic between Pacific and Indian Oceans. In addition, Indonesia is also one of the countries in the coral triangle consisting of Malaysia, Papua New Guinea, the Philippines, Solomon Islands, and Timor-Leste (Agostini et al., 2012). Natural sources in the form of various types of marine life and coral reefs contribute greatly to food sources and improve people's welfare (Klein, 2016). Unfortunately, these natural resources are threatened by various pollution and damage caused by the activities of shipping or the fishing methods that are not environmentally friendly, for example fishing using bombs or cyanides, which damage fish habitats including coral reefs and cause a decrease in biodiversity (Adam, 2010). The Convention on the Law of the Sea, 1982 (The United Nations on the Law of the Sea, hereinafter referred to (UNCLOS) and the Convention on Biological Diversity (Biological Diversity Convention) of 1992) requires the member states to make the protection of the marine environment including the establishment of the Marine Protected Areas hereinafter referred to as MPA (Recio-Blanco, 2015). Marine Protected Areas are also known as Waters Protected Areas (KKP). According to the Regulation of the Minister of Marine Affairs and Fishery Number Per. 30 / MEN / 2010, KKP is protected water areas managed by zoning system to realize sustainable management of fish resources and the environment.

To ensure that the formation of MPA as a form of marine conservation can be implemented properly,

Indonesia has made various laws and regulations, even before UNCLOS came into force on November 16, 1994 (Payne, 2019) and The Convention on Biological Diversity was adopted in 1992 (Hudzik, 2010). Indonesia had issued Law No.5 of 1990 concerning the Conservation of Living Natural Resources and their Ecosystems as the legal basis for the formation of MPA which was followed by the promulgation of Law Number 31 of 2004 concerning Fishery which had been amended by Law Number 45 of 2009 concerning Fishery and Law Number 27 of 2007 concerning Management of Coastal Areas and Small Islands. Article 4 of Law Number 27 of 2007 states that the Management of Coastal Areas and Small Islands is carried out with the aim of conserving and sustainable use of coastal resources by involving the community. Apart from that, it also creates harmony and synergy between the central and local governments. However, this is not an easy thing because it is possible that there is a potential conflict of interest between the central and regional governments in managing MPA areas.

In some areas of the Indonesian archipelago, there are actually traditions of conservation carried out from generation to generation although it is not called MPA in very small percentage compared to the vast Indonesian archipelago. For example, in Raja Ampat and Maluku, these two places have a regulation on marine conservation called "Sasi"; in West Nusa Tenggara it is called Awig-Awig; and in Aceh it is called Panglima Laot (Satria, & Mony, 2019). In general, these systems regulate responsible, equitable and sustainable coastal

resource management, but the percentage is still very small compared to the vast Indonesian archipelago. The awareness of fishermen to participate in the conservation of marine resources is not the same from one area to another. For example, fishermen in the North Java region still use a lot of non-environmentally friendly fishing gear called "Cantrang". This fishing gear destroys the marine ecosystem and will also catch fish that should not be the target of catching (bycatch). Therefore, the use of Cantrang is prohibited based on the Regulation of the Minister of Marine Affairs and Fishery (KP) Number 2 of 2015 concerning the Prohibition of the Using of Hela Trawl and Pulled Trawl (Seine Nets) in the Indonesian Fishery Management Area.

Several studies have been conducted to examine how the implementation of MPA management in Indonesia. The studies related to the implementation of MPA management in Indonesia, i.e.: First, a research conducted by Elizabeth Mcleod, et al in Raja Ampat, West Papua on the traditional provisions of conservation of natural resources in the sea called "SASI". The provisions contained in the sasi are the provisions that support the implementation of conservation. However, with the changing times, the provisions contained in the "sasi" need to be supported by a social and institutional system recognized by the government. Two villages in Raja Ampat were subjected to the research to examine how the provisions of sasi were affected by cultural, political and economic changes. The results of this study indicate that the two villages illustrate the importance of the role of traditional and religious

leaders in effective management and conservation with the monitoring carried out by community members and also the law enforcement against those who violate the provisions of sasi. The recommendations in this study state the need for government regulations to support the implementation of sasi provisions (Mcleod, Szuster, & Salm, 2009).

Second, a research conducted by Dewa Wiadnya, et al in 2011 on the development of the implementation of MPA in Indonesia. The purpose of this study was to study the formation of MPA in six regions of Manokwari, Raja Ampat, Wakatobi, Berau, Komodo and Nusa Penida. With different management types. During the reign of President Suharto (1970-1995), the Ministry of Forestry had established several marine conservation areas (MPAs) spread across several Indonesian islands. Then, in 2004 the Ministry of Marine Affairs and Fishery was given the mandate to establish an MPA equipped with zoning, regulations and institutions. The results of this study indicate that in Manukwari and Raja Ampat, they have carried out marine conservation since the Dutch colonial era. The people in both places obey the provisions contained in the "sasi" well. However, the MPA which was formed by the Ministry of Marine Affairs and Fishery in 2004 which has been equipped with zoning, regulations and institutions has not been able to achieve the goal of carrying out sustainable fishery conservation, so it still requires a clearer management institution (Wiadnya et al., 2011)

Third, it is the research conducted by Irfan Yulianto, et al. In 2011. This research was on the management of Weh island led by Panglima Laot. Panglima Laot had the authority to apply customary law provisions regarding marine conservation, to maintain harmony in social life, and to resolve conflicts in the use of natural resources in the sea. These traditional provisions include restricting the use of fishing gear that is not environmentally friendly and determining the prohibition zone for fishing. Conservation provisions made by indigenous peoples are considered contrary to the provisions of other customary groups, and it is stated that these provisions have no legal basis. The results of this study state that the conservation tradition adopted by the people of Weh Island led by Panglima Laot is a form of MPA recognized by the government (Yulianto, Wiryawan, & Mukminin, 2011).

Fourth, the research conducted by Ananda Prima Yurista in 2017 related to the Zoning of Coastal Areas and Small Islands (RZWP3K) as a follow-up to the Law Number. 27 of 2007 concerning the Management of Coastal Areas and Small Islands. This study question was on the presence of the compatibility owned by the RZWP3K as a marine spatial plan. The results of this study indicate that the RZWP3K is insufficient and cannot even be used as a marine spatial plan. The RZWP3K only functioned as one part of the marine spatial planning document as mandated by Law Number 32 of 2014 concerning Maritime Affairs (Yurista, 2017).

Fifth, the research conducted by Adi Yunanto, et al. in 2018 states that in Indonesia there has been

an over exploitation of natural resources in the sea. This is exacerbated by the presence of Illegal, Unreported and Unregulated Fishing (IUU fishing). Therefore, the Indonesian government established an MPA to conserve and sustainably use marine resources. This research also states that there is no empirical study conducted on the impact of the MPA formation on IUU fishing conducted in the MPA area. The results of this study state that IUU fishing in MPA is less than that in the areas or territories that are not MPA. In addition, the results of this study state that the formation of MPA in Indonesia is the right step, so the target to establish the MPAs of 30 million hectares by 2030 is reasonable (Yunanto et al., 2018).

In various studies outlined above, there has no study that examine the implementation of the MPA formation law comprehensively in Indonesia, particularly in Raja Ampat as an MPA model based on local wisdom (Lestari, & Knight, 2015) to achieve sustainable fishery as part of the sustainable development in Raja Ampat from the perspective of international and national laws. The purpose of this research was to examine the implementation of the law on the formation of MPA in Indonesia and what lessons can be taken from the formation of MPA in Raja Ampat to create sustainable fishery. Therefore, this research is different from previous studies and has novelties that have never been made by other researchers. because this study also analyzes the feasibility of the provisions of "SASI" to be applied in other areas with certain modifications.

B. RESEARCH METHOD

This research was a normative juridical research. According to Soerjono Soekanto, a normative juridical approach is a legal research conducted by examining library materials or secondary data as the basic material for research by conducting a search on regulations and literature related to the problem under the study (Soekanto & Mamuji, 2001 and Ali, 2014). Normative juridical research is conducted by examining and interpreting theoretical matters relating to principles, conceptions, doctrines and legal norms related to Marine Protected Areas and the principles of sustainable development. The approaches used in this study were conceptual and statutory approaches (Ibrahim, 2007).

C. RESULTS AND DISCUSSION

1. Sustainable Development and the International Instruments of Marine Protected Area

Development as a right of all states in the Sockholm Declaration 1972 (Sung, 2014) is unlikely to be stopped. Therefore, in order that development can go hand in hand with environmental protection and the environment can be in good condition, it is necessary to regulate it with relevant legal instruments and programs based on the principles of sustainable development. Various human activities carried out at sea by individuals, private or state legal entities have resulted in various negative impacts on the marine environment and natural resources in it. The UNCLOS in 1982 gave an obligation to its member countries to protect marine environment and

to apply the precautionary principle in the conservation of marine environment (Yiallourides, 2018) so that the sea and natural resources in it can be utilized sustainably for the benefit of the present and future generations (Fitzmaurice, 2012).

The principle of sustainable development has been adopted since 1987 (Ellison, 2014) as outlined in the Brundtland Report which states "Sustainable development is development that meets the needs of the present without compromising the abilities of future generations to meet their own needs". The principle of sustainable development has three pillars of environmental protection, economic development and social development (Hush, 2018). To achieve sustainable development, the development which is conducted by the present generation to meet its needs should not be compromising the ability of future generations to meet their needs in a way harmonizing between the three pillars and cannot prioritize only one pillar. The goal of sustainable development is environmental protection norms oriented towards ecological protection (Voight, 2009). With the formation of Marine Protected Areas, hereinafter referred to as MPA, is an effort agreed upon by the international community as outlined in the international agreement of UNCLOS and the 1992 Biodiversity Convention in order to realize the conservation and sustainable use of biodiversity (Brooks et al., 2014). This is in accordance with the principles of sustainable development so that the three pillars of 2018 sustainable development must be integrated in MPA.

MPA is an instrument for conserving various natural resources in the sea. The formation of MPAs carried out by the state is a response to the failure of the state to control and supervise activities at sea, particularly those related to fishing and marine habitat conservation including coral reef conservation (Kushlan, 2010). Pollution and damage to the marine environment are caused by various activities in the sea that are not environmentally friendly (Telesetsky, 2016) so that MPA is an instrument needed to carry out effective conservation. At the international level, there is no uniformity in the definition of MPA, both legally and scientifically. One of the definitions of MPA that is often used by countries is the definition put forward by the International Union for Conservation of Nature and Natural Resources (IUCN) in 2008 (Nevill, 2017) which states:

"A protected area is a clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values." MPAs can be "no-take" areas or allow restricted exploitation and activities, or combine both."

From this definition, it can be understood that MPA is very useful for the protection and conservation of flora and fauna and cultural sites in the sea. MPA is formed based on legal provisions or other effective mechanisms to achieve the goals of conservation and sustainable use of resources in the sea or sustainable fishery.

In practice, the formation of MPAs is within the national jurisdiction of a country in the territorial sea,

in the Additional Zone, or in the Exclusive Economic Zone of a country (Van Dyke, & Broder, 2012). MPA is formed based on the national law of a country at the central, provincial or district levels because the MPA is located in a certain Regency or borders between two regencies. However, the practice in some countries for the formation of MPAs can be at the initiative of the local government or from the indigenous peoples of a country who have previously practiced marine conservation independently managed by indigenous peoples, such as in Indonesia. In Maluku and Raja Ampat, the indigenous peoples have practiced the regulations regarding the conservation of natural resources both on land and in the sea which are regulated in "SASI" (Mcleod, Szuster, & Salm, 2009).

a. Types of Marine Protected Area

Referring to the definition put forward by IUCN, MPA can be classified based on the purpose of the MPA establishment.. Initially, MPA focused more on conservation issues to protect marine biodiversity. With the development of science, the changes in ecological conditions and status of utilization of biological resources, MPA may have multiple goals. One of them is that MPA is aimed at scientific research and sciences (Shi, 2012), maintains environmental services, protects cultural features and specific landscapes in the sea, protection and preservation of marine species and genetic diversity, tourism, education, sustainable use of natural resources and their environment, or maintaining cultural or traditional attributes. The example of the MPA which is a combination of conservation and

sustainable use of natural resources in the sea as well as increasing community economic development, is the one in Raja Ampat (Craig, 2018).

On the other hand, there is an MPA whose purpose is only for the conservation of biological or non-biological natural resources which prohibits the holding of exploitative activities such as fishing. Here, the MPA is known as the MPA of "no-access" and "no-take" (Kearney, Buxton, & Farebrother, 2012). The consequence is that in the MPA of "no-access" it is not allowed to access or take anything from the MPA. The presence of people to the MPA is only for the purpose of supervision and monitoring as well as scientific research purposes to promote effective conservation. The type of "no-take" MPA still allows the presence of people in the MPA, for example, for tourism purposes (eco tourism) so that economically the surrounding community still benefits. Therefore, the form of MPA which will be formed is strongly influenced by its objectives. For MPAs aimed at ecological conservation, of course, they will choose "no access" MPA because this type of MPA is more efficient for conservation than that for multi-functions. However, most MPAs are multi-functional, while the "no- take" MPA is less than 1% of the total MPA worldwide (Dick, & Jefferies, 2013).

b. International Instruments for Regulating Marine Protected Area

The legal basis for the establishment of MPA is Agenda 21 adopted at the Earth Summit in Rio De Janeiro, Brazil in 1992 (Guthoff, 2017). Chapter 17 of Agenda 21 is aimed at protecting the marine environment (Shi, 2012). In the chapter, there are

seven program areas with two of them containing the instruments to implement sustainable marine environmental management. The Program Area A contains the obligation to integrate sustainable development in the management of coastal areas as well as in additional zones and EEZ, while Article 17 paragraph 7 is a recommendation for the establishment of MPA in coastal areas and other parts of the sea that are still within the national jurisdiction of a country for the purposes of protecting biodiversity.

Another international agreement which is the legal basis for the establishment of the MPA is UNCLOS 1982. UNCLOS states that the member states are obliged to form an MPA within the national jurisdiction of a country. Article 56 of UNCLOS obliges the states to establish an MPA as a form of marine environmental management (Salcido, 2016). Article 56 paragraph (1) (a) of UNCLOS states:

"In the exclusive economic zone, the coastal State has:

(a) sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-living, of the waters superjacent to the seabed and of the seabed and its subsoil, and with regard to other activities for the economic exploitation and exploration of the zone, such as the production of energy from the water, currents and winds";

The provisions of Article 56 (1) (a) is a legal basis for UNCLOS to oblige the member countries of the Convention to carry out the management and conservation of natural resources in the EEZ, both living and non-living (Lee, & Bautista, 2018) as a

result of activities carried out by the states or individuals and legal entities that have an impact on the marine environment.

Furthermore, UNCLOS also regulates the obligations of the member countries to protect the marine environment which is generally regulated in Article 194 (5) (Mossop, 2018):

"The measures taken in accordance with this Part shall include those necessary to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life".

Based on the provisions of Article 195 (5), in addition to the states establishing MPA, this action must also be aimed at an ecosystem that is threatened with its sustainability because there is serious damage to the ecosystem or there is a species that is threatened with extinction. Then, the states need more serious and comprehensive actions, for example by forming a "no-take" MPA (Patlis et al., 2014).

Another provision in UNCLOS that instructs the member countries to form a special MPA is stated in Article 211 (6):

"...clearly defined area of their exclusive economic zones...where the adoption of special mandatory measures for the prevention of pollution from vessels is required for recognized technical reasons in relation to its oceanographical and ecological conditions, as well as its utilization or the protection of its resources and the particular character of its traffic...".

Article 211 paragraph (6) only mentions the formation of MPA in the EEZ, but that does not mean that MPA cannot be formed in territorial sea or in coastal areas.

The question might arise; is it permissible in all EEZ areas to be declared as MPA? Of course, this will very much depend on the policies of the government of a country if indeed in the EEZ ecologically there has been very serious damage and requires special handling.

An international legal instrument that is no less important than that previously described is the Convention on Biological Diversity. This convention was adopted in 1992 at the time of the Earth Summit in Rio De Janeiro, Brazil (Segger, 2009). The Convention on Biological Diversity contains the objectives in Article 1 stating "

The objectives of this Convention, to be pursued in accordance with its relevant provisions, are the conservation of biological diversity. the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding

Based on this Article, it can be said that there are three objectives of the Convention on Biological Diversity, i.e.: (i) biodiversity conservation; (ii) sustainable use of biodiversity components; and (iii) equity in sharing benefits from genetic resources. However, the Convention on Biological Diversity focuses more on the implementation of conservation in an area of national jurisdiction, whereas the conservation of the areas outside the jurisdiction of a country is regulated in UNCLOS or by Regional Fishery Management Organization or Regional

Fishery Management Organizations often called RFMOs (Qureshi, 2018).

With regard to the obligation to form MPA, this is in accordance with the principle of inter-generational equity contained in the Preamble to the Convention on Biological Diversity. The application of the principle of intergenerational equity is very important in order to achieve the goal of MPA realizing the conservation and sustainable use of marine biodiversity. According to Edith Brown Weiss (Weiss, 1992) the current generation has an obligation to ensure that future generations also have the same rights to enjoy various kinds of natural resources with the same quality as those enjoyed by the present generation, and future generations also have access the same as enjoyed by the current generation (Wartini, 2015).

Therefore, when the principle of intergenerational equity is applied in the formation of MPA, it will give an obligation for the government of a country to make legal instruments that are normative in nature, considering that the principle is something abstract. The principle of intergenerational equity is closely related to the principle of sustainable development (Weiss, 1992) because by applying the principle of sustainable development with the three pillars contained therein, namely economic development, environmental protection and social development, justice between generations will also be achieved.

Article 8 of the Convention on Biological Diversity obliges the member states to carry out conservation in situ, and in Article 9 obliges the

member states to undertake conservation ex-situ. The obligation to conserve in-situ, especially for biodiversity that has been destroyed, is obliged to form an MPA which only aims for the conservation with the MPA model of no-access so that it will be more focused and effective in achieving conservation goals. Based on the Convention on Biological Diversity, Article 8 paragraph (a) states "Protected area" means a geographically defined area which is designated or regulated and managed to achieve specific conservation objectives. "Based on this definition, MPA is an area that has been determined or specifically designed for conservation purposes, but this Convention does not explicitly mention marine areas because the Convention on Biological Diversity covers biological diversity both on land and in the sea:

c. Regulation of MPA Establishment in Indonesian National Law

Conservation areas in the form of MPA are protected by law, so they are often referred to as Water conservation areas (Wiryawan, & Dermawan, 2006). The regulation of natural resources has been under the authority of the central government as stated in Article 33 Paragraph 3 of the 1945 Constitution which states that land, water and natural resources contained therein are managed by state and addressed for the prosperity of the people. In carrying out the mandate of the Constitution, the government uses policy instruments by determining an area as a Marine Protected Area (MPA). Based on Government Regulation Number 60 of 2007 concerning Conservation of Fish Resources, MPA is

called Marine Conservation Area (KKL) as a protected water area, managed with a zoning system, to realize sustainable management of fish resources and the environment (Soemodinoto et al., 2013). As a member country of various international instruments that oblige the establishment of an MPA, Indonesia has issued various policies, laws and regulations as the legal basis for the establishment of MPA in Indonesia. Indonesia has ratified UNCLOS with Law Number 17 of 1985 concerning Ratification of the United Nations Convention on The Law of The Sea and ratified the Convention on Biodiversity with Law Number 5 of 1995 concerning Ratification of the United Nations Convention on Biological Diversity.

Concerning various laws and regulations that have been made by the Indonesian government, in their implementation, one must mutually support one statute and another. For example, implementing Law No. 5 of 1990 concerning Conservation of Living Natural Resources and their Ecosystems as a basis for the formation of MPA is actually an implementation of Law No. 32 of 2009 concerning Environmental Protection and Management. Article 63 of Law Number 32 of 2009 gives the authority to the state to determine marine protection policies (Kherid, & Aminah, 2019). Then, it is stated in Law Number 31 of 2004 concerning Fishery which was amended by Law Number 45 of 2009 (Yulianto, Wiryawan, & Mukminin, 2011). Article 1 of Law Number 31 of 2004 does not include in the amended one. Article 1 paragraph (7) states:

"Fishery management is all efforts, including an integrated process in information gathering, analysis, planning, consultation, decision

making, allocation of fish resources, and implementation and enforcement of laws and regulations in fishery, carried out by the government or other authorities. which is directed at achieving the continuity of the productivity of aquatic biological resources and the agreed objectives.

Then, Article 1 paragraph (8) defines "Conservation of fish resources is an effort to protect, conserve, and utilize fish resources, including fish resources". These two articles must be interpreted as one unit that conservation also concerns the management involving government institutions at the central and regional levels.

Based on the definition of fishery management, of course, it is related to the provisions of the Law on Environmental Protection and Management because the Law on Environmental Protection and Management regulates the Strategic Environmental Assessment (SEA) in Article 15 (1) which states that: "Government and local governments are obliged to make SEA to ensure that the principles of sustainable development have become the basis and are integrated in the development of an area and / or policies, plans, and / or programs ". Therefore, when determining an area to become an MPA, SEA must be carried out and it is based on a predetermined spatial layout (Yurista, 2017).

With regard to the formation of the MPA, it must also refer to Law Number 26 of 2007 concerning Spatial Planning. The formation of the MPA in relation to the areas determined as MPA must also be based on the provisions of Law Number 26 of 2007 and Law

Number 26 of 2007 concerning Spatial Planning. Article 8 paragraph (1) of Law Number 26 of 2007 concerning Spatial Planning states:

The government's authority in spatial planning includes:

- a) regulation, guidance and supervision of the implementation of spatial planning for national, provincial and regencies / cities, as well as the implementation of spatial planning for national, provincial and regency / city strategic areas;

Based on the provisions of the Spatial Planning Law, the determination of the MPA must refer to the determined Spatial Planning so that there is no conflict or overlapping spatial use. This spatial planning provision is closely related to the authority of the Regional Government as regulated in Law Number 32 of 2004 concerning Regional Government which has been amended by Law Number 23 of 2014 concerning Regional Government. The role of the Regency government is very important because the management of the MPA area is in the Regency area and MPA requires institutions as well as a large amount of a budget for conservation.

However, with the amendment of Law Number 32 of 2004 concerning Regional Government with Law Number 23 of 2014 concerning Regional Government, it has expanded the authority of the Provincial Government which has a broad impact on fishery management issues and the authority of the Regency government to manage the existing MPA in its territory. Based on Law Number 23 of 2014, the

Regional Government which originally had authority over the sea area with a limit of 0-4 miles no longer has this authority because the authority over the 0-12 mill sea area becomes the authority of the Provincial Government as stated in Article 27 paragraph (3): "The authority of the province to manage natural resources in the sea as referred to in paragraph (1) is no more than 12 (twelve) nautical miles measured from the coastline towards the high seas and/ or towards archipelagic waters". Therefore, the sea territory after the territorial sea becomes the authority of the central government. The conflict of interest between Provincial government and Regency government may be related to the MPA management authority in Regency area.

In addition to the management, conservation issues is essential to achieve sustainable fishery which are also part of sustainable development. According Marine Stewardship Council (MSC) definition of sustainable fishery, it is one of the ways of producing fish in such a way that it can take place continuously on a reasonable level taking into account ecological health, minimizing adverse side effects that disrupt ecosystem diversity, structure and function, and managed and operated fairly and responsibly in accordance with local, national and international laws and regulations to meet the needs of present and future generations (Ministry of National Development Planning/ Bappenas, Directorate of Maritime Affairs and Fishery, 2014). Therefore, conservation carried out by the establishment of MPA must of course follow the applicable provisions including the international

provisions that have been adopted by the Indonesian government, such as the Code of Conduct for Responsible Fishery adopted with Resolution Number 4/95 in the Conference of Food and Agriculture Organization dated October 31, 1995 (Cámara, & Santero-Sánchez, 2019), Laws and Government Regulations, Ministerial Regulations and also Regional Government Regulations at both the provincial and regency levels. Article 6 Law Number 27 of 2007 concerning Management of Coastal Areas and Small Islands states:

Management of Coastal Zone and Small Islands as referred to in Article 5 must be carried out by integrating activities: a. between the Government and Local Governments; b. among Regional Governments; c. Inter-sector; d. by the Government, business world, and Community; e. between terrestrial ecosystems and marine ecosystems; and f. between science and management principles.

Based on the provisions of this article, it provides a legal basis that conservation does require good coordination and institutional cooperation among sectors, between the central and regional governments (Lekipiouw, 2010) and all stakeholders involved in the management system of coastal areas and small islands.

2. Implementation of Marine Protected Area in Raja Ampat Papua to Achieve Sustainable Development

The establishment of MPA in Raja Ampat was spearheaded by the Regent of Raja Ampat and the Ministry of Marine Affairs and Fishery supported by

an international NGO, namely The Nature Conservancy (TNC) since 2003 and Conservation International (CI). These two NGOs are involved in the planning and management design of the MPAs in Raja Ampat by conducting scientific studies, technology support and financing. MPA is an area declared as a water area including flora, fauna, and related cultural and historical features, legally protected or other effective means, to protect part or all of the surrounding environment. In 2006, the Raja Ampat Regional Government had succeeded in establishing six MPAs which were spearheaded by the Raja Ampat Regent with the issuance of Regent Regulation Number 66 of 2007 concerning the Marine Protected Areas of the Raja Ampat Regency. However, the official handover of the six MPA areas to the Raja Ampat government only took place in 2008. In specific, Article 8 of Regional Regulation Number 27 of 2008 concerning Marine Protected Areas in the Raja Ampat Regency is the legal basis for the handover of part of the sea area controlled by indigenous peoples to be managed by the Raja Ampat Regency government which includes the Ayau-Asia Islands, i.e.: (a) KKLD Kawe; (b) KKLD Dampier Strait; (c) KKLD Mayalibit Gulf; (d) KKLD Kofiau-Boo Islands; and (e) KKLD South East Misool. Raja Ampat is the first regency to have an MPA equipped with a network well coordinated to communicate and collaborate among the MPAs.

The MPA which was formed in Raja Ampat still applies the provisions on sea conservation and management. that has been passed down from generation to generation as contained in "SASI".

What does SASI mean to have an important role in marine conservation in Raja Ampat? SASI is " a customary law in the form of a prohibition on taking something in a certain location, which aims to preserve the conservation and population of biological resources" (Chandra, 2015). SASI is widely known in eastern Indonesia, especially Maluku and Papua. SASI is a practice of adaptation to nature that is carried out as part of the interaction of the Raja Ampat people with their environment. In Raja Ampat, there are two religious groups adhered to by the local community, the Christian and Catholic majority groups and the Muslim minority groups (McLeod, Szuster, and Salm, 2009). Each group forms SASI or a rule to interact with the environment by conserving it according to their respective religious rituals. Besides, the custom of SASI predates the two types of SASI.

There are three types of SASI in Raja Ampat which complement each other in their applications, such as SASI Masjid, SASI Gereja and SASI Adat. It is called customary SASI because in some areas there is no division of residence based on religion (Wekke, 2015). The three SASIs are applied collectively in their respective territories without any conflict with one another. SASI Masjid is applied to Muslim residents; SASI Gereja is applied to Christian or Catholic residents; and SASI Adat is applied to indigenous people (Ibid). The SASI provision that regulates the prohibition of exploitation of natural resources in the sea at a certain time is an example of local wisdom that respects the environment and maintains the balance of the ecosystem. When it is

related to the modern concept of conservation contained in Government Regulation Number 60 of 2007 concerning Conservation of Fish Resources, it does not conflict and instead supports conservation in modern concepts. Article 1 paragraph (1) of Government Regulation Number 60 of 2007 states:

Conservation of fish resources is an effort to protect, conserve and utilize fish resources, including ecosystem, species, and genetics to ensure their existence, availability and sustainability while maintaining and improving value quality and diversity of fish resources.

To combine the two conservation concepts, a comprehensive study is needed to be applied in the MPA management in Raja Ampat. Therefore, it is not surprising that the formation of MPA in Raja Ampat took approximately three years to prepare and conduct studies and to involve the community in its formation. The MPA in Raja Ampat is in accordance with applicable legal provisions but does not abandon traditional practices that have been proven to be able to maintain the balance of the marine ecosystems in Raja Ampat and also contribute to improving the economy of local communities. In addition, the practice of SASI in Raja Ampat can be said to be a pattern of conservation of sustainable fishery as referred to in Article 6 paragraph (1) of Law Number 31 of 2004 concerning Fishery because this article is not amended by Law Number 45 of 2009 (Ministry of National Development Planning/ Bappenas, Directorate of Marine Affairs and Fishery, 2014).

The provisions contained in "SASI" include: (i) the Provisions regarding the types of biota that may

or may not be caught; (ii) The quota for the number of catches; (iii) the time to catch marine biota or certain types of marine biota, for example lobster, sea cucumber or other types of fish; (iv) How long it is permitted to catch, and when it is prohibited to catch it; (v) Regulating the gear used for fishing, and determining which areas are designated as SASI areas by providing certain marks. The provisions concerning SASI must be known and obeyed by all people of SASI members. When there is a violation of the provisions in SASI, the sanctions can be taken in the form of physical activity, fines, or the fishing gear. In the form of physical activities, for example, for the offender, he must lift stones for the mosque or walk squatting and walking around the village (Lestari, & Satria, 2015).

What is regulated in SASI does not contradict Article 6 of Law Number 31 of 2004 which is not amended by Law Number 45 of 2014 concerning Amendments to Law Number 31 of 2004 concerning Fishery, Article 6 of Law Number 31 of 2004 concerning Fishery states:

- (1) Fishery management in the Indonesian Fish Cultivation Territory is carried out to achieve optimal and sustainable benefits, as well as to ensure the preservation of fish resources.
- (2) Fishery management for the benefit of fishing and fish farming must consider customary law and / or local wisdom and pay attention to community participation.

Based on the provisions of Article 6 of Law Number 31 of 2004, it is an acknowledgment of the existence of local wisdom which must be continued so that

there is community support in conservation implementation. which is initiated by the government. Therefore, fisheries management for the benefit of fishing and fish breeding must consider customary law and/ or local wisdom and pay attention to community participation.

Based on research conducted by SASI, it has a positive impact on the conservation of marine life, which is one of the community-based management practices of MPA. The impact of implementing SASI can be used as an example or model of MPA community-based management by taking into account the values and philosophical foundations of rule formation that have been practiced from generation to generation. In addition to providing incentives for the community to be independent in organizational institutions at the local level, supervision of local implementation will be more effective and stronger because it is carried out by the community as an institution (Putri, Satria and Saharudin, 2020). Community involvement in the formation of MPA is an implementation of community participation which is also regulated in Article 70 paragraph (3) of Law Number 32 of 2009 concerning Environmental Protection and Management which states that participation is carried out by developing and maintaining culture and local wisdom. in the framework of preserving environmental functions. SASI culture as a local wisdom for fish conservation needs to be developed and maintained for its sustainability and can be said to be a provision for sustainable fishery to realize SDGs 14, namely conserving and sustainably utilizing marine, oceanic

and maritime resources for sustainable development (Zulbainarni, Indrawan, & Khumaera, 2020).

D. CONCLUSION

Indonesia as a member of various international instruments such as UNCLOS and the Convention on Biological Diversity has the obligation to implement the protection of marine environment and the biodiversity contained therein. Based on the two Conventions, Indonesia must establish MPA (Marine Protected Area) as an instrument for effective conservation of marine biodiversity resources. The presence of these obligations creates legal consequences for forming various national legal instruments in the form of laws, government or ministerial regulations, and even provincial regulations and regional regulations in order to implement the applicable legal provisions in the formation of MPA. In addition, the establishment of adequate institutions and funding to carry out conservation in MPA is an important agenda that must find a solution, including the problem of adequate monitoring and supervision in MPA areas.

The formation of MPA in Indonesia is of course gradual. One of the MPAs that can be said to be a pilot is the MPA formed in Raja Ampat Regency, West Papua Province. The Regent of Raja Ampat Regulation Number 66 of 2007 concerning the Conservation area of Raja Ampat is a legal basis for the establishment of a network system among the MPAs that have been established for the ecosystem relationship in the MPAs. The establishment of the MPA in Raja Ampat at the initiative of the Regent of

Raja Ampat in the implementation stage results in the legal consequence of the issuance of Regional Regulation as the legal basis for the formation of MPA in Raja Ampat and also the transfer of some of the customary areas to the local government. SASI in Raja Ampat has succeeded in conserving biodiversity in the sea to achieve sustainable fisheries. The formation of six MPAs by the Raja Ampat Regent does not eliminate the provisions on SASI which have been passed down from generation to generation. In addition, the management of fisheries in the MPA is in line with the provisions of SASI because the establishment of MPA in Raja Ampat from the beginning involved the local community. Therefore, the environmental and sustainable conservation provisions contained in the SASI of Raja Ampat can synergize with the conservation provisions imposed in the MPA established by the Regency Government of Raja Ampat. Therefore, the formation of MPA in Raja Ampat that takes local wisdom into account can be used as a model for "sustainable fishery" in other areas with the necessary modifications according to the situation and conditions of each marine area.

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