

# The Protection of Biological Diversity in Convention on Biological Diversity Framework

Salma Laitupa\*, S.M. Noor, \*\* Alma Manuputty, \*\* Marcel Hendrapati\*\*

\*Graduate School, Hasanuddin University, Indonesia

\*\*Professor, Faculty of Law, Hasanuddin University, Indonesia

## Abstract

Indonesia is the richest country in the world in terms of biodiversity. Indonesian coastal and marine resources have an important meaning for the world, considering that the flora and fauna species found in Indonesia's tropical waters are more than any other region in the world. The various marine and coastal ecosystems that exist provide sustainable resources for the majority of the Indonesian people. Discussing the richness of biodiversity, especially biodiversity in the sea, Indonesian waters is known as the center of distribution of world coral reefs, and has the highest level of biodiversity in the world. The world coral triangle area, covering parts of Southeast Asia and the Western Pacific, is the center of the world's marine biodiversity. The triangle-shaped area covers all or part of the six countries' exclusive economic zone (EEZ), namely Indonesia, East Timor, Philippines, Malaysia, Papua New Guinea, and Solomon Islands.

**Keywords:** biodiversity, CBD, protection.

**DOI:** 10.7176/RHSS/9-13-08

**Publication date:** July 31<sup>st</sup> 2019

## I. Introduction

It is based on the physical fact that the Unitary State of the Republic of Indonesia (NKRI) was formed from the configuration of islands totaling around 17,504 islands,<sup>1</sup> and most or almost 70% of the NKRI area is sea waters covering an area of around 5.8 million km<sup>2</sup> with coastline (coastline) of 95,181 km.<sup>2</sup> The configuration of such a large island, in fact, is mostly small islands with an estimated number of more than 10,000 islands.<sup>3</sup> Therefore, Indonesia is known as a maritime country and the largest archipelagic country in the world.<sup>4</sup> With the enactment of UNCLOS 1982, the vast territorial waters of Indonesia have become very wide, namely 5.8 million km<sup>2</sup>, consisting of 0.3 million km<sup>2</sup> of territorial sea, 2.8 million km<sup>2</sup> of archipelago waters (archipelagic waters), and 2.7 million km<sup>2</sup> of waters Indonesia's Exclusive Economic Zone (EEZ).<sup>5</sup> In addition, UNCLOS 1982 has opened a new chapter on the determination of territorial boundaries and jurisdictional authority in the sea, in which the State of the Republic of Indonesia as an "Archipelagic State" legally has jurisdictional boundaries and authority over internal waters, Archipelagic waters, territorial sea,<sup>6</sup> Exclusive economic zones, high sea and continental shelf and international seabed are clearer.

Indonesian sea areas have very important ecological, economic, socio-cultural and defense (defense and security) meanings, because of the large potential of marine resources for community livelihoods and basic capital for national development.<sup>7</sup> The magnitude of this potential, because considering the length of the coastline of Indonesia is 95,181 km<sup>2</sup> of the number of islands reaching approximately 17,508 islands.<sup>8</sup> The potential of Indonesia's marine resources can be broadly divided into 4 (four) groups: (1) natural resources can be recovered (renewable resources), (2) non-renewable resources, (3) marine energy, and (4) very potential

<sup>1</sup> Rokmin Dahuri, *et.al.* 2000. *Pengelolaan Sumberdaya Wilayah Pesisir dan Lautan Secara Terpadu*. Pradnya Paramita, Jakarta. p. 1

<sup>2</sup> L. Tri Setyawanta. R., 2009. "Reformasi Pengaturan Pengelolaan Wilayah Pesisir Di Indonesia dan Tantangan Dalam Implementasinya Di Daerah", *Speech of Inauguration at Position Acceptance Ceremony for Professor of Law at the Faculty of Law of Diponegoro University*, Semarang. p. 2

<sup>3</sup> Farida Patittingi, 2012. *Dimensi Hukum Pulau-Pulau Kecil di Indonesia. Studi atas Penguasaan dan Pemilikan Tanah*, Penerbit Rangkang Education, Yogyakarta. p. 1-2.

<sup>4</sup> Dewan Kelautan Indonesia, 2012. *Kebijakan Kelautan Indonesia, Buku I*, Kementerian Kelautan dan Perikanan, Sekretariat Jenderal Satuan Kerja Dewan Kelautan Indonesia, Jakarta. p. 43

<sup>5</sup> Suhaidi, "Perindungan Lingkungan Laut: Upaya Pencegahan Pencemaran Lingkungan Laut Dengan Adanya Hak Pelayaran Internasional Di Perairan Indonesia", *Speech of Inauguration of Professors in the Field of International Law at the Faculty of Law, University of North Sumatra, Medan*, 2006.

<sup>6</sup> Law Number 6 Year 1996, Article 3 stipulates that "Indonesian Waters Region consists of inland waters, territorial sea and island waters".

<sup>7</sup> L. Tri Setyawanta. R., *Loc.Cit.*

<sup>8</sup> *Ibid.*

environmental services.<sup>1</sup> In addition, marine resources are also often classified into two groups, namely (a) living resources and non-living resources.<sup>2</sup> Marine resources can be recovered (renewable resources), including coral reef ecosystems, seagrass beds, sea grass, mangrove forests, bioactive substances, and various types of fish, and other marine biota.<sup>3</sup>

Non-renewable resources include all mineral and geological resources. Minerals consist of three classes, namely class A (strategic minerals: petroleum, natural gas, and coal), class B (vital minerals: gold, tin, nickel, bauxite, iron ore, and cromite); and class C (industrial minerals: including building materials and excavations such as granite, lime, clay, kaolin and sand).<sup>4</sup> Marine energy sources, can come from tidal energy, ocean wave energy, current energy, and ocean thermal energy conversion. While environmental services include the functions of the coastal and oceanic environment as recreational facilities, transportation and communication media, energy sources, educational and research facilities, security defense, waste storage, climate regulators, protected areas (conservation and preservation), and life support systems and other ecological functions.<sup>5</sup>

Based on the basic capital in the maritime sector, one of the missions set out in the National Long Term Development Plan for 2005-2025 is “Realizing Indonesia to be an independent, developed, strong and nationally based archipelagic country”, which means “growing maritime insight for the community and the government so that Indonesia's development is oriented towards the sea; increase the capacity of marine-minded human resources through the development of marine science and technology; manage the national sea area to maintain sovereignty and prosperity; and building an integrated marine economy by optimizing the use of marine resources in a sustainable manner”.<sup>6</sup>

Recognizing the importance of these marine resources, there is a growing awareness today to make marine resource-based development in addition to land natural resources as the mainstay of national development.<sup>7</sup> This means that the orientation of development is not only on land (terrestrial orientations) but also to marine orientations in a balanced manner.<sup>8</sup> Based on its geographical location, the Unitary State of the Republic of Indonesia is on the equator, in reality it is an archipelagic state that is in the cross position of the world, between two continents namely the Asian continent and the Australian continent and between the two oceans the Indian Ocean and Ocean Pacific, making the territorial waters of Indonesian waters as high productivity waters with strong natural carrying capacity.<sup>9</sup> In addition, the location of Indonesia in the tropics with a relatively low level of environmental temperature changes enables the development of various marine biologies, therefore Indonesia is seen as the world's center of biodiversity richness.<sup>10</sup> world, so that it belongs to the “mega-biodiversity” group.<sup>11</sup>

Indonesia is the richest country in the world in terms of biodiversity. Indonesian coastal and marine resources have an important meaning for the world, considering that the flora and fauna species found in Indonesia's tropical waters are more than any other region in the world. The various marine and coastal ecosystems that exist provide sustainable resources for the majority of the Indonesian people.

The Indonesian state with its islands has a fairly high level of species endemism. Known numbers of animal species for taxa, and the number of endemic species for each taxa are reflected in the following facts: 515

<sup>1</sup> Rokhmin Dahuri, *et.al.*, 1996. *Pengelolaan Sumber Daya Wilayah Pesisir dan Lautan Secara Terpadu*, Pradnya Paramita, Jakarta. p. 77

<sup>2</sup> Such groupings are found in Law Number 5 Year 1983 concerning the Indonesian Exclusive Economic Zone.

<sup>3</sup> Rokhmin Dahuri, *et.al. Op.Cit.* p. 78

<sup>4</sup> *Ibid.*, p. 95

<sup>5</sup> *Ibid.*, p. 98

<sup>6</sup> Law Number 17 of 2007 concerning National Long-Term Development Plans for 2005-2025, Appendix Chapter III, Vision and Mission of Long-Term Development for 2005-2025, Mission No. 7.

<sup>7</sup> Sugeng Budiharsono, 2001. *Pembangunan Wilayah Pesisir dan Lautan*. Pradnya Paramita, Jakarta. p. 1

<sup>8</sup> *Ibid.*

<sup>9</sup> Dewan Kelautan Indonesia, 2012. “*Kebijakan Ekonomi Kelautan Dengan Model Ekonomi Biru*”, Kementerian Kelautan dan Perikanan, Sekretariat Jenderal Satuan Kerja Dewan Kelautan Indonesia, Jakarta. p. 1. See also Andi Iqbal Burhanuddin, *et.al.* (Ed.), 2003. *Membangun Sumber Daya Kelautan Indonesia, Gagasan dan Pemikiran Guru Besar Universitas Hasanuddin*, IPB Press, Bogor., p. 219.

<sup>10</sup> The term Biodiversity has different meanings, according to the World Wildlife Fund for Nature (WWF) that Kehati is a wealth of life on earth, which consists of millions of plants, animals, and micro-organisms, including the genetics they contain and ecosystems which he built into the environment. See Hadi S. Alikodra, 2012. *Konservasi Sumberdaya Alam dan Lingkungan, Pendekatan Ecosophy bagi Penyelamatan Bumi*. Gadjah Mada University Press, Yogyakarta. p. 247

<sup>11</sup> *Biological diversity* then abbreviated as biodiversity, translated into keanekaragaman hayati (kehati).

large mammal species (39 percent endemic); 511 reptile species (29 percent endemic); 1531 bird species (26 percent endemic); 270 amphibian species (37 percent endemic); 35 primate species (18 percent endemic) and 121 butterfly species (44 percent endemic). The Indonesian Biodiversity Strategy and Action Plan (IBSAP) also notes that Indonesia ranks first in the world for palm, butterfly types of Swallowtail, and parrot species.<sup>1</sup> These figures show that Indonesia is home to globally threatened species and species with limited mobility, and critical ecosystems and forest areas at the center of global biodiversity activities in the Sunda region and Wallacea region.<sup>2</sup>

The ecosystems and habitats of living things that should be preserved but neglected by their maintenance are even systematically damaged, negatively affecting the survival of all living things. Pollution and environmental damage that occur globally, have periodically threatened the sustainability and biodiversity in the world. The impact caused by creatures that exist in terrestrial ecosystems and marine ecosystems to be reduced or even extinct. This triggers natural imbalances in maintaining the carrying capacity of the environment for the sustainability of human life and other creatures.<sup>3</sup>

Discusses the richness of biodiversity, especially biodiversity in the sea, Indonesian waters is known as the center of the distribution of world coral reefs, and has the highest level of biodiversity in the world.<sup>4</sup> The area of coral reef ecosystems in Indonesian waters is estimated at 85,707 km<sup>2</sup>, which consists of 50,223 km<sup>2</sup> barrier reefs, 19,540 km<sup>2</sup> of ring reefs (atolls), 14,542 km<sup>2</sup> of edge reefs, and 1,402 km<sup>2</sup> of oceanic platform references.<sup>5</sup> Indonesia's coral reefs represent 18% of the total coral reefs in the world,<sup>6</sup> or 51% of the total area of coral reefs in Southeast Asia, some even say that coral reefs in Indonesia reach 75.000 km<sup>2</sup>,<sup>7</sup> or 85.000 km<sup>2</sup>.<sup>8</sup>

In the world there are around 800 species of hard corals and 76% of them are in Indonesian waters.<sup>9</sup> Indonesian coral reefs also contribute around 74% of the world's coral species wealth,<sup>10</sup> there were 590 types of hard coral (hermatipik, stony coral) with 82 genera, 2010 types of soft corals (ahermatipik) and 350 types of gorgonian.<sup>11</sup> Coral reefs in the Raja Ampat Islands are recognized by scientists as the center of the world's biodiversity.<sup>12</sup> In addition, Indonesia is also in the center of the world's coral triangle.<sup>13</sup>

The world coral triangle area, covering parts of Southeast Asia and the Western Pacific, is the center of the world's marine biodiversity. The triangle-shaped area covers all or part of the six countries' exclusive economic zone (EEZ), namely: Indonesia, East Timor, Philippines, Malaysia, Papua New Guinea, and Solomon Islands (country C6).<sup>14</sup> The coral triangle area surrounding the six countries has been recognized by marine and

<sup>1</sup> *Indonesian Biodiversity Strategi and Action Plan (IBSAP)*, 2003. Strategi dan Rencana Aksi Keanekaragaman Hayati Indonesia, 2003 - 2020, Bappenas, Jakarta., p. 27

<sup>2</sup> *Ibid.*

<sup>3</sup> Laode M. Syarif and Andri G. Wibisana, (Ed.), *Hukum Lingkungan: Teori, Legislasi dan Studi Kasus*, USAID, Kemitraan Partnership, The Asia Foundation., p. 10 - 11

<sup>4</sup> Jamaluddin Jompa, "Terumbu Karang Indonesia di Tengah Globalisasi dan Ancaman Pemanasan Global", in Andi Iqbal Burhanuddin, *et.al.* (Ed.), 2003. *Op.Cit.* p. 32

<sup>5</sup> Tomascik, *et.al.* 1997. *The Ecology of the Indonesian Sea. Part II.* Periplus Edition (HK) Ltd., Singapore.

<sup>6</sup> *Ibid.*

<sup>7</sup> Burke, *et.al.*, 2002, *Terumbu karang yang terancam di Asia Tenggara*, World Resource Institut Washington, Amerika. See also Hutomo and Moosa, 2005, *Indonesian Coastal and Marine Biodiversity: Present Status*; Indian Journal of Marine Sciences Vol. 14(1), p. 88-89; See also Spalding *et.al.*, 2001, *World Atlas of Coral Reefs*. University of California Press: Berkeley. Information provided by Reef Base-A Global Information System: Indonesia, Threat-Human.

<sup>8</sup> Tomascik, *et.al.*, 1997, *The Ecology of Indonesian Seas, Part I. The Ecology of Indonesia Series*, Vol. VII, Periplus Editions: Singapore.

<sup>9</sup> Andi Iqbal Burhanuddin, *et.al.* (Ed.), *Loc.Cit.*

<sup>10</sup> *Ibid.*

<sup>11</sup> Hutomo and Moosa, 2005, *Indonesian Coastal and Marine Biodiversity: Present Status*; Indian Journal of Marine Sciences, Vol. 14(1), p. 88-89.

<sup>12</sup> Veron, J.E.N. *et.al.*, 2009, *Delineating the Coral Triangle*, Galexa, Journal of the Coral Reef Studies, Vol. 11, p. 95

<sup>13</sup> Veron, J.E.N., 2002, *Reef Corals of the Raja Ampat Islands, Papua Province, Indonesia, Part I: Overview of Scleractina*, dalam *a Marine Rapid Assessment of the Raja Ampat Islands, Papua Province, Indonesia*, edited by S.A. Mc Kenna, *et.al.*, Conversation International: Washington DC, p. 26

<sup>14</sup> M. Eko Rudianto, "Coral Triangle Initiatives on Coral Reefs, Fisheries and Food Security", in Buletin: Coral Reef Rehabilitation and Management Program Phase II (Coremap II), Vol. 3, 2007, Direktorat Jenderal Kepulauan Pesisir dan Pulau-Pulau Kecil Departemen Kelautan dan Perikanan RI, Jakarta, p. 8. See also Syamsul Maarif, "Arah dan Tantangan Pengelolaan Terumbu Karang", dalam Buletin: Coral Reef Rehabilitation and Management Program Phase II (Coremap II), Vol. 3, 2007., p. 12-13

fisheries experts as a center of marine mega-biodiversity,<sup>1</sup> even the whole world recognizes that the coral triangle area is the only world heritage with the highest marine biodiversity in the world,<sup>2</sup> and areas with the highest level of endemism. Therefore, the coral triangle area is also called “Amazon of the Ocean”.<sup>3</sup>

In the context, management, utilization, protection and preservation of coral reef ecosystems. The arrangement implicitly can be found in the normative provisions contained in various relevant laws such as: Law Number 5 Year 1983 concerning the Indonesian Exclusive Economic Zone; Law Number 5 Year 1990 concerning Conservation of Biological Resources and their Ecosystems; Law Number 6 Year 1996 concerning Indonesian Waters; Law Number 31 Year 2004 concerning Fisheries which has been amended by Law Number 45 Year 2009 concerning Fisheries; Law Number 27 Year 2007 concerning Management of Coastal Areas and Small Islands as amended by Law Number 1 Year 2014 concerning Management of Coastal Areas and Small Islands; Law Number 32 Year 2009 concerning Environmental Protection and Management; and Law Number 32 Year 2014 concerning Marine Affairs and so on.

Based on the laws and regulations above, it can be seen that the management, utilization, protection and preservation of coral reef ecosystems are largely sectoral in nature which regulate certain development sectors, and are based on the interests of each sector. In addition, management, utilization, protection and preservation of coral reef ecosystems as marine and coastal resources face various issues and problems in the form of: (a) Potential conflicts of interest and overlapping between sectors and other stakeholders in management and utilization of coral reef ecosystems; and (b) Potential authority conflicts (jurisdictional conflict) in the management and utilization of coral reef ecosystems. This has implications for the management and utilization of coral reefs that are sectoral, exploitative and exceed the environmental carrying capacity.

The impact of sectoral regulation of coral reef ecosystems appears on non-integrated management authority, there are differences in objectives, targets and plans so as to create rivalries between users or related institutions in regulating, thus impacting on effectiveness and efficiency in managing and utilizing, protection and preservation of sustainable and environmentally friendly coral reef ecosystems (pro-environment). Based on the explanation, the problem to be discussed in this paper is how is biodiversity protection within the framework of the Convention on Biological Diversity?

## II. Research Method

This type of research is normative using a statute approach and a conceptual approach.<sup>4</sup> The data used are primary data and secondary data collected through interviews and documentation. The collected data is then analyzed qualitatively.

## III. Results and Discussion

### Protection of Biodiversity in the Convention on Biological Diversity

The importance of living natural resources for humanity is recognized by the world community, which has formally agreed on an international agreement namely the Convention on Biological Diversity (“CBD”) in 1992. The CBD is one of the international legal instruments born from the conference International which was held in Rio Janeiro in 1992, officially took effect in 1993 where Indonesia ratified it in 1994.<sup>5</sup>

The CBD is part of a number of agreements that were produced at the 1992 Earth Summit Meeting in Rio de Janeiro, Brazil. CBD is a multilateral agreement of member countries in the convention in solving global problems regarding biodiversity. In principle, every country has the sovereign right to utilize biological resources in accordance with their respective environmental development policies and also has the responsibility that these activities do not have an impact on the environment of other countries.

<sup>1</sup> Freddy Numberi, 2009. *Perubahan Iklim; Implikasinya Terhadap Kehidupan di Laut, Pesisir dan Pulau-Pulau Kecil*, Fortuna Prima Makmur, Jakarta.

<sup>2</sup> Briggs, J.C. *The Marine East Indies: Diversity and Speciation*, Journal of Biogeography, 2005., p. 32. See also Callum, M.R., et.al., 2002. *Marine Biodiversity Hotspots and Conservation Priorities for Tropical Reefs*. Sciences. p. 295

<sup>3</sup> *Ibid.*

<sup>4</sup> Peter Mahmud Marzuki, 2005, *Penelitian Hukum*, Prenadamedia Group Jakarta, p. 35

<sup>5</sup> The Convention on Biological Diversity ratified through Law Number 5 Year 1994 concerning the Ratification of the Convention on Biological Diversity.

The CBD gives special attention to biodiversity which is considered very strategic in providing protection, so the CBD is a multilateral agreement that is undoubtedly the most accepted by the international community. 193 countries which are participating countries in the convention prove the importance of the role of the CBD in protecting biodiversity globally and sectorally, and in terms of protecting a country's sovereignty over its natural resources within its jurisdiction.

In the CBD preamble, the state states that biodiversity is a support for the buffer system of human life that is important for evolution; safeguarding this biosphere system that makes human life sustainable; and emphasizes concerns about the current rate of damage and loss of biodiversity. Therefore, conservation of sustainable use and justice for the community for its use is important.<sup>1</sup>

The CBD provides a comprehensive framework for stopping damage and loss of biological resources. This Convention is equally binding internationally where each member country is committed to implementing three pillars of objectives, namely biodiversity conservation, sustainable use and fair and balanced distribution of benefits generated by the use of genetic resources.<sup>2</sup> Thus, the important role of biodiversity conservation is clearly described in Article 1 of the 1992 CBD on the CBD target, which concerns conservation and sustainable use of components of biodiversity, equitable and equitable sharing of benefits in the use of genetic resources as a component of diversity biodiversity, including regarding access to these genetic resources, the transfer of relevant technology and financing matters related to this matter, taking into account the country's sovereignty over all of its natural resources including the technological invention.

In applying CBD the principle is that every country has sovereignty to utilize its natural resources but in its management it must be ensured that the use of its natural resources does not pollute the environment which can endanger the environment of other countries.<sup>3</sup> This is stipulated in Article 3 of this convention, namely "States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction."<sup>4</sup>

The principle recognizes the existence of sovereignty in the use of natural resources of a country based on its national environmental policy. The term sovereign right of states in this case is a right recognized by international law for specific purposes, namely in terms of exploitation of natural resources. But there are two important things that must be considered as a limitation of this principle, namely: First, that sovereignty in exploiting natural resources is associated with the responsibility to maintain a cross-border environment. This means that a country must ensure that activities within its territorial area or which are under its control such as, in the continental shelf, in fisheries zones or economic zones do not damage the environment of other countries or regions outside their national jurisdiction, such as the high seas, deep sea floor or space. In international law, this principle "no harm principle" exists as a matter that must be understood by a country as its need to do the best in preventing cross-border environmental pollution. Second, the thing that must be considered as a limitation of the principle is regarding "Sovereign Right" itself which should also be tested in relation to the Charter of the United Nations and the Principles of International Law. The state must consider various obligations in the Charter of the United Nations to cooperate; These obligations include, among other things, promoting a higher standard of living and seeking solutions to international economic, social and health problems. These goals cannot be achieved without regard to environmental conservation.

<sup>1</sup> Preamble in the CBD text, which mentions the role of biodiversity for the future of humanity and the importance of biodiversity conservation due to the level of damage currently occurring caused by human activities. See "Convention on Biological Diversity," 5 June 1992, United Nations Treaty Series Vol. 1760 p. 79, Preamble as quoted in Sumedi, "Konservasi Keanekaragaman Hayati Di Indonesia: Rekomendasi Perbaikan Undang-Undang Konservasi", Jurnal Hukum Lingkungan, Vol. 2 Issue 2, December 2015., p. 4

<sup>2</sup> Article 1 CBD: "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."

<sup>3</sup> Lyle Glowka, et al., 1994, *A Guide to the Convention on Biological Diversity*, Environmental Policy and Law Paper No. 30, IUCN-The World Conservation Union: Siegburg, Germany, p. 26.

<sup>4</sup> See Article 3 Convention on Biological Diversity 1992.

Indonesia's commitment to the international community to protect natural resources de jure began since the ratification of the CBD.<sup>1</sup> The form of state control over biological natural resources according to the CBD is based on sovereign rights.<sup>2</sup> According to the International Union for Conservation of Nature (IUCN) the sovereign rights referred to in the CBD emphasize that state sovereignty is balanced with obligations arising from sovereignty itself.<sup>3</sup> Sovereign rights also affirm that conservation of natural resources is a common concern for the entire international community.<sup>4</sup>

The state has sovereign rights over components of biodiversity that are within the national jurisdiction.<sup>5</sup> The scope of the jurisdiction referred to in the CBD if interpreted based on state sovereignty means that the state has the right of sovereignty only towards the component of biodiversity that exists in national jurisdiction. It is national law and inter-state border agreements that ultimately can really determine the national jurisdiction.

Based on this, the implementation of the CDB in Indonesian legislation as an implementation of the CDB and the regulations relating to and supporting the implementation of the CDB, especially in the field of conservation of living natural resources (including coral triangles) in the conservation of the marine environment in Indonesia.

Juridically, today the law governing the conservation of natural resources is Law Number 5 Year 1990 concerning Conservation of Biological Resources and their Ecosystems. Article 1 paragraph (1) formulates the understanding "Living natural resources are biological elements in nature which consist of plant-based natural resources and animal natural resources which together with the surrounding non-living elements form a whole ecosystem". Article 1 paragraph (2) stipulates "Conservation of living natural resources is the management of biological natural resources whose utilization is carried out wisely to ensure the continuity of its supply while maintaining and improving the quality of diversity and its value". Article 1 paragraph (3) stipulates "Biological natural resource ecosystems are a system of reciprocal relations between elements in nature, both biological and non-living which are interdependent and influencing influences". Article 1 paragraph (9) stipulates "Nature reserve areas are areas with certain distinctive characteristics, both on land and in waters which have a main function as a preservation area for diversity of plants and animals as well as their ecosystem which also functions as an area of life support system". Article 1 paragraph (12) stipulates "Biosphere reserves are an area that consists of native ecosystems, unique ecosystems, and/or ecosystems that have been degraded whose entire natural elements are protected and preserved for the benefit of research and education". Article 1 paragraph (13) stipulates "Nature conservation areas are areas with certain characteristics, both on land and in waters which have the function of protection of life support systems, preservation of plant and animal species diversity, and sustainable use of living natural resources and their ecosystems". Article 1 paragraph (14) stipulates "National parks are natural escape areas that have original ecosystems, managed by zoning systems that are used for research, science, education, cultivation, tourism, and recreation purposes". Article 1 paragraph (15) stipulates "Great forest parks are natural conservation areas for the purpose of collection of plants or animals that are natural or artificial, native and/or non-native, which are used for the benefit of research, science, education, culture, tourism and recreation". Article 1 paragraph (16) stipulates "Natural tourism parks are natural conservation areas that are mainly used for tourism and natural recreation".

Conservation of natural resources and ecosystems is based on the preservation of the ability and utilization of living natural resources and their ecosystem in a harmonious and balanced manner.<sup>6</sup> Whereas the conservation of living natural resources and its ecosystem aims to strive for the realization of the preservation of biological natural resources and the balance of their ecosystem so that they can further support efforts to improve

---

<sup>1</sup> Law Number 5 Year 1994 concerning Ratification of the United Nations Convention on Biological Diversity.

<sup>2</sup> In principle, sovereign rights mean that the state has the power and jurisdiction to regulate the distribution, use, and ownership of natural resources in the territory of its sovereignty. The sovereign rights over natural resources can be interpreted as the right of the state to manage natural resources as public property for the greatest prosperity of the people today without reducing the rights of future generations both in quality and quantity. See Isna Fatimah, "Aspek Hukum Dalam Pelestarian Sumber Daya Genetik Laut: Kebutuhan dan Tantangan", *Jurnal Hukum Lingkungan*, Vol. 2 Issue 2, December 2015, p. 121 - 122

<sup>3</sup> *Ibid.*

<sup>4</sup> *Ibid.*

<sup>5</sup> Article 4 *United Nations Convention on Biological Diversity*: "Subject to the rights of other States, and except as otherwise express provided in this Convention, the provision of this Convention apply in relation to each Contracting Party: (a) in the case of components of biological diversity, in areas within the limits of its national jurisdiction; and (b) in the case of processes and activities, regardless of where their effects occur, carried out under its jurisdiction or control, within the area of its jurisdiction or beyond the limits of national jurisdiction."

<sup>6</sup> Article 2 *United Nations Convention on Biological Diversity*

people's welfare and the quality of human life.<sup>1</sup> The strategy for conserving biological natural resources and their ecosystems consists of the following activities: (a) protection of life support systems; (b). preservation of the diversity of plants and animals and their ecosystems; (c) sustainable use of living natural resources and their ecosystem.<sup>2</sup>

Law Number 5 Year 1990 concerning Conservation of Natural Resources and the Ecosystem which in the decade of the nineties was considered effective enough to protect Indonesian ecosystems and species. This law, which replaced several products of pre-independence colonial regulations, was 29 years old, and during this period there have been a lot of changes in the national strategic environment such as changing political and governmental systems from centralization to decentralization and democratization and changing sectoral legislation, and changes at the global level in the form of shifting some international policies in conservation activities, as stated in the results of conventions related to biodiversity, or the results of agreements both bilateral, regional and multilateral.

Law No. 5 Year 1990 concerning Conservation of Biological Resources and their Ecosystems is the first law produced in the period after independence which includes conservation of ecosystems (areas) and conservation of species. This law is believed to have been able to save some of the natural resources from the threat of damage and extinction, especially at the ecosystem and species level. Based on this law, Indonesia has been able to set aside some of the most important representatives of ecosystems to become nature reserves and nature conservation. In terms of area, Indonesia has been able to set aside around 22 million hectares of terrestrial ecosystems and around 4.5 million hectares of coastal and marine ecosystems from various types of Indonesian ecosystems become conservation areas<sup>3</sup> in the form of nature reserves and natural conservation areas which are vehicles for conservation of ecosystems and are very beneficial for the survival of humans and nature in the future.

No country has a conservation area as large as Indonesia. These areas with adequate management will be able to make a significant contribution to the development of ecological tourism (ecotourism), food security, development of agricultural cultivation from genetic resources (germplasm) which are protected within the area and support human life through water supply clean, maintain fertility of agricultural land, control climate change, and provide green open space that is increasingly needed by humans for health.<sup>4</sup>

In addition, this law has also provided legal (legal) protection for endangered species of plants and animals by regulating the determination of these types as protected by law, so that they can significantly prevent extinction and regulate legal sanctions for violations or crimes related to the endangered species mentioned above. To protect the types of plants and animals that have been threatened with extinction, this Law provides guidance on matters that may or may not be carried out along with sanctions for violations. The sanctions, if applied consistently will have a deterrent effect on the perpetrators of crimes, especially crimes against endangered and increasingly organized plants and animals (organizational crime).<sup>5</sup>

Besides the advantages that exist in Law No. 5 Year 1990, this law also has some basic weaknesses, which have not or cannot be accommodated by other laws. Among these weaknesses, for example in conservation of species, is the absence of provisions regarding sanctions for violations involving species that are not protected. This situation has led to the over-exploitation of unprotected species, even some species of which have become critically and extinct locally or extinct in nature before being designated as protected species. Of course this will affect the genetic diversity. At the ecosystem level, a fundamental weakness of Law Number 5 Year 1990 is in the classification of conservation areas along with the lack of clarity in establishing conservation area management goals. The categorization of conservation areas namely Nature Reserves, Wildlife Reserves, National Parks, Nature Parks and Forest Parks is based on the legalization of the determination of these areas. The categorization of conservation areas should be in accordance with the guidelines of the International Union for Conservation of Nature (IUCN) which is the largest conservation organization in the world, where Indonesia is a member, the establishment of conservation areas is based on management objectives.

---

<sup>1</sup> Article 3 *United Nations Convention on Biological Diversity*

<sup>2</sup> Article 5 *United Nations Convention on Biological Diversity*

<sup>3</sup> Ministry of Forestry, 2011, as quoted in the Final Report of the Legal Analysis and Evaluation Team on Conservation of Biological Resources and Ecosystems, National Legal System Research and Development Center, National Law Development Agency, Ministry of Law and Human Rights of the Republic of Indonesia, Jakarta, 2015, p. 69

<sup>4</sup> *Ibid.*, p. 70

<sup>5</sup> *Ibid.*

In addition, Law Number 5 Year 1990 has not yet regulated one component of biodiversity, namely genetic conservation. At the genetic level, this law does not at all provide rules or directives for regulation. Whereas now the world has begun to depend on technology based on genetic resources for food, cosmetics, medicine and other organism-based industries, while access to genetic resources without adequate regulations has led to many biological piracy (bio-piracy). ) or “theft” of genetic resources.<sup>1</sup>

In principle, the management of genetic resources cannot be separated from the conservation of biodiversity itself. Internationally, the use of genetic resources is part of the 1992 United Nations Convention on Biological Diversity, which was then further regulated in the Nagoya Protocol on Access and Distribution of the Benefits of Genetic Resources in 2010. The National Convention - Biodiversity has three objectives, namely: biodiversity conservation; sustainable use of components of biodiversity; and fair and equitable sharing of benefits from the use of genetic resources.

Law Number 5 Year 1990 concerning Conservation of Natural Resources and their Ecosystems contains basic provisions and covers all aspects of the conservation of living natural resources and their ecosystems. Because of this, the Law contains very general provisions, and then detailed arrangements are submitted to the implementing regulations.<sup>2</sup> In addition, Law No. 5 Year 1990 is based on the need to have national and comprehensive legislation related to the conservation of living natural resources and their ecosystems, in order to provide a legal basis for efforts to “protect the life support system, preserve the diversity of plants and animals along with its ecosystem, and the sustainable use of living natural resources and their ecosystem in order to guarantee their use for people’s welfare and increase the quality of human life”.<sup>3</sup>

Law Number 5 Year 1990 concerning the conservation of biological natural resources and their ecosystems. There are two important words in this law, namely “conservation” and “ecosystem” of natural resources. Article 1 paragraph (2) of this law states that “the conservation of living natural resources is the management of biological natural resources whose utilization is carried out wisely to ensure the continuity of its supply while maintaining and improving the quality of diversity and value”. Then Article 1 paragraph (3) “biological natural resource ecosystem is a system of reciprocal relationships between elements in nature, both biological and non-living which are interdependent and have an influential influence”.

The issued of this law as a form of state awareness of the importance of preserving the wealth of natural resources. Considering Law No. 5 Year 1990, that “Indonesia’s longstanding biological resources and ecosystems that have an important position and role for life are the gifts of God Almighty, therefore they need to be managed and utilized sustainably, harmoniously, harmoniously and balanced for the welfare of the Indonesian people in particular and humanity in general, both today and the future”. Even from the enactment of Law Number 5 Year 1990, Indonesia is seen as one step ahead of the new international community which considers it important to protect its biodiversity and supporting ecosystems through the United Nations Convention on Biological Diversity four years later.<sup>4</sup>

This law also regulates the existence of a National Park, as stipulated in Article 29 paragraph (1) “Nature conservation areas as referred to in Article 1 number 13 consist of (a) national parks; (b) highway forest parks; (c) nature tourism park”. The existence of TNT is sufficiently protected in this law. Although it does not specifically regulate the protection of marine ecosystems and surrounding waters, including coral reef ecosystems. Supposedly, “conservation” as referred to in Article 1 above is described in detail; conservation of natural resources on land and conservation of natural resources in the sea, in order to encourage the birth of implementing regulations for its strengthening.

#### IV. Conclusion

The United Nations Convention on Biological Diversity which was later ratified by Indonesia through Law No. 5 Year 1994 gave special attention to biodiversity which was considered very strategic in providing protection, so that the CBD was a multilateral agreement that was undoubtedly the most accepted by the international community. 193 countries which are participating countries in the convention prove the importance of the role of the CBD in protecting biodiversity globally and sectorally, and in terms of protecting a country’s

<sup>1</sup> *Ibid.*, p. 71

<sup>2</sup> General Explanation of Law Number 5 Year 1990 concerning Conservation of Natural Resources and Their Ecosystems.

<sup>3</sup> *Ibid.*

<sup>4</sup> Zulfikli Aspan, “Perlindungan Hukum Terhadap Terumbu Karang Di Taman Nasional Taka Bonerate”, Jurnal Hukum Lingkungan, Vol. 2, Issue 2, December 2015, p. 79-80



sovereignty over its natural resources within its jurisdiction. Law Number 5 Year 1990 concerning Conservation of Natural Resources and their Ecosystems contains basic provisions and covers all aspects of the conservation of living natural resources and their ecosystems. The issued of this law as a form of state awareness of the importance of preserving the wealth of natural resources. Concerning Law No. 5 Year 1990, explained that Indonesia's longstanding biological resources and ecosystems that have an important position and role for life are the gifts of God Almighty, therefore they need to be managed and utilized sustainably, harmoniously and balanced for the welfare of the Indonesian people in particular and humanity in general, both present and future.

## References

- Andi Iqbal Burhanuddin, *et.al.* (Ed.), 2003. *Membangun Sumber Daya Kelautan Indonesia, Gagasan dan Pemikiran Guru Besar Universitas Hasanuddin*, IPB Press, Bogor.
- Briggs, J.C. *The Marine East Indies: Diversity and Speciation*, Journal of Biogeography, 2005.
- Burke, *et.al.*, 2002, *Terumbu karang yang terancam di Asia Tenggara*, World Resource Institut Washington, Amerika.
- Callum, M.R., *et.al.*, 2002. *Marine Biodiversity Hotspots and Conservation Priorities for Tropical Reefs. Sciences.*
- Dewan Kelautan Indonesia, 2012. *Kebijakan Kelautan Indonesia, Buku I*, Kementerian Kelautan dan Perikanan, Sekretariat Jenderal Satuan Kerja Dewan Kelautan Indonesia, Jakarta.
- Dewan Kelautan Indonesia, 2012. *"Kebijakan Ekonomi Kelautan Dengan Model Ekonomi Biru"*, Kementerian Kelautan dan Perikanan, Sekretariat Jenderal Satuan Kerja Dewan Kelautan Indonesia, Jakarta.
- Farida Patittingi, 2012. *Dimensi Hukum Pulau-Pulau Kecil di Indonesia. Studi atas Penguasaan dan Pemilikan Tanah*, Penerbit Rangkang Education, Yogyakarta.
- Freddy Numberi, 2009. *Perubahan Iklim; Implikasinya Terhadap Kehidupan di Laut, Pesisir dan Pulau-Pulau Kecil*, Fortuna Prima Makmur, Jakarta.
- Hadi S. Alikodra, 2012. *Konservasi Sumberdaya Alam dan Lingkungan, Pendekatan Ecosophy bagi Penyelamatan Bumi*, Gadjah Mada University Press, Yogyakarta.
- Hutomo and Moosa, 2005, *Indonesian Coastal and Marine Biodiversity: Present Status*; Indian Journal of Marine Sciences Vol. 14(1).
- Indonesian Biodiversity Strategi and Action Plan (IBSAP)*, 2003. Strategi dan Rencana Aksi Keanekaragaman Hayati Indonesia, 2003 - 2020, Bappenas, Jakarta.
- Isna Fatimah, *"Aspek Hukum Dalam Pelestarian Sumber Daya Genetik Laut: Kebutuhan dan Tantangan"*, Jurnal Hukum Lingkungan, Vol. 2 Issue 2, December 2015.
- L. Tri Setyawanta. R., 2009. *"Reformasi Pengaturan Pengelolaan Wilayah Pesisir Di Indonesia dan Tantangan Dalam Implementasinya Di Daerah"*, Speech of Inauguration at Position Acceptance Ceremony for Professor of Law at the Faculty of Law of Diponegoro University, Semarang.
- Laode M. Syarif and Andri G. Wibisana, (Ed.), *Hukum Lingkungan: Teori, Legislasi dan Studi Kasus*, USAID, Kemitraan Partnership, The Asia Foundation.
- Lyle Glowka, *et.al.*, 1994, *A Guide to the Convention on Biological Diversity*, Environmental Policy and Law Paper No. 30, IUCN-The World Conservation Union: Sieberg, Germany.
- M. Eko Rudianto, *"Coral Triangle Initiatives on Coral Reefs, Fisheries and Food Security"*, in Buletin: Coral Reef Rehabilitation and Management Program Phase II (Coremap II), Vol. 3, 2007, Direktorat Jenderal Kepulauan Pesisir dan Pulau-Pulau Kecil Departemen Kelautan dan Perikanan RI, Jakarta.
- Ministry of Forestry, 2011, as quoted in the Final Report of the Legal Analysis and Evaluation Team on Conservation of Biological Resources and Ecosystems, National Legal System Research and

- Development Center, National Law Development Agency, Ministry of Law and Human Rights of the Republic of Indonesia, Jakarta, 2015.
- National Long-Term Development Plans for 2005-2025.
- Peter Mahmud Marzuki, 2005, *Penelitian Hukum*, Prenadamedia Group Jakarta.
- Rokhmin Dahuri, *et.al.*, 1996. *Pengelolaan Sumber Daya Wilayah Pesisir dan Lautan Secara Terpadu*, Pradnya Paramita, Jakarta.
- Rokmin Dahuri, *et.al.* 2000. *Pengelolaan Sumberdaya Wilayah Pesisir dan Lautan Secara Terpadu*. Pradnya Paramita, Jakarta.
- Spalding *et.al.*, 2001, *World Atlas of Coral Reefs*. University of California Press: Berkeley. Information provided by Reef Base-A Global Information System: Indonesia: Threat-Human.
- Sugeng Budiharsono, 2001. *Pembangunan Wilayah Pesisir dan Lautan*. Pradnya Paramita, Jakarta.
- Suhaidi, “*Perlindungan Lingkungan Laut: Upaya Pencegahan Pencemaran Lingkungan Laut Dengan Adanya Hak Pelayaran Internasional Di Perairan Indonesia*”, Speech of Inauguration of Professors in the Field of International Law at the Faculty of Law, University of North Sumatra, Medan, 2006.
- Sumedi, “*Konservasi Keanekaragaman Hayati Di Indonesia: Rekomendasi Perbaikan Undang-Undang Konservasi*”, *Jurnal Hukum Lingkungan*, Vol. 2 Issue 2, December 2015.
- Syamsul Maarif, “*Arah dan Tantangan Pengelolaan Terumbu Karang*”, dalam *Buletin: Coral Reef Rehabilitation and Management Program Phase II (Coremap II)*, Vol. 3, 2007.
- Tomascik, *et.al.*, 1997, *The Ecology of Indonesian Seas, Part I. The Ecology of Indonesia Series*, Vol. VII, Periplus Editions: Singapore.
- Tomascik, *et.al.* 1997. *The Ecology of the Indonesian Sea. Part II*. Periplus Edition (HK) Ltd., Singapore.
- Veron, J.E.N, 2002, *Reef Corals of the Raja Ampat Islands, Papua Province, Indonesia, Part I: Overview of Scleractina*, dalam *a Marine Rapid Assessment of the Raja Ampat Islands, Papua Province, Indonesia*, edited by S.A. Mc Kenna, *et.al.*, Conversation International: Washington DC.
- Veron, J.E.N. *et.al.*, 2009, *Delineating the Coral Triangle*, *Galexa, Journal of the Coral Reef Studies*, Vol. 11.
- Zulfifli Aspan, “*Perlindungan Hukum Terhadap Terumbu Karang Di Taman Nasional Taka Bonerate*”, *Jurnal Hukum Lingkungan*, Vol. 2, Issue 2, December 2015.