

# INDONESIA'S RESPONSIBILITY FOR CORAL REEF DAMAGE IN KEPULAUAN SERIBU\*

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## *Abstract*

*Coral reef is an underwater biodiversity great in value. Sovereignty of the state to explore its natural resources is deeply recognized by international law. On the other hand, the state must also guarantee the preservation of its natural resources. This research will explain about state responsibility (Indonesia) upon the damage of the coral reefs based on Convention on Biodiversity in Kepulauan Seribu.*

**Keywords:** *Indonesia responsibility, coral reef.*

## *Intisari*

Terumbu karang merupakan salah satu kekayaan laut yang sangat tinggi nilainya. Hukum internasional mengatur bahwa meskipun suatu negara berdaulat penuh atas wilayahnya, negara tersebut berkewajiban untuk tidak merusak lingkungan. Penelitian ini menganalisis mengenai tanggung jawab Indonesia sebagai negara peratifikasi Konvensi Keanekaragaman Hayati 1992 sehubungan dengan kerusakan terumbu karang di Kepulauan Seribu.

**Kata Kunci:** tanggung jawab Indonesia, terumbu karang.

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## A. Background

As a form of reaffirmation of the 1972 Stockholm Declaration, the Convention on Biological Diversity is a legal product from the United Nations Conference on Environment and Development (UNCED) in 1992 in Rio de Janeiro, Brazil. Indonesia became a state party to this Convention through its ratification in 1994 with the issuance of Act No. 5 of 1994. Indonesia's commitment towards this legal product is based on the factual basis that Indonesia is amongst those with the greatest biodiversity in the world, which then by this virtue, would oblige them to preserve it. The largest potential in Indonesia's biodiversity is its marine sector due to Indonesia's status as a maritime country with sea occupying 75% of its territory and a coastline of 81,791 km, the second longest coastline in the world.<sup>1</sup> Additionally, Indonesia is the largest archipelago in the world as there are 17,508 islands within its territory.

Coral reefs are one of the marine resources of very high value. Coral reefs are ecosystems which are unique to tropical areas possessing high productivity levels and a vast diversity of species' inhabiting them. Indonesia's coral reefs is scattered from the Province of Nanggroe Aceh Darussalam (NAD) to the province of Papua. Indonesia's coral reefs are reached 85,200 square kilometers in the world's second largest after the Great Barrier reef.<sup>2</sup>

The existence of large-scale exploitation of the coral reefs is due to economic dependence on the maritime sector. In 2005, the area of 85,200 square kilometers of coral reefs in Indonesia, it was found that 40% of were in poor condition, 24% were damaged and only 6% are in a very good condition.<sup>3</sup> The people's behavior in fulfilling their economical needs is a major cause of coral reef degradation in some areas in Indonesia. Threats and damage, among others, are triggered by rampant overfishing, mangrove

deforestation, and coastal development.

International law rules that a state is fully sovereign over its own its territory. State sovereignty is limited by the state's obligation to explore natural resources without causing harm or damage to the natural environment. Indonesia has the right to collect and harness the potential of the sea, but it should take the national and international environmental preservation into account.

A country's international obligation can arise from agreements or from other sources. The activities of a country that ignores international law can incur state responsibility. The ratio of the emergence of state responsibility is related to the principle of responsibility and liability. Responsibility, in essence, refers to an obligation (duty) or in the form of a standard of social role established by a certain legal system, while the liability refers to the existence of the consequences of a failure in performing the obligations (or violation) where the state is responsible for providing compensation to the other party who suffered losses due to that violation.

The location of the study is the Pulau Pramuka, which is one part of Kepulauan Seribu, located at approximately at 05 39' South Latitude and 106 32' East Longitude and has been declared as 'Traditional Usage Sea' by the Department of Forestry through the Ministerial Decree No. 162/Kpts-II/95 on March 21, 1995. This zone can be used for research and education. The damage to the coral reefs in Pulau Pramuka, caused either naturally or by humans, require more attention.

Based on the explanations above, the authors are interested in studying the accountability of Indonesia as a state party to the Convention on Biological Diversity in 1992 relating to the destruction of coral reefs in the Kepulauan Seribu. The main problem identified by this study, are: (1) How does international law rule on state

<sup>1</sup> Radjoki Fr. Sinaga, "Pengelolaan Pantai Lestari", *Suara Pembaharuan*, 21 October 1996.

<sup>2</sup> Redaksi Majalah Teknologi, "Kondisi Terumbu Karang Indonesia Turun 90%", *Majalah Teknologi*, 166<sup>th</sup> Edition, July 2001.

<sup>3</sup> Martin Sihombing, "Budi Daya Karang, Bisnis Sekaligus Melestarikan Alam", *Bisnis Indonesia*, 19 July 2005.

responsibility for environmental damage within a state's territory? (2) What is the responsibility of Indonesia as a state party to the Convention on Biological Diversity in 1992 with regards to the damage to coral reefs in the Kepulauan Seribu?

## **B. Research Methods**

This research is a normative legal research, which is descriptive-analytic. A normative legal research is conducted by analyzing secondary data research with a descriptive analysis.

### **1. Research Materials**

This research emphasizes on secondary data as main data. The data will be obtained from literature research. Secondary data is obtained from primary, secondary, and tertiary legal materials. In this study, the primary legal materials will include: (1) of the Convention on Biological Diversity 1992; (2) Draft Article on Responsibility of States for Internationally Wrongful Acts; (3) of Law No. 5 of 1994; (4) other related legislations. Secondary legal materials are a description of the primary legal materials obtained from the literature research. In this research, secondary legal materials include: books, journals, papers, newspapers and websites in the internet related to the Convention on Biological Diversity 1992, state responsibility and damage to coral reefs in the Kepulauan Seribu. Tertiary legal materials include English-Indonesian dictionary by Hassan Shadily and John M. Echol as well as the Black's Law Dictionary which will provide guidance or clarification on primary legal materials. In order to support secondary data, primary data will also be collected by conducting field research and interviews with experts in Environmental Law, International Law, Criminal Law, officials in the Ministry of Environment, the Provincial Government of DKI Jakarta, as well as other related officials.

### **2. Research Tools**

Legal research is conducted either through literature research (library research) by reviewing literature, research reports and other documents,

and through field research in form of interviewing various sources. The search for literature and reading material as well as the results of seminars or papers through literature searches in the Department of Environment of Indonesia, United Nations Information Center (UNIC) in Jakarta, Jakarta National Library, Library of NGOs in the field of Environmental Protection, and the Library of Universitas Atma Jaya in Jakarta. In addition, it also materials or books in foreign languages are translated to complement the accuracy of the data for this research.

The literature research is also carried out electronically through the internet as a way to collect data efficiently, effectively, permanently, and easily. Normative legal research via electronic research can facilitate researchers to obtain secondary data. Electronic research provides quality secondary data with structured and integrated concepts. Electronic research can develop a systematic approach to the study plan, so that researchers can coordinate and test the collected data.

### **3. Data Analysis**

The data obtained from the results of the literature research in form of primary legal materials, secondary, and tertiary, are used to describe the concepts and theories with respect to the results of field research (empirical). In the early stages, the data will be edited, followed by data coding. The type of data analysis used in a normative legal research is qualitative data analysis. Prior to the analysis, the qualitative data that has been collected must be separated by category and then interpreted in order to answer the research problem. The method of explaining (interpretation) qualitative data will be grammatical interpretation, systematic or logical interpretation, historical interpretation, teleological or sociological interpretation, and comparative interpretation.

### **4. Research Sites**

This research will be conducted in Jakarta and the Kepulauan Seribu, particularly in Uni-

versitas Atma Jaya's Library in Jakarta, UNIC (United Nations Information's Center) library, Department for Environment Library, NGOs Library of in the field of Environment, the National Library, the Department of Environment, Government of DKI Jakarta, Kepulauan Seribu especially at Pulau Pramuka.

### C. Results and Analysis

#### 1. Review on the Concept of State Responsibility

A state is one of the subjects of international law. A subject of international law is an entity that can be given rights and obligations by international law.<sup>4</sup> The reference or the legal basis used by the international community in the debate on the definition of state is the Montevideo Convention 1933. As an international subject countries have international rights and obligations. The rights and obligations of the state, among others, are rights and responsibilities related to territory in international relations, relations to other countries, relating to people in the international community, dealing with objects in the international community, dealing with economic interests, as well as relating to the environment and state jurisdictions.

Every country in the world is obliged to respect the rights and obligations of other countries. Violations of the rights and obligations of other countries may lead to a state responsibility. State responsibility is a fundamental principle in international law. This principle was originally known in civil law, which states that a person must be responsible for the mistakes caused by that person. In Roman law, the concept of state responsibility is called called *sic utere jure alienum tuo ut non laedes* which means that a person may exercise that person's rights over all his property, but must be maintained in order not

to harm or cause loss towards another person.<sup>5</sup>

State responsibility appears as consequence of the principles of equality and sovereignty of states which is recognized in international law. The state responsibility basically arises when exists a violation of obligation under international law, such as: violation of international treaties, violation of territorial sovereignty of other states, acts of aggression towards another state, and violations towards diplomatic representatives of other states and foreign nationals.<sup>6</sup>

International law is essentially regulates the legal relations between states, so that in the concept of responsibility, the state often becomes the main subject. This is reflected in Article 1 of the ILC Draft (Responsibility of States for internationally Wrongful Acts 2001) which states that, "Every internationally wrongful act of a state entails the international responsibility of that state."

The main characteristics of state responsibility will depend on several factors. The first is the existence of an international obligation. The second is the existence of an act of commission or omission that results in that violation. The third is a loss or damage caused by that unlawful act. In general, it can be said that the state's responsibility is the obligation of the state to take responsibility for the actions he has done, whether made directly or indirectly (conducted by state officials).

#### 2. Forms of State Responsibility

International law recognizes a number of forms of state responsibility, which are the following: **Firstly**, responsibilities rising out from violations of treaties or surrounding contractual obligations. State responsibility for violations of a treaty or international treaty obligations depends on the terms in the provisions of the treaty which have been allegedly violated. On many occasions,

<sup>4</sup> Sugeng Istanto, 1994, *Hukum Internasional*, Universitas Atma Jaya Yogyakarta Publishing, Yogyakarta, p. 16.

<sup>5</sup> Yanti Fristikawati, 2005, "Tanggung Jawab Negara Berkenaan dengan Kerusakan Lingkungan Akibat Kegiatan pada Reaktor Penelitian Nuklir," *Dissertation*, Universitas Katolik Parahyangan, Bandung, p. 73

<sup>6</sup> Jawahir Thontowi, 2006, *Hukum Internasional Kontemporer*, Refika Aditama, Bandung, p. 194.

the disputes are regarding the interpretation of certain terminologies used in the treaty. However, such action constitutes as a violation towards the provisions of the treaty, then responsibility will incur.<sup>7</sup>

**Secondly**, there is responsibility towards international offense. Here, what is meant by “offense” are violations towards obligations of states given by international law, which is not a contractual obligation. An action can be categorized as an international offense if it meets two conditions, which are that it was carried out by a state which is subject to international law, and the act is a violation of international obligations.

The concept of state responsibility in context of environmental problems would certainly be associated with the principle of state sovereignty. Under Principle 21 of the Stockholm Declaration, states are no longer fully sovereign in managing their natural resources, as they must take full responsibility for the activities of natural resource management in their territory so that they do not damage the environment of other countries.<sup>8</sup>

### 3. An Overview of Environmental Degradation

The environment, under Article 1 of Law No. 23 of 1997 on “Environmental Management”, is, “The unity of space with all objects, energy, state of being, and organisms, including human beings and their behavior that affect the survival of lives and welfare of human beings and other organisms.”<sup>9</sup> The definition of damage or Damage by Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment 1993 is:<sup>10</sup> (a) loss of life personal injury; (b) loss of or damage to property other than to the installation itself or property held under the

control of the operator, at the site of the dangerous activity; (c) loss or damage by impairment of the environment inso far as this is not Considered to be damage within the meaning of sub-paragraphs a or b above Provided that compensation for impairment of the environment, other than for loss of profit from such impairment, shall be limited to the cost of measures of reinstatement actually undertaken or to be undertaken; (d) the costs of preventive measures and any loss or damage cause by preventive measure.

Based on that description, it can be seen that the damage to the environment can include many things such as:<sup>10</sup> (a) Loss of life or injury and disability; (b) Loss of or damage to property; (c) Loss of or damage to the quality of the environment and therefore cannot function as intended; (d) Costs of preventive measures, including cost of the loss or damage caused by preventive measures cost.

Relating to state responsibility for activities that cause damage to the environment, there are some actions that states can conduct to display responsibility for the offense, which may include:<sup>12</sup> (a) Implementing environmental protection and preventing damages to the environment, in accordance with the Precautionary Principle; (b) Admitting the mistake and appologizing to the states who suffered damage or loss; (c) Immediately stopping activities that cause environmental damage; (d) Conduct environmental restoration, which can be done directly by the country committing the offense by sending experts or tools/equipments to perform recovery; (e) Provide compensation as a liability in the sense of responsibility to the states aggrieved.

In 1974, the UN General Assembly passed Resolution No. 3281 (XXIX). This resolution

<sup>7</sup> J.G. Starke (Translated by Bambang Iriana Djajaatmadja), 2001, *Pengantar Hukum Internasional*, Fifth Edition, Sinar Grafika, Jakarta, pp. 397-398.

<sup>8</sup> Yanti Fristikawati, *Op.cit.*, p. 77.

<sup>9</sup> Translated from the original text “*Kesatuan ruang dengan semua benda, daya, keadaan, dan makhluk hidup termasuk di dalamnya manusia dan perilakunya yang mempengaruhi kelangsungan perikehidupan dan kesejahteraan manusia serta makhluk hidup lainnya.*”

<sup>10</sup> See the Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment 1993.

<sup>11</sup> Yanti Fristikawati, *Op.cit.*, p. 21.

<sup>12</sup> *Ibid.*, pp. 84-85.

actually contains the Economic Rights and Duties of States, but Article 30 of this Resolution states that each country is responsible for the protection, preservation, and development of the environment, both for the present and future generations to come. Implementation of these responsibilities should be carried out together with other states, but without transgressing the national jurisdiction of other states. The resolution states the following:<sup>13</sup>

The protection, preservation, and enhancement of the environment for the present and future generations are the responsibility of all states. All states endeavor to establish their own environmental and developmental policies in conformity with such responsibility. The environmental policies of all states and should not adversely affect Enhance the present and future development potential of developing countries. All states have 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. All states should co-operate in evolving international norms and regulations in the field of the environment.

The development of regulation regarding state responsibility with respect to environmental damage continues to raise attention, which is shown by the inclusion of Article 30 of the Charter of Economic Rights and Duties of States 1974 which states that each state is responsible for their actions to not cause environmental damage in the territory of their own and other states.

#### **4. An Overview of the Convention on Biological Diversity**

Under Article 2 of the Convention on Biological Diversity, the word "biodiversity" is defined as "[...] the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species, and of ecosystems." The

United Nations Convention on Biological Diversity is the result of the 1992 Earth Summit held in Rio de Janeiro Brazil. This convention has been ratified by the Government of Indonesia through Law No. 5 of 1994.

Convention on Biological Diversity provides obligations for state parties in connection with the implementation of the said convention, as follows:

- 1) Each party shall cooperate with the other parties (Article 5);
- 2) Each party with special conditions and skills are required to develop strategies, plans or programs, for the conservation and sustainable usage of biological diversity or to adapt preexisting strategies, plans or programs (Article 6, paragraph a). They are also required to integrate the conservation and sustainable use of biological diversity into plans, programs and sectorial or crosssectorial policies (Article 6, paragraph b);
- 3) Each party shall identify the components of biological diversity that are essential for conservation and sustainable usage (Article 7, paragraph a), monitor the components of biological diversity (Article 7 letter b), identify the processes and categories of activities which have or are expected to have significant negative impacts on the conservation and sustainable usage (Article 7 c);
- 4) Each party shall develop a system of protected areas, develop guidelines for the completion and management of protected areas; organize and manage biological resources; promote the protection of ecosystems, natural habitats and the maintenance of populations; promote environmentally sound and sustainable development; rehabilitate and restore degraded ecosystems and

<sup>13</sup> Martin Dixon, 1996, *International Law*, Blackstone Press Limited, London, p. 487.

promote the recovery of endangered species; respect, protect and maintain knowledge, innovations and practices of the indigenous and local communities in accordance with the conservation and sustainable usage (Article 8).

- 5) Each Party shall implement *ex-situ* conservation (Article 9).
- 6) Each party shall consider the conservation and sustainable use of biological resources into national decision-making; impose efforts/actions with the stabilization of biological resources to avoid or minimize negative impacts on biodiversity, protect and encourage the traditional use of biological resources in accordance with cultural practices consistent with the rules of conservation, supporting local residents to develop and conduct efforts to repair damaged areas; encourage cooperation between government and private sectors in the use of biological resources in a sustainable manner (Article 10).

### 5. Laws on Biodiversity in Indonesia

Indonesia has a strong commitment to protect and preserve the environment, one of its manifestations is the aggressive issuing of regulations related to biodiversity by the government since 1984. The following are the classification of laws and regulations related to biodiversity in Indonesia: Law No. 5 of 1994 on Ratification of the United Nations Convention on Biological Diversity, Law No. 5 of 1990 on Conservation of Natural Resources and Ecosystems, Law No. 22 of 1999 on Regional Government, Law No. 41 of 1999 on Forestry, Law No. 23 of 1997 on Environmental Management, Law No. 12 of 1992 on Cultivation System, Law No. 24 of 1992 on Spatial Planning, Government Regulation No. 18 of 1994 concerning Natural Resources Tourism Use Zone in National Parks, National Forests, and

the Nature Park, Government Regulation No. 7 of 1999 on the Conservation of Plants and Animals, Government Regulation No. 8 of 1999 on Utilization of Wild Animals, Government Regulation No. 13 of 1994 on Animal Poaching, Government Regulation No. 25 of 2000 on the Authority of Provinces as Autonomous Regions, Government Regulation No. 51 of 1993 on Environmental Impact Assessment, Government Regulation No. 68 of 1998 on Regional Nature Reserve and Nature Protection, Government Regulation No. 8 of 1999 on the Use of Wildlife, Government Regulation No. 15 of 1984 on Management of Natural Resources in the Indonesian Exclusive Zone, Presidential Decree No. 32 of 1990 on the Management of Protected Areas, Joint Ministerial Decree of the Minister of Mines and Energy and the Ministry of Forestry. 110/12/702.M/PE/1991 and No. 346/Kpts.11/1991 of Joint Arrangement Mining and Energy in the Forest Area.

### 6. The Responsibility of Indonesia as States Party to the Convention on Biological Diversity 1992 Related to Coral Reefs in the Kepulauan Seribu

#### a. Description of the Research Site

Taman Nasional Laut Kepulauan Seribu (or The National Marine Park of Kepulauan Seribu), abbreviated TNLKS, is one of Indonesia's national parks are famous for its rich coral reef ecosystems and is located in the Jakarta Bay. The Kepulauan Seribu located in the geographical position between 106°20'00" to 106°57'00" East Longitude and 5°10'00" to 5°57'00" South Latitude, the cluster consists of 105 islands stretching vertically from the Jakarta Bay to the North and ends in an island called Sebira, approximately 150 km from the coast of North Jakarta.<sup>14</sup> The Kepulauan Seribu has a land area of 897.71 ha and 6997.50 km<sup>2</sup> of water area.<sup>15</sup> Administratively, the Kepulauan Seribu is managed under the Province of

<sup>14</sup> Safran Yusri, *et al.*, 2002, *Sekilas tentang Kepulauan Seribu: Kondisi Sosial Ekonomi, Potensi dan Ancaman Sumber Daya Alam, dan Upaya Konservasi*, Terangi, Jakarta, p. 7.

<sup>15</sup> *Ibid.*

Daerah Khusus Ibukota Jakarta, with the status of an administrative district.<sup>16</sup> Of about 105 islands in the Kepulauan Seribu, 78 islands are in the national park area. Some islands are developed as tourist attractions such as the Pulau Pramuka (which is the location of the study), Pulau Semak Daun which is a turtle breeding area and camping ground, and Pulau Kelapa and Pulau Panggang which are the largest residential areas.

Kepulauan Seribu Marine National Park was originally a marine natural reserve. The decision to declare the region to become the Kepulauan Seribu Marine National Park begun with the issuance of various government regulations regarding the use of natural resources, namely:<sup>17</sup>

- 1) In 1962, the Regional Municipality of Jakarta Raya Rules of Decision Corals and others are also referred to as Coral Regulation of Jakarta Raya.
- 2) In 1969, the Safety in the Use of Land Regulation in the Kepulauan Seribu.
- 3) In 1970, Regulation of Water Closure in gardens around the Great Barrier Reef in the Kepulauan Seribu for fishing by fishermen as a Livelihood.
- 4) In 1970, the Regulations to Prohibit Fishing with Chart in Ocean / Water in the area of DKI Jakarta.
- 5) In 1972 Licensing Terms and Conditions in Land Use Designation for Managing / Occupying islands in the Kepulauan Seribu, DKI Jakarta.
- 6) Given the large potential in natural resources, in 1982 the Ministry of Agriculture declared an area of 108,000 hectares as the Marine Nature Reserve of Kepulauan Seribu. In 1982, it was announced as a National Park candidate and Nature Reserve.
- 7) In 1986, a zone distribution was conducted in the Kepulauan Seribu National Park.
- 8) In 1995, there was a change in function from the Marine Natural Reserve Area of Kepulauan Seribu of 108,000 ha to a National Marine Park of Kepulauan Seribu Marine National Park.
- 9) In 2001, based on the News on Boundaries and Maps, the National Marine Park of Kepulauan Seribu covers 107,489.00 ha.
- 10) In 2002, it was declared that the National Marine Conservation Area of Kepulauan Seribu Park is an area of 107,489.00 ha.

In addition, through the Regional Government Regulation No. 6 of 1999, the Government of DKI Jakarta has given the directives for the development of the development region of Kepulauan Seribu, which increases the activity of tourism and quality of life of fishing communities through increased aquaculture and utilization of fisheries resources while conserving coral reefs, seagrass beds and forests mangrove. Management refers to the Kepulauan Seribu region of Jakarta Regulation No. 11 of 1992 on Planning and Management of Kepulauan Seribu. In accordance with the Decree of the Minister of Forestry No. 185/Kpts-II/1997, the TNLKS is divided into four zones, namely:<sup>18</sup> (a) The core zone, which is the area where the source of genetic and ecological processes are completely closed for any forms of utilization, except for research. There are three core zones, namely Core Zone I, which includes the waters around Pulau Gosong Rengat and Karang Rengat which is a *penyu sisik* protection area; then there is Core Zone II which includes the land and waters around the Pulau Penjaliran Barat and Pulau

<sup>16</sup> *Ibid.*

<sup>17</sup> Departemen Kehutanan Republik Indonesia, 2007, *Buku Informasi 50 Taman Nasional di Indonesia, Seri Kws-II.02.*, Ministry of Forestry, Jakarta, pp. 98-99.

<sup>18</sup> Refer to the TNLKS Development Project, 1995.

Pejaliran Timur, and the waters around the Pulau Peteloran Timur, Peteloran Barat, Buton, and Gosong Penjaliran which are coral reefs, mangrove forest ecosystems and *penyu sisik* protection also; Core Zone III includes the waters around the island Pulau Kayu Angin Bira, Pulau Belanda, and the northern part of Pulau Bira Besar which is a *penyu sisik* protection area and coral reef ecosystems, (b) Protection Zone, which is a protection area for the core zone. This area is open for a very limited utilization, because this area is where the turtles feed and grow. This region includes the Pulau Dua Barat, Pulau Dua Timur, Pulau Jagung, Pulau Gosong Sebaru Besar, Pulau Rengit, and Pulau Karang Mayang. (c) Intensive Use Zone, this zone is reserved for natural tourism. Unlike other zones, there are a large number of islands in this zone, but the well-known ones are Pulau Putri, Pulau Matahari, Pulau Kotok, and Pulau Pelangi. (d) Traditional Use Zone, this zone serves to filter the negative impacts of human activities within and outside the region. This zone is important for the marine conservation area. Most of the 10,000 residents living in the Kepulauan Seribu are in this zone. In this zone, the people are allowed to fish with traditional fishing gear.

In 2001, the Government issued Government Regulation No. 55 of 2001 on the Establishment of the Administrative District Kepulauan Seribu.<sup>19</sup> This Government Regulation was formed with an aim to improve the service and welfare of the community and function control of Kepulauan Seribu. This

government regulation is further elaborated by DKI Jakarta Regulation No. 4 of 2001 on the establishment of the Northern District of Kepulauan Seribu and the Southern District of Kepulauan Seribu. The National Marine Park of Kepulauan Seribu is located entirely within the Northern District of Kepulauan Seribu. The area of the National Marine Park of Kepulauan Seribu was issued through the Decree of the Minister of Forestry. No. 6310/Kpts-II/2002.<sup>20</sup> In 2004, there was a change in the zone divisions in the National Marine Park of Kepulauan Seribu, issued under the decision of the Directorate General of Forest Protection and Nature Conservation Decree No. 05/IV-KK/2004 on the Zone Divisions of the National Park of Kepulauan Seribu. Under this decree, the zones of the National Marine Park of Kepulauan Seribu are divided as follows:<sup>21</sup>

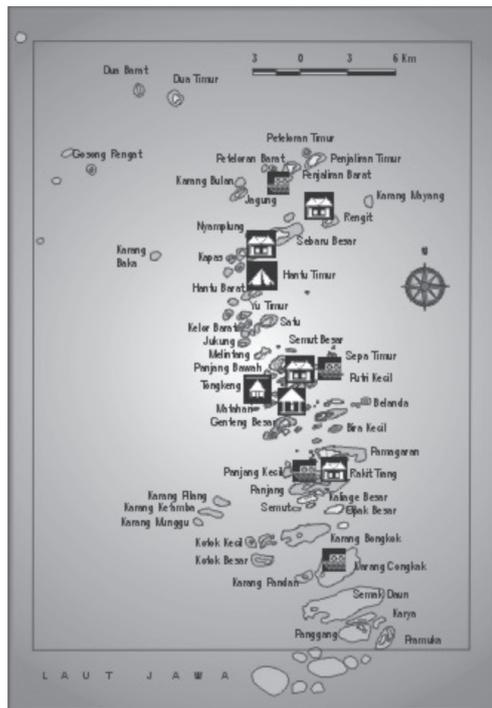
- (1) Core Zone  
Activities that are allowed in this zone include activities related to science, education, research, and cultivation support.
- (2) Protection Zone  
Activities are allowed in this zone are those related to education, research, scientific development, activities of cultivation supporting, limited natural tourism, and the breeding of certain animal species.
- (3) Settlement Zone  
The Zones to accommodate the interests of the society by taking into account the aspects of conservation.
- (4) Utilization Zone, the zone for natural tourism and leisure activities.

<sup>19</sup> Rini Estu Smara and Silvianita Timotius, "Taman Nasional Laut Kepulauan Seribu di Kabupaten Administratif Kepulauan Seribu DKI Jakarta, Terumbu Karang Jakarta (Pengamatan Terumbu Karang Kepulauan Seribu 2004-2005)", <http://www.terangi.or.id/publications/pdf/tkj-web-pdf>, accessed on 23 April 2010.

<sup>20</sup> *Ibid.*

<sup>21</sup> *Ibid.*

### A Map of the National Marine Park of Kepulauan Seribu



Source: [http://www.dephut.go.id/INFORMASI/TN%20INDO-ENGLISH/tm\\_kepulauanseribu.htm](http://www.dephut.go.id/INFORMASI/TN%20INDO-ENGLISH/tm_kepulauanseribu.htm), accessed on 23 April 2010.

Among the main potentials in the TNLKS are the coral reefs that are only found in tropical ecosystems. The constellation of islands spread within the region TNLKS provides color to the existing constellation of coral reefs.<sup>22</sup>

#### b. Coral Reefs as Marine Natural Resources

Coral reefs are buildings of thousands of corals that have become a habitat for a variety of fish and other sea creatures.<sup>23</sup> Indonesia currently has a general guideline on the management of coral reefs in Indonesia stipulated in the Decree of the Ministry of Maritime and Fishery Affairs No. Kep.38/MEN/2004 on General Guidelines for the

Management of Coral Reefs. These guidelines provide understanding of the structure of coral reefs in shallow seas that are resistant to the onslaught of the waves as a result of the processes of segmentation and the construction of hermatypic coral shells, coralline algae, and calcium-secreting organizations.

Coral reefs have a significant value in the socio-economic aspect and is a coastal ecological resource in Indonesia, and is a general indication in environmental management.<sup>24</sup> The formation of coral reefs which consists of hundreds of thousands and even millions of polyps is very slow, with a growth rate of only 0.25 cm - 0.5 cm per year, its complete formation would take centuries. To further understand the benefits of coral reefs, the following will provide further explanation:

##### 1) Fishery

Coral reefs provide habitats for organisms. Fish and other marine life forms that use these reefs are commodities of a high export value, especially for Indonesia. The estimates of fish production depends on the condition of the coral reefs.

##### 2) Tourism

The beauty of the corals, biological richness, and clarity of the water, makes the reef area a place of recreation that contributes greatly to the tourism industry. The increase in marine tourism in the region also increases the demand for good service facilities and transportation, accommodation and other types of services, such as hotels, restaurants and docks, the operation of various types of vessels as well as tour

<sup>22</sup> Achmad Abdullah, "Taman Nasional Kepulauan Seribu Sebagai Wahana Konservasi", [http://www.terangi.or.id/id/index.php?option=com\\_content&task=view&id=68&Itemid=41/](http://www.terangi.or.id/id/index.php?option=com_content&task=view&id=68&Itemid=41/), accessed on 3 August 2009.

<sup>23</sup> *Ibid.*

<sup>24</sup> *Ibid.*

guides.<sup>25</sup> These activities provide new jobs and a relatively large amount of revenue for the government and the people.

3) Coastal protection

Fringing reefs are very useful as a natural waterbreaker that protects the coast from erosion, coastal flooding and other events of coast destruction caused by sea water phenomena. Coral reefs also contribute to the coastal accretion by providing sand to the shore.

4) Medical Aid

For centuries, the coastal communities have utilized coral plants and animals for medicinal purposes. Coral reefs are used to make medicine for certain diseases, such as malaria, herpes, and some types of cancer.

**c. Coral Reef Damage**

Coral reefs in Indonesia are as vast as 60,000 km<sup>2</sup>. In the current development, coral reef ecosystems are suffering an alarming rate of degradation. The damages to coral reefs are caused by various factors, that can be generally grouped into two factors: damages by human activity (anthropogenic causes) and damage caused naturally.<sup>26</sup> The damage to these coral reefs is of course very detrimental, and rehabilitating the damaged reefs could takes 20-40 years.<sup>27</sup>

**d. The Responsibilities of Indonesia in Relation to Coral Reef Damage in Kepulauan Seribu**

Strategic and economic value of coral reefs apparently triggers human instinct to exploit it to the fullest, and at times even excessively, which is of course bad for the coral reefs. Due to utilization, coral reefs are

suffering uncontrolled damage / degradation. In Kepulauan Seribu, approximately 90-95% of coral reefs to the depth of 25 meters are dying.<sup>28</sup>

The location of fishing villages in Kepulauan Seribu are adjacent to the sea, which makes it easier for fishermen to catch fish. In the research conducted by the authors, it was discovered that in attempt to get as many fish as possible, the fishermen occasionally utilizes explosives and poisons. Both of those methods become among of the main causes that lead to the destruction of the coral reef ecosystems in Kepulauan Seribu. Other causes are partly sedimentation, coral mining, pollution, water and land pollution, and global warming. The damaged coral reef ecosystems will have extensive implications to the availability of marine biological resources, which is scarcity of fish and the pollution of other marine resources.

As it has been known that the Government of Indonesia has ratified the Convention on Biological Diversity of 1992 through Law No. 5 of 1994. By ratifying this Convention, Indonesia has affirmed its commitment as one of the countries that have the greatest biodiversity in the world to participate in its obligation to maintain and conserve the biodiversity, which includes the coral reef ecosystem.

The facts found in the field indicates that the coral reef ecosystems in the Kepulauan Seribu are increasingly corrupt destroyed and demands Indonesia's responsibility. Rules of international law prescribes that every action of ratification by a states would bind that state to carry it out with good faith (the principle of *pacta sunt servanda*). If the state in question violates the obligations rising out of the agreement that they have

<sup>25</sup> *Ibid.*

<sup>26</sup> *Ibid.*

<sup>27</sup> Redaksi Bisnis Indonesia, "Terumbu Karang Bernasib Malang", *Bisnis Indonesia*, 19 April 1998.

<sup>28</sup> *Ibid.*

agreed upon, then that state should be responsible. Seeing the dramatic degradation of coral reefs over the years, the Indonesian government should take full responsibility to restore the condition of coral reefs as a commitment to the implementation of the Convention on Biological Diversity.

The management of coastal areas and small islands are inseparable from sustainable coral reef management. This is due to the fact that coral reefs are an integral part of the coastal ecosystem.<sup>29</sup> The Indonesian government has attempted various measures to manage and rescue the coral reefs that are under threat of or already damaged as a form of responsibility as a state party to the Convention on Biological Diversity. Among them is the establishment of the Coral Reef Rehabilitation and Management Program (or COREMAP). COREMAP aims to protect, rehabilitate and utilize coral reef ecosystems and associated ecosystems in a sustainable manner and by improving the welfare of the people in the surrounding ecosystems by strengthening the capacity of reef resource management at the national and local/regional level. The program is implemented in three phases, namely: the initiation phase (1998-2002), accelerated phase (2003-2009), and the institutionalization phase.<sup>30</sup> The actions and efforts that have and are being done to conservation of coral reefs in Kepulauan Seribu are the following:

### 1) Preventive Measures

**Firstly**, providing status as the National Marine Park of Kepulauan Seribu Marine National Park (TNLKS) through the Decree of the Ministry of Forestry No. 6310/

Kpts-II/2002 on June 13, 2002. This status officially declares Kepulauan Seribu as an area for the conservation of coral reefs and other marine life. **Secondly**, Grouping the Kepulauan Seribu region into four (4) zones, so that its utilization can be controlled with an environmentally friendly spirit. **Thirdly**, a community-based management of coral reefs. One of the forms is fishermen in the Kepulauan Seribu area having the technology to "summon" fish with 'rumpon' in traditional fishing.<sup>31</sup> **Fourthly**, the cooperation between local communities and the government in the conservation of coral reefs. **Fifthly**, the cooperation between the government and environmentalists communities (coral reefs) in form of research, education, counseling, training of coral reef cultivation. Pulau Pramuka is among the locations for education and training of coral reef cultivating. **Sixthly**, to establish, define and enact coral reef regulations, among them is the Head of BAPEDAL Decree No. 47 of 2001 on the Guidelines for the Measurement of Coral Reefs. Specific regulations concerning coral reefs in Kepulauan Seribu are either inexistent or lack coordination.

### 2) Repressive Actions

Punishing parties who pollute the marine environment, in this case: polluting the coral reefs. To this date, however, these regulations have yet to be enforced. Based on observations at the time of the research, there are still many fishermen using explosives to catch fish, large amounts of waste polluting the waters of, Kepulauan Seribu, and such actions are left unpunished.

<sup>29</sup> Anonymous, "Buku Manual Tata Kerja Kelembagaan COREMAP II-ADB, Program Rehabilitasi dan Pengelolaan Terumbu Karang COREMAP II", <http://www.docstoc.com/docs/21537791/Program-Rehabilitasi-dan-pengelolaan-Terumbu-Karang-COREMAP-II>, accessed on 22 April 2010.

<sup>30</sup> *Ibid.*

<sup>31</sup> See Adriani Sunuddin, 2008, *Biodiversitas dan Analisis Genetika Komunitas Ikan di Terumbu Karang Buatan, Kepulauan Seribu*, Strategic Research Report, Lembaga Penelitian dan Pengabdian Kepada Masyarakat, Institut Pertanian Bogor, Bogor.

#### D. Conclusion

State responsibility for environmental damages in the state is related to the principle of state sovereignty, where states are sovereign over the environment and the natural resources in it. Such view was replaced by the advent of Principle 21 of the Stockholm Declaration 1972 and Article 2 of the Declaration of Rio de Janeiro. In addition, in 1974, the UN General Assembly passed UN General Assembly Resolution No. 3281 (XXIX). The resolution states that every state is responsible for the protection, preservation, and development of the environment, both for the present and future generations to come. Article 30 of the Charter of Economic Rights and Duties of States 1974 also states that each country is responsible to ensure that their activities do not cause environmental damage in their own or to other states.

Indonesia's responsibilities as a state party to the Convention on Biological Diversity of 1992 with respect to damage to coral reefs in the Kepulauan Seribu, especially in Pulau Pramuka, are: (1) to establish the Kepulauan Seribu as a Marine Conservation Zone is to give him the status of National Marine Park of Kepulauan Seribu and to form the Coral Reef Rehabilitation and Management Program (COREMAP) with various activities in the field of the sustainability of coral reef environment, among them are the training and cultivation of artificial reefs, and (2) to encourage the cessation of fishing using explosives and to encourage community-based coral reef management, among them is by fishermen in Kepulauan Seribu having the technology to "summon" fish using "rumpon" in traditional fishing activities.

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