
| RESEARCH ARTICLE

Legal Protection of Biological Resources and Its Ecosystems in Indonesia

Albert Riyadi¹ ✉ Sunardi² and Joko Setiono³

¹Master of Law Program, Faculty of Law, Diponegoro University, Semarang, Indonesia

^{2,3}Lecture of Law Program, Faculty of Law, Diponegoro University, Semarang; Jl. Prof. Soedarto, SH., Tembalang, Semarang, Indonesia

Corresponding Author: Albert Riyadi, **E-mail:** albertriyadi@student.undip.ac.id

| ABSTRACT

This study aims to analyze the implementation of the conservation of Biological Natural Resources and their ecosystems in Indonesia and what are the inhibiting and supporting factors in the implementation of Conservation of Biological Natural Resources and their ecosystems in Indonesia. Biological natural resources are one of the most important elements in an ecosystem. The elements of living natural resources and their ecosystems are interdependent with each other, so their use also affects each other causing damage and the extinction of one of them will result in the disruption of the ecosystem. Therefore, it is necessary to have conservation as the management of living natural resources that is carried out regularly. The research uses a normative juridical approach (*socio-legal research*) as the basis for describing ideas. The result of this research is that efforts to use it sustainably in conservation are often forgotten. In addition, conservation within the framework of decentralization has led to disharmony in relations between the central government, provincial governments, and district/city governments. As a result, the welfare of the community around the area or within the conservation area is decreasing. Efforts that should be made in the context of overcoming law enforcement on the conservation of living natural resources and their ecosystems in Indonesia cannot be carried out only with penal (criminal) policies but must be carried out through integral efforts between penal and non-penal policies (without criminal). Crimes or criminal acts occur because of social conditions that are conducive factors for the occurrence of crime, therefore non-penal measures that can be taken are eliminating conducive factors that cause criminal acts in the field of conservation of living natural resources and their ecosystems.

| KEYWORDS

Legal, Protection, Biological, Resources, Ecosystems

| ARTICLE INFORMATION

ACCEPTED: 01 February 2023

PUBLISHED: 09 February 2023

DOI: 10.32996/ijlps.2023.5.1.10

1. Introduction

Indonesia's living natural resources and their ecosystems have an important position and role in national life and development. Therefore, it must be managed and utilized sustainably for the welfare of the Indonesian people and mankind in general for now and in the future. Because the elements of biological resources and their ecosystems depend on each other, and their use will affect each other so that the damage and extinction of one of them will result in the disruption of the ecosystem, it is necessary to regulate the utilization and protection of its ecosystem.¹

The diversity of biological natural resources in terms of their types, numbers, and uniqueness enhances life support systems. Therefore, the protection of the diversity of living natural resources and their ecosystems through the law is very important. According to Law Number 5 of 1990 concerning the Conservation of Biological Natural Resources and Their Ecosystems, what is

¹ Muhammad Sood, *Hukum Lingkungan Indonesia* (Sinar Grafika, 2021).

meant by Biological Natural Resources are biological elements in nature consisting of vegetable (plant) natural resources and animal (animal) natural resources which together with the surrounding non-biological elements as a whole form an ecosystem.²

Meanwhile, the conservation of living natural resources is the management of living natural resources whose utilization is carried out wisely to ensure the continuity of their supply while maintaining and improving the quality of their diversity and value. The legal framework on which efforts to integrate biodiversity conservation and development can succeed or fail is highly confusing and contains little supporting structure. Several new laws, at first glance, seem to be the basis for straightening out aspects of development, but many have not been implemented.³

The system of protected areas is extensive, but the government agencies that are authorized to administer them do not have the human and financial resources needed to manage them or even to control people going in and out and operating them. At the same time, most laws, new or old, always seem to favor the massive use of resources for commercial purposes and changing land use rather than their conservation and concern for local people and their needs, rights, or welfare.⁴

While the ecosystem is an ecological system formed by the reciprocal relationship between living things and their environment. Broadly speaking, the biosphere consists of natural ecosystems and artificial ecosystems. Indonesia has a very high diversity of ecosystems, which form formations with one another so it is very complex.⁵

Ecosystems are broadly divided into natural ecosystems and artificial ecosystems. Indonesia's natural ecosystems extend from land or terrestrial (30%) to water (70%). Among the terrestrial and aquatic life media, there are also semi-terrestrial ecosystems that show merging characteristics, such as mangroves growing on the coast and river riparian. Artificial ecosystems formed by humans to meet their needs are also a medium for diversity that needs to be maintained. In rice fields, gardens and ponds there are various types of flora, fauna and microbes.⁶

Ecosystems provide services (*ecosystem services*) needed in human life. Ecosystems provide human needs for food, clean water, wood and fiber and fuel. The role of ecosystems is also very important in climate regulation, water cycles, and even disease cycles. Humans get ecosystem services in terms of culture, beauty, spirituality, education and ecotourism. In addition, ecosystems provide functions in nutrient cycling, soil formation and production support. It should be emphasized that an ecosystem provides not only in one group but also across. Therefore, ecosystem protection cannot be done only for one type of service but for many.⁷

If the ecosystem is not maintained properly, the role and services of ecosystems in supporting human life will be disturbed or even lost. For example, a damaged forest ecosystem causes a decrease in the availability of wood, floods, decreases soil fertility and loss of opportunities to enjoy the beauty of the forest. A further impact is a decrease in the level of biodiversity, both ecosystems, as well as species and genetics in them. Therefore, ecosystem conservation not only maintains the condition of the ecosystem but also maintains biodiversity and non-biological diversity as a whole.⁸

In other cases, wildlife ecosystems are natural resources that are included in the category of *renewable resources*. In accordance with the principles of the world's conservation strategy, the wildlife management program in Indonesia also includes aspects of protection, preservation, and utilization. Efforts to protect and conserve wildlife in Indonesia have shown positive results.⁹ However, the utilization program is still experiencing obstacles, mainly due to the limitations of:

² Sigit Sapto Nugroho, *Hukum Konservasi Sumber Daya Alam & Keanekaragaman Hayati: Sebuah Dilema Antara Potensi & Ancaman Kepunahan* (Penerbit Lakeisha, 2020).

³ Ahmad Jazuli, "Dinamika Hukum Lingkungan Hidup Dan Sumber Daya Alam Dalam Rangka Pembangunan Berkelanjutan," *Jurnal Rechts Vinding: Media Pembinaan Hukum Nasional* 4, no. 2 (2015): 181, <https://doi.org/10.33331/rechtsvinding.v4i2.19>.

⁴ Derry Adrian Saleh, "PENEGAKAN HUKUM PERDAGANGAN SATWA LANGKA SECARA ILEGAL MELALUI DUNIA MAYA DITINJAU DARI UNDANG-UNDANG NOMOR 5 TAHUN 1990 TENTANG KONSERVASI SUMBER DAYA ALAM HAYATI DAN EKOSISTEMNYA," 2018.

⁵ Zaka Firma Aditya and Sholahuddin Al-Fatih, "Perlindungan Hukum Terhadap Ikan Hiu Dan Ikan Pari Untuk Menjaga Keseimbangan Ekosistem Laut Indonesia," *Legality: Jurnal Ilmiah Hukum* 24, no. 2 (2016): 224–35.

⁶ Sulasi Rongiyati, "Perlindungan Hak Masyarakat Adat Melalui Konservasi Restorasi Ekosistem," *Kajian* 17, no. 3 (2016): 409–35.

⁷ Haris Retno Susmiyati, *Hukum Sumber Daya Alam: Menelusuri Utilitas Tambang Batu Bara Di Kawasan Hutan* (Inteligencia Media (Kelompok Penerbit Intrans Publishing), 2020).

⁸ S H Rina Yulianti, *PERLINDUNGAN HUKUM BAGI HAK MASYARAKAT ATAS SUMBER DAYA PESISIR* (SCOPINDO MEDIA PUSTAKA, 2022).

⁹ Hadi S Alikodra, *Teknik Pengelolaan Satwaliar: Dalam Rangka Mempertahankan Keanekaragaman Hayati Indonesia* (PT Penerbit IPB Press, 2018).

1. Legislation
2. Public awareness and perception of the conservation sector
3. Knowledge of wildlife biology and technology
4. Skilled personnel in the field of wildlife management

According to Law Number 5 of 1990 concerning Conservation of Biological Natural Resources and Their Ecosystems Article 1 point 5, what is meant by animals are all types of animal natural resources that live on land, and/or in water, and/or in the air.¹⁰

Whereas Article 21 paragraph 2 is prohibited for everyone:

1. Catching, injuring, killing, keeping, possessing, maintaining, transporting, and trading protected animals alive
2. Storing, possessing, maintaining, transporting, and trading protected animals that are dead
3. Releasing protected animals from one place in Indonesia to another inside or outside Indonesia
4. Demonstrating, storing, or possessing the skin, body or other parts of protected animals or goods made from these parts or expelling them from one place in Indonesia to another inside or outside Indonesia.
5. Taking, destroying, displaying, storing or possessing eggs or nests of protected animals.

Thus, efforts for wildlife conservation programs must be carried out by maintaining or controlling animal populations, especially animals that are threatened with extinction, and must receive more careful attention so that the ecology of the system must be considered and even expanded and improved.

The need for health and facilities for the life of wild animals will increase in the program for saving and preserving wild animals, in this case, attention is needed from the government as well as groups of lovers and environmentalists to focus more on providing understanding/education to the public on the values of animal conservation. wild.¹¹

Based on Law Number 5 of 1990 concerning Conservation of Biological Natural Resources and Their Ecosystems Article 19, namely:

1. Everyone is prohibited from carrying out activities that can result in changes to the integrity of the nature reserve area
2. The provisions as referred to in paragraph (1) do not include habitat development activities for the benefit of animals in wildlife reserves.

Wildlife is one of the biological components that are often negatively affected by a project. The population, distribution, and species diversity are heavily influenced by human activities (forest clearing, swamp drainage, poaching, etc.), whereas the species diversity of an ecosystem greatly determines the stability of the system concerned, especially in relation to its function to support human life. This ecological reality is still not getting public attention.¹²

The above conditions are very concerned about the need for future efforts such as strengthening law enforcement on biodiversity. Therefore, it is necessary to have national legislation on the conservation of biodiversity that has a high capacity to protect biodiversity effectively and ensure the benefits to the community. Degradation occurs due to various causes, such as forest conversion, illegal logging, encroachment, and fires. This is closely related to weak community participation, weak law enforcement and weak management practices. This situation is influenced, among other things, by the lack of solid legislation, so it has not been able to guarantee the realization of the principles of sustainable natural management.¹³

Conservation of living natural resources and their ecosystems, as a form of optimizing the management of natural resources for the realization of sustainable people's prosperity, also cannot be avoided from the above situation, therefore it is necessary to analyze and evaluate the laws and regulations in the conservation sector so that the target is conservation can be realized immediately. In order to ensure the realization of the preservation of these natural resources for the welfare of the Indonesian people, it is necessary to regulate that these natural resources must receive proportional protection with sustainable use. Socially,

¹⁰ Lihat Undang-Undang Nomor 5 Tahun 1990 tentang Konservasi Sumber Daya Alam Hayati Dan Ekosistemnya

¹¹ Abdul Halim Barkatullah, *Buku Ajar Hukum Pertambangan: Sub Sistem Hukum Sumber Daya Alam* (Nusamedia, 2019).

¹² Fathi Hanif, "Upaya Perlindungan Satwa Liar Indonesia Melalui Instrumen Hukum Dan Perundang-Undangan," *Jurnal Hukum Lingkungan Indonesia* 2, no. 2 (2015): 29–48.

¹³ Sood, *Hukum Lingkungan Indonesia*.

biodiversity conservation is a balance of protection treatment where sustainable use is still possible so that its existence can be maintained and can be used sustainably for the prosperity of the community, both current and future generations.¹⁴

2. Research Methods

This study uses a normative legal research method, namely examining legislation in a coherent legal system. In this case, the law is a positive norm that applies at a certain time and is issued as a product of a certain political power that has legitimacy.¹⁵ With a statutory *approach*, namely reviewing and researching laws and regulations in the field of child protection and other laws and regulations related to natural resources and their ecosystems. Sources are obtained from laws and regulations relating to natural resources. The analysis used is legal interpretation, namely principal, systematic and grammatical interpretation. While the legal material analysis method used in this research is the normative method in prescriptive optics with deductive-inductive reasoning to produce propositions or concepts as answers to problems or research findings.¹⁶

3. Results and Discussion

In general, natural resources are often defined as all living and non-biological resources used by human beings as sources of food, raw materials and energy. Natural resources are factors of production from nature that are used to provide goods and services in economic activities. Natural resources must be used carefully because they are limited in number and will not be able to support population growth which tends to grow exponentially. There is a law of "*diminishing returns*", where additional factors of production at a certain amount will not increase total production, even if additional factors of production continue to be carried out it will cause a decrease in total production. Therefore, when natural resources continue to be drained/exploited to increase the rate of economic growth, what happens is a decline in natural resources both in quantity and quality.¹⁷

Conservation is a way that can be done to reduce the impact of decreasing the quality and quantity of natural resources due to exploitation. According to Gifford Pinchot as quoted by Suparmoko, conservation is how we use natural resources for good optimally, in the greatest number and for the longest period of time. This understanding implies that this conservation is an action to prevent the depletion of natural resources by taking not excessive so that in the long term natural resources remain available.¹⁸

As a country rich in natural resources, including living natural resources, Indonesia also realizes that conservation needs to be done. The basis for implementing the conservation of living natural resources is Law no. 5 of 1990 concerning the Conservation of Biological Natural Resources and Their Ecosystems. Conservation is carried out through activities to protect life support systems, preserve the diversity of wild flora and fauna species and their ecosystems, and use them sustainably. The ultimate goal is the realization of the preservation of living natural resources and the balance of their ecosystems so that they can better support efforts to improve community welfare and the quality of human life.¹⁹

1. Law Enforcement for the Conservation of Biological Natural Resources and Their Ecosystems

Law enforcement is a series of actions taken by law enforcement officers in order to provide protection to human interests for the achievement of order, peace and prosperity in people's lives by referring to the principles of justice, legal certainty and social benefits. The national law enforcement strategy is focused on preventive or preventive measures. Operational preventive means are carried out in a careful, complete, and clear way for licensing procedures and the next stage is the implementation of coaching, monitoring and monitoring activities in a consistent, efficient and effective manner. Furthermore, if this does not work or is unable to prevent the occurrence of violations, then it will enter a repressive stage.²⁰

Preventive law enforcement means active supervision is carried out in compliance with regulations without direct incidents involving concrete events that give rise to suspicions that legal regulations have been violated. Instruments for preventive law enforcement are counselling, monitoring and the use of supervisory powers (sampling, machine stopping and so on). Repressive law enforcement is carried out in terms of actions that violate regulations, such as criminal prosecution.²¹

¹⁴ Nugroho, *Hukum Konservasi Sumber Daya Alam & Keanekaragaman Hayati: Sebuah Dilema Antara Potensi & Ancaman Kepunahan*.

¹⁵ Ani Purwati, "Metode Penelitian Hukum Teori & Praktek" (Jakad Media Publishing, 2020).

¹⁶ Zainal Asikin, "Pengantar Metode Penelitian Hukum," 2016.

¹⁷ Barkatullah, *Buku Ajar Hukum Pertambangan: Sub Sistem Hukum Sumber Daya Alam*.

¹⁸ Nugroho, *Hukum Konservasi Sumber Daya Alam & Keanekaragaman Hayati: Sebuah Dilema Antara Potensi & Ancaman Kepunahan*.

¹⁹ M Kudeng Sallata, "Konservasi Dan Pengelolaan Sumber Daya Air Berdasarkan Keberadaannya Sebagai Sumber Daya Alam," *Buletin*

Eboni 12, no. 1 (2015): 75–86.

²⁰ Hartiwingsih, *Hukum Lingkungan Dalam Perspektif Kebijakan Hukum Pidana* (Sebelas Maret University Press, 2008).

²¹ Siti Sundari Rangkuti, *Hukum Lingkungan & Kebijaksanaan Ling Nasional Ed 4* (Airlangga University Press, 2020).

The need for legal politics for the development of the conservation of living natural resources and their ecosystems in Indonesia is carried out in accordance with the mandate of Law Number 5 of 1990 concerning the Conservation of Biological Natural Resources and Their Ecosystems. According to Adi Sulistiyono, "Legal Politics is a policy carried out by state administrators in planning, enforcing, enforcing the law to build a legal system in an effort to achieve the goals of the state as mandated by the constitution"²²

The law regulates the development strategy for the conservation of living natural resources. in Indonesia through the establishment or stipulation of conservation areas both on land and in water areas, management models for the conservation of living natural resources and their ecosystems in Indonesia, including norms/stipulations regarding actions that should not be carried out with sanctions for imprisonment and fines if the norm is violated. The strategy for enforcing the criminal law on the provisions of Law Number 5 of 1990 concerning the Conservation of Biological Natural Resources and their Ecosystems is implemented either through a preventive/prevention approach or a repressive approach/the application of criminal sanctions (investigation, prosecution and criminal justice) for perpetrators.²³

In Law Number 5 of 1990 concerning Conservation of Biological Natural Resources and Their Ecosystems it is stated that in the case of investigating criminal acts in the field of conservation of living natural resources and their ecosystems, apart from investigating officers from the Indonesian National Police, there are also certain civil servants in the environment. the departments/ministries whose scope of duties and responsibilities include fostering the conservation of living natural resources and their ecosystems, are given special authority as investigators as referred to in Law Number 8 of 1981 concerning Criminal Procedure Code to conduct investigations of criminal acts in the field of conservation of living natural resources. and the ecosystem. In addition, in the framework of the task of protecting and securing forest areas including conservation areas, certain forestry officials in accordance with the nature of their work are given special police powers in the field of forestry and conservation of living natural resources and their ecosystems, namely the Forestry Police (Polhut).²⁴

In the management of national park areas, the task of law enforcement in the context of securing and protecting national park areas and investigating criminal acts in the field of Conservation of Biological Natural Resources and their Ecosystems are carried out by the Forestry Police (Polhut) and Forestry Civil Servant Investigators (PPNS). implemented by the Police, Prosecutors and Courts (judges). Forestry Police are certain officials within the central and regional forestry agencies who, in accordance with the nature of their work, organize and or carry out forest protection efforts which are authorized by law to be given special police powers in the forestry sector and conservation of living natural resources and their ecosystems.²⁵ The Forestry Police (Polhut) has the authority for special police activities and actions in the forestry sector that are preventive, administrative and repressive operations including:²⁶

- a. Carry out patrols/surveillance within the forest area or its legal area;
- b. Examine documents relating to the transportation of forest products within the forest area or its legal area;
- c. Receive reports on the occurrence of criminal acts involving forests, forest areas, and forest products;
- d. Seeking information and evidence of the occurrence of criminal acts relating to forests, forest areas and forest products;
- e. In the case of being caught red-handed, it is obligatory to arrest the suspect to be handed over to the authorities;
- f. Make reports and sign reports on the occurrence of criminal acts involving forests, forest areas, and forest products; and
- g. On orders from the leadership, the authorities are authorized to carry out investigations, in order to find and arrest suspects.

Forestry Civil Service Investigating Officers (PPNS) are certain civil servants within the scope of central and regional forestry agencies who by law are given special powers to investigate forestry and the conservation of living natural resources and their

²² Marhaeni Ria Siombo, "Arah Politik Hukum Lingkungan Di Indonesia," *Masalah-Masalah Hukum* 42, no. 3 (2013): 381–89.

²³ Nommy Horas Thombang Siahaan, *Hukum Lingkungan Dan Ekologi Pembangunan* (Erlangga, 2004).

²⁴ Undang-Undang Nomor 5 Tahun 1990 tentang Konservasi Sumber Daya Alam Hayati dan Ekosistemnya dan Undang-Undang Nomor 8 Tahun 1981 tentang Hukum Acara Pidana untuk melakukan penyidikan tindak pidana di bidang konservasi sumber daya alam hayati dan ekosistemnya.

²⁵ Mira Rosana, "Kebijakan Pembangunan Berkelanjutan Yang Berwawasan Lingkungan Di Indonesia," *Kelola: Jurnal Sosial Politik* 1, no. 1 (2018): 148–63.

²⁶ Ammy Nurwati, "Pengaruh Kepuasan Kerja, Komitmen Dan Keterikatan Terhadap Kinerja Polisi Kehutanan" (Institut Pertanian Bogor, 2013).

ecosystems. Article 39 of Law Number 5 of 1990 concerning the Conservation of Biological Natural Resources and their Ecosystems states that the authority of civil servant investigators for forestry is as follows:²⁷

- a. To examine reports or information relating to criminal acts in the field of conservation of living natural resources and their ecosystems;
- b. Conduct examinations on people suspected of committing criminal acts in the field of conservation of living natural resources and their ecosystems
- c. Check the identification of a person who is in a nature reserve area and a nature conservation area;
- d. Conduct searches and confiscate evidence of criminal acts in the field of conservation of living natural resources and their ecosystems
- e. Request information and evidence from individuals or entities in connection with criminal acts in the field of conservation of living natural resources and their ecosystems;
- f. Create and sign the minutes of the event;
- g. Stop the investigation if there is not enough evidence regarding the existence of a criminal act in the field of conservation of living natural resources and their ecosystems.

In accordance with Law Number 5 of 1990 concerning the Conservation of Biological Natural Resources and Their Ecosystems, Civil Servant Investigators (PPNS), when carrying out their duties of investigating criminal acts in the field of conservation of living natural resources and their ecosystems notify the commencement of the investigation and report the results of the investigation to the Prosecutor. Public through Investigating Officers of the Police of the Republic of Indonesia in accordance with the provisions of Article 107 of Law Number 8 of 1981 concerning the Criminal Procedure Code. In carrying out their duties, the Forestry Civil Service Officer is under the coordination and supervision of the Investigating Officer of the State Police of the Republic of Indonesia.²⁸

From the explanation above, it can be seen that law enforcement efforts against the provisions of Law Number 5 of 1990 concerning the Conservation of Biological Natural Resources and Their Ecosystems are carried out preventively or preventive measures are carried out by the Forestry Police and repressively or the application/enforcement of criminal law is carried out by the Forestry Police. Forestry Police and Forestry PPNS are not only carried out by Polri investigators, the Prosecutor's Office and Judges (Courts).

2. Efforts to Combat Crimes or Crimes of Living Natural Resources and Their Ecosystems

Legal instruments in the field of conservation of living natural resources and their ecosystems in Law Number 5 of 1990 concerning Conservation of Living Natural Resources and Their Ecosystems (KSDAH & E) have formulated prohibited acts in the management of the conservation of living natural resources and their ecosystems, especially in the National Park area and if violated, it is a criminal act which is threatened with criminal sanctions, which are divided into 2 (two) categories, namely crime and violation. These actions are regulated in Article 21 and Article 33 of Law Number 5 of 1990 concerning the Conservation of Biological Natural Resources and Their Ecosystems.²⁹

Law Number 41 of 1999 concerning Forestry as amended by Law Number 19 of 2004 concerning Stipulation of Government Regulations in Lieu of Law Number 1 of 2004 concerning Amendments to Law Number 41 of 1999 concerning Forestry into Laws Invite.³⁰ In Law Number 41 of 1999 concerning Forestry, efforts to protect and conserve nature are stated in Article 46 and Article 47 as follows: conservation, and production functions, are achieved optimally and sustainably.³¹

In Law Number 41 of 1999 concerning Forestry, it is formulated that there is a provision for criminal penalties. The punishment for forestry crimes is regulated in Article 78 paragraph (14) of Law Number 41 of 1999 concerning Forestry, which reads: "Criminal acts as referred to in Article 50 paragraph (1), paragraph (2), and paragraph (3) if committed by and or on behalf of a legal entity or

²⁷ Peraturan Pemerintah Nomor 45 tahun 2004 tentang Perlindungan Hutan. Pasal 39

²⁸ Departemen Kehutanan, "Peraturan Pemerintah Nomor 45 Tahun 2004 Tentang Perlindungan Hutan," *Jakarta: Dephut*, 2004.

²⁹ Indonesia, P. R., & Indonesia, P. R. (1990). Undang Undang No. 5 Tahun 1990 Tentang: Konservasi Sumberdaya Alam Hayati Dan Ekosistemnya. Jakarta: Dephut.

³⁰ Undang-Undang Nomor 41 Tahun 1999 tentang Kehutanan sebagaimana telah diubah dengan Undang-Undang Nomor 19 Tahun 2004 tentang Penetapan Peraturan Pemerintah Pengganti Undang-Undang Nomor 1 Tahun 2004 tentang Perubahan Atas Undang-Undang Nomor 41 Tahun 1999 tentang Kehutanan Menjadi Undang-Undang

³¹ INDONESIA, KEPUTUSAN MENTERI KEHUTANAN REPUBLIK. "Kementerian Kehutanan." (2013).

business entity, the charges and criminal sanctions imposed on the management, either individually or jointly, shall be subject to criminal penalties in accordance with the respective criminal threats plus 1/3 (one third) of the sentence imposed".³²

In Law Number 31 of 2004 concerning Fisheries, it is explained that conservation efforts are carried out through activities to protect fish resources, conserve ecosystems, conserve species and conserve fish genetics. Article 1 paragraph (8) explains that "Conservation of fish resources is an effort to protect, conserve, and utilize fish resources, including ecosystems, species, and genetics to ensure their existence, availability and sustainability while maintaining and improving the quality of value and diversity of resources. fish power".³³

Law Number 31 of 2004 concerning Fisheries does not specifically regulate the conservation of living natural resources but implicitly includes provisions relating to the principles of conservation or conservation of fish resources, ecosystem conservation, species conservation and fish genetics conservation. It can be described as follows: The provisions of the Articles that regulate Fishery Crimes related to the Conservation of Biological Natural Resources and Their Ecosystems. Provisions governing conservation efforts in this law are regulated in articles 84 to 88.³⁴

Law Number 45 of 2009 concerning Amendments to Law Number 31 of 2004 concerning Fisheries. Provisions relating to the conservation of living natural resources and their ecosystems in Law Number 45 of 2009 concerning Amendments to Law Number 31 of 2004 concerning Fisheries are amended in Article 9 in conjunction with Article 85 of this law as follows: Article 9.

1. Everyone is prohibited from owning, controlling, carrying, and/or using fishing gear and/or fishing aids that interfere with and damage the sustainability of fish resources on fishing vessels in the fishery management area of the Republic of Indonesia.
2. Provisions regarding fishing gear and/or fishing aids that interfere with and damage the sustainability of fish resources as referred to in paragraph (1) shall be regulated by a Ministerial Regulation.³⁵

Law Number 27 of 2007 concerning the Management of Coastal and Small Islands. In this law the definition of conservation in the management of coastal and small islands is contained in the general provisions of Article 1 paragraph (19) and paragraph (20) as follows: (19) Conservation of Coastal Areas and Small Islands is an effort to protect, preservation, and utilization of Coastal Areas and Small Islands and their ecosystems to ensure the existence, availability, and sustainability of Coastal Resources and Small Islands while maintaining and improving the quality of their values and diversity. (20) Conservation Areas in Coastal Areas and Small Islands are coastal areas and small islands with certain characteristics that are protected to realize the sustainable management of Coastal Areas and Small Islands.³⁶

Law Number 32 of 2009 concerning Environmental Protection and Management (PPLH). This law states that the conservation of natural resources is the management of natural resources to ensure their wise use and sustainable availability while maintaining and improving the quality of their values and diversity. Provisions for environmental protection and management relating to the management of natural resource conservation.³⁷ In the provisions relating to the conservation of living natural resources and their ecosystems: Article 57 (1) The maintenance of the environment is carried out through the following efforts:

- a. conservation of natural resources;
- b. reserves of natural resources; and/or
- c. preservation of the function of the atmosphere.

Conservation of natural resources as referred to in paragraph (1) letter a includes the following activities:

- a. protection of natural resources;
- b. preservation of natural resources; and
- c. sustainable use of natural resources.

³² Pasal 78 ayat (14)

³³ Undang-Undang Nomor 31 Tahun 2004 tentang Perikanan.

³⁴ Psaal 84, Pasal 85

³⁵ Undang-Undang Nomor 45 Tahun 2009 tentang Perubahan Atas Undang-Undang Nomor 31 Tahun 2004 tentang Perikanan adalah pada perubahan Pasal 9 jo Pasal 85

³⁶ Undang-Undang Nomor 27 Tahun 2007 tentang Pengelolaan Pesisir dan Pulau-Pulau Kecil.

³⁷ Undang-Undang Nomor 32 Tahun 2009 tentang Perlindungan dan Pengelolaan Lingkungan Hidup (PPLH).

Natural resource reserves as referred to in paragraph (1) letter b are natural resources that cannot be managed within a certain period of time. The preservation of the function of the atmosphere as referred to in paragraph (1) letter c includes:

- a. climate change mitigation and adaptation efforts;
- b. efforts to protect the ozone layer; and
- c. protection against acid rain.

Further provisions regarding the conservation and reserve of natural resources as well as the preservation of the function of the atmosphere. The function of law in general is to create an orderly social order, create order and balance by achieving order in society, it is hoped that human interests will be protected in achieving its goals, the law functions to divide rights and obligations between individuals in society, share authority and regulate ways to solve problems. law and maintain legal certainty.

4. Conclusion

Biological natural resources are biological elements in nature consisting of vegetable (plant) natural resources and animal (animal) natural resources which together with the surrounding non-biological elements as a whole form an ecosystem. Meanwhile, the conservation of living natural resources is the management of living natural resources whose utilization is carried out wisely to ensure the continuity of their supply while maintaining and improving the quality of their diversity and value.

In the context of national law, the protection of natural resources is embodied in each sectoral law, including Law no. 27 of 2007 concerning the Management of Coastal and Small Islands, Law no. 31 of 2004 concerning Fisheries in conjunction with Law no. 45 of 2009 concerning Amendments to Law no. 31 of 2004 concerning Amendments to Law no. 31 of 2004 concerning Fisheries, Law no. 41 of 1999 concerning Forestry, Law no. 11 of 1974 concerning Irrigation, Law no. 22 of 2001 concerning Oil and Gas, Law no. 4 of 2009 concerning Minerals and Coal, Law no. 30 of 2007 concerning Energy, and Law no. 21 of 2014 concerning Geothermal.

Upaya yang seharusnya dilakukan dalam rangka penanggulangan penegakan hukum konservasi sumber daya alam hayati dan ekosistemnya di Indonesia tidak dapat dilakukan hanya dengan kebijakan penal (pidana) saja tetapi harus dilakukan melalui upaya integral antara kebijakan penal dan non penal (tanpa pidana). Kejahatan atau tindak pidana terjadi karena kondisi sosial yang menjadi faktor kondusif penyebab terjadinya kejahatan, karena itu upaya non penal yang dapat dilakukan adalah meniadakan faktor-faktor kondusif yang menyebabkan terjadinya tindak pidana di bidang konservasi sumber daya alam hayati dan ekosistemnya.

Funding: This research received no external funding.

Conflicts of Interest: The authors declare no conflict of interest.

Publisher's Note: All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers.

References

- [1] Aditya, Z F and Sholahuddin A (2016). *Perlindungan Hukum Terhadap Ikan Hiu Dan Ikan Pari Untuk Menjaga Keseimbangan Ekosistem Laut Indonesia*. *Legality: Jurnal Ilmiah Hukum* 24 224–35.
- [2] Alikodra, H S. (2018). *Teknik Pengelolaan Satwaliar: Dalam Rangka Mempertahankan Keanekaragaman Hayati Indonesia*. PT Penerbit IPB Press
- [3] Asikin, Z. (2016). *Pengantar Metode Penelitian Hukum*.
- [4] Barkatullah, A H. (2019). *Buku Ajar Hukum Pertambangan: Sub Sistem Hukum Sumber Daya Alam*. Nusamedia
- [5] Hanif, F. (2015). Upaya Perlindungan Satwa Liar Indonesia Melalui Instrumen Hukum Dan Perundang-Undangan. *Jurnal Hukum Lingkungan Indonesia* 2, 29–48.
- [6] Hartiwiningsih. (2018). *Hukum Lingkungan Dalam Perspektif Kebijakan Hukum Pidana*. Sebelas Maret University Press
- [7] Jazuli, A. (2015). Dinamika Hukum Lingkungan Hidup Dan Sumber Daya Alam Dalam Rangka Pembangunan Berkelanjutan. *Jurnal Rechts Vinding: Media Pembinaan Hukum Nasional* 4, no. 2 (2015): 181. <https://doi.org/10.33331/rechtsvinding.v4i2.19>.
- [8] Kehutanan, Departemen. (2004). *Peraturan Pemerintah Nomor 45 Tahun 2004 Tentang Perlindungan Hutan*. Jakarta: Dephut
- [9] Nugroho, S S. (2020). *Hukum Konservasi Sumber Daya Alam & Keanekaragaman Hayati: Sebuah Dilema Antara Potensi & Ancaman Kepunahan*. Penerbit Lakeisha.
- [10] Nurwati, A (2013). *Pengaruh Kepuasan Kerja, Komitmen Dan Keterikatan Terhadap Kinerja Polisi Kehutanan*. Institut Pertanian Bogor
- [11] Purwati, A. (2020). *Metode Penelitian Hukum Teori & Praktek*. Jakad Media Publishing.
- [12] Rangkuti, S S. (2020). *Hukum Lingkungan & Kebijaksanaan Ling Nasional Ed 4*. Airlangga University Press
- [13] Rina-Yulianti, S H. (2022). *PERLINDUNGAN HUKUM BAGI HAK MASYARAKAT ATAS SUMBER DAYA PESISIR*. SCOPINDO MEDIA PUSTAKA
- [14] Rongiyati, S. (2016). Perlindungan Hak Masyarakat Adat Melalui Konservasi Restorasi Ekosistem. *Kajian* 17: 409–35.
- [15] Rosana, M. (2018). Kebijakan Pembangunan Berkelanjutan Yang Berwawasan Lingkungan Di Indonesia. *Kelola: Jurnal Sosial Politik* 1 148–63.
- [16] Saleh, D A. (2018). *PENEGAKAN HUKUM PERDAGANGAN SATWA LANGKA SECARA ILEGAL MELALUI DUNIA MAYA DITINJAU DARI*

UNDANG-UNDANG NOMOR 5 TAHUN 1990 TENTANG KONSERVASI SUMBER DAYA ALAM HAYATI DAN EKOSISTEMNYA

- [17] Sallata, M K. (2015). Konservasi Dan Pengelolaan Sumber Daya Air Berdasarkan Keberadaannya Sebagai Sumber Daya Alam. *Buletin Eboni* 12: 75–86.
- [18] Siahaan, N H T. (2004). *Hukum Lingkungan Dan Ekologi Pembangunan*. Erlangga
- [19] Siombo, M R. (2013). Arah Politik Hukum Lingkungan Di Indonesia. *Masalah-Masalah Hukum* 42 381–89.
- [20] Sood, M. (2021). *Hukum Lingkungan Indonesia*. Sinar Grafika
- [21] Susmiyati, H R. (2020). *Hukum Sumber Daya Alam: Menelisik Utilitas Tambang Batu Bara Di Kawasan Hutan*. Inteligencia Media (Kelompok Penerbit Intrans Publishing)