

**Samarah:** Jurnal Hukum Keluarga dan Hukum Islam Volume 7, No. 1, March 2023 ISSN: 2549 – 3132; E-ISSN: 2549 – 3167 DOI: 10.22373/sjhk.v7i1.15381

# Animal Protection in the Perspective of Positive Law and Islamic Law: A Study of Elephant-Human Conflict in Aceh, Indonesia

Efendi Efendi Faculty of Law, Universitas Syiah Kuala, Banda Aceh M. Zuhri Faculty of Law, Universitas Syiah Kuala, Banda Aceh Tarmizi Tarmizi Faculty of Law, Universitas Syiah Kuala, Banda Aceh Ainal Hadi Faculty of Law, Universitas Syiah Kuala, Banda Aceh Rizki Yunanda Universitas Malikussaleh, Aceh Utara, Indonesia Email: fendie\_idris@usk.ac.id

**Abstract**: This article talks about protecting animals from the point of view of positive law and Islamic law. It focuses on elephants and their conflicts with people. Cases of conflict between elephants and humans have continued to increase from 2015 to 2021, reaching 582 cases. This research is a normative legal study, while the approach used is the approach of legislation and Islamic law. The data studied are literature and legal norms related to positive legal rules and Islamic law. This study concludes that the government has made efforts to protect elephants by issuing various laws and regulations, both at the central and regional levels. Positional law regulates and strives for the protection of elephants, such as the prohibition of catching, injuring, killing, possessing, keeping, and even trading them. In addition, the government has taken various steps, including having mutual coordination between related agencies, involving nongovernmental organizations and the community, and enforcing the law. Furthermore, to overcome conflicts between elephants and humans in the future, it is necessary to immediately implement policies related to the prohibition of land use around elephant crossings and policies to relocate people close to elephant crossing areas and provide compensation to those who are affected. From the perspective of Islamic law, the protection of animals, including elephants, is part of the benefit based on the Qur'an, hadith, and fatwas of ulemas to preserve nature, which has an impact on human survival.

**Keywords**: Animal protection, elephant conflict with humans, positive law, Islamic law.

Submitted: October 24, 2022 Accepted: March 28, 2023 Published: March 31, 2023

http://jurnal.ar-raniry.ac.id/index.php/samarah

Abstrak: Artikel ini membahas tentang perlindungan satwa dalam perspektif hukum positif dan hukum Islam khususnya gajah yang berkonflik dengan manusia. Kasus konflik antara gajah dan manusia terus mengalami peningkatan dari tahun 2015 sampai dengan tahun 2021 mencapai 582 kasus. Penelitian ini merupakan studi hukum normatif, sedangkan pendekatan yang digunakan adalah pendekatan perundangan-undangan dan hukum Islam. Data yang dikaji adalah literature dan norma hukum yang terkait dengan aturan hukum positif dan hukum Islam. Kajian ini menyimpulkan bahwa pemerintah telah melakukan upaya perlindungan terhadap gajah, dengan cara mengeluarkan berbagai peraturan perundang-undangan baik di tingkat pusat maupun di tingkat daerah. Hukum positif mengatur dan mengupayakan perlindungan terhadap gajah, yaitu; larangan penangkapan, melukai, membunuh, memiliki dan memelihara, bahkan tidak dibenarkan untuk memperdagangkan. Di samping itu, pemerintah telah melakukan berbagai langkah, yaitu; saling koordinasi antar instansi terkait, pelibatan lembaga swadaya masyarakat dan masyarakat serta penegakan hukum. Lebih jauh untuk mengatasi konflik gajah dengan manusia di masa mendatang perlu segera merealisasi kebijakan yang berkaitan dengan larangan pemanfaatan lahan sekitar jalur lintasan gajah serta kebijakan merelokasi masyarakat yang dekat dengan wilayah lintasan gajah disertai pemberian kompensasi. Dari perspektif hukum Islam perlindungan terhadap satwa termasuk gajah merupakan bagian dari kemaslahatan berdasarkan al-Qur'an, hadis dan fatwa ulama untuk menjaga kelestarian alam yang berdampak pada kelangsungan hidup manusia.

*Kata Kunci*: Perlindungan satwa, konflik gajah dengan manusia, hukum positif, hukum Islam.

# Introduction

Living natural resources and ecosystems play a significant part in human life. As a result, for present and future success, management and usage must be handled in a sustainable, harmonic, appropriate, and balanced manner.<sup>1</sup> In Indonesia, Article 33 paragraph (3) of the 1945 Constitution of the Republic of Indonesia states that the land, water, and natural resources contained therein are controlled by the state and used for the best interests of the people.

The development of a region will constantly intersect with challenges of natural resource management. Natural resource problems are frequently caused

<sup>&</sup>lt;sup>1</sup>M. J. Smith, et.al., "Managing Natural Resources for Their Human Values," *Ecosphare* 6, No. 8 (2015). David Pimentel, et.al., "Natural Resources and an Optimum Human Population", *Population and Environment* 15, No. 5 (1994), p. 347-369. Irma Yeny, et.al., "Examining the Socio-Economic and Natural Resource Risks of Food Estate Development on Peatlands: A Strategy for Economic Recovery and Natural Resource Sustainability," *Sustainability* 14, No. 1 (2022), p. 3961.

by poor management. Unwise usage of natural resources can cause their quality and quantity to dwindle and eventually run out.<sup>2</sup>

One of the problems with natural resources is that the existing ones have not been fully protected by the government. Existing laws and regulations do not yet reflect the mandate and spirit of the 1945 Constitution.<sup>3</sup> Similarly, the potential of natural resources is also not adequately protected by either national or local government policies. The interest in preserving the ecological and the sociocultural values of the people who use natural resources will be sacrificed if the government does not adopt proper policies for the conservation of natural resources.<sup>4</sup>

Therefore, the issues of natural resource laws, regulations, and government policies is a fundamental and critical subject that requires attention. The rapid destruction of natural resources can also be caused by a lack of sustainability vision and the vulnerability of natural resource carrying capacity, as evidenced by the different primary legal products pertaining to natural resources. With an expanding population, humans are being forced to intervene to fulfill their needs, which threatens the sustainability of natural resource carrying capacity for the survival of humans and diverse animal species.<sup>5</sup> The carrying capacity refers to the maximum population of a species that can exist in a certain habitat without inflicting any harm to the habitat.<sup>6</sup>

The centralised system of natural resource management and the lack of community participation are two other factors that worsen the damage to existing natural resources. Various organisations believe that centralised patterns of natural resource management are no longer appropriate and that the region must be the primary actor. This is due to the fact that these natural resources are located in the regions, and of course, local governments are the most realistic in terms of managing, including benefiting from natural resources exploited in their regional territories.

Regional governments believe they have a better understanding of the conditions, problems, and opportunities they have, allowing them to develop

<sup>&</sup>lt;sup>2</sup>Wahyu Nugroho, "Reorienting the Principle of Sustainable Development in Investing Policy Utilizing Natural Resources and Energy in Indonesia," *Indonesian Journal of Energy* 5, No. 1 (2022), p. 15-24. Takdir Rahmadi, *Hukum Lingkungan di Indonesia*, (Jakarta: Raja Grafindo Persada, 2011), p. 2.

<sup>&</sup>lt;sup>3</sup>Abrar Saleng, *Hukum Pertambangan* (Yogyakarta: UII Press, 2004), p. 4-5.

<sup>&</sup>lt;sup>4</sup>Taqwaddin, Aspek Hukum Kehutanan & Masyarakat Hukum Adat di Indonesia, (Yogyakarta: Intan Cendekia, 2011), p. 40.

<sup>&</sup>lt;sup>5</sup> Li Wenwen, et. al. "Human Elephant Conflict in Xishuangbanna Prefecture, China: Distribution, Diffusion, and Mitigation," *Global Ecology and Concervation* 16, (2018).

<sup>&</sup>lt;sup>6</sup> G. Tyler Miller, *Living in The Environment: Principles, Connections and Solution*, (Canada: Thomson Learning, 2007).

http://jurnal.ar-raniry.ac.id/index.php/samarah

legislation that are tailored to their region's goals and needs.<sup>7</sup> To avoid damage and loss of natural resources, it is vital to consider how to carry out development in a sustainable manner, often known as the concept of sustainable development.<sup>8</sup> The concept of sustainable development can be realised, among other things, by enacting legislation or policies that reduce the demand on or destruction of natural resources.

The concept of sustainable development in natural resource management can be implemented by taking into account the interrelation of one natural resource with another, as well as the availability of managed natural resources for the benefit of present and future generations. Furthermore, in order to achieve sustainable development, it is vital to decrease and use non-renewable natural resources wisely, as well as find a replacement for these natural resources from renewable materials.

Due to the large area coverage, lack of funding, limited number and quality of human resources, strong sectoral egos, and weak law enforcement, the government's efforts to save the consumption of natural resources in anticipating of destruction or exploitation appear to have been inadequate. As a result, policy and legal development must employ an alternative strategy, which is to continuously execute decentralisation policies. To accomplish this, missions relating to natural resource management, including conservation area management, must be developed in various policies, laws, and regulations. The mission of conservation area management should be used as a guideline in constructing various policy instruments, rules and regulations, and natural resource management institutions, including conservation area management. In relation to this, there is an important distinction between abiotic and biotic components in natural resource conservation. The emphasis for the abiotic components is on conservation and efforts to find renewable natural resources, whereas conservation efforts for the biotic components, or living resources, are carried out with the goal of a) always maintaining the main or fundamental ecological processes and life support systems, b) protecting and maintaining genetic diversity, and c) ensuring the sustainable use of species and their ecosystems.<sup>9</sup> The conservation effort will assure the development of sustainable natural resources, resulting in the creation of sustainable natural resource use.

There are four contexts that require attention in order to achieve sustainability through natural resource management: a mature protection

<sup>&</sup>lt;sup>7</sup> Efendi, et.al., "Conflict of Law Regarding Natural Resource Management in Indonesia," *International Journal of Criminology and Sociology* 9, (2020).

<sup>&</sup>lt;sup>8</sup> Sutikno and Maryunani, *Ekonomi Sumberdaya Alam*, (Malang: Badan Penerbit Fakultas Ekonomi, Universitas Brawijaya, 2006).

<sup>&</sup>lt;sup>9</sup> Chafid Fandel, et.al., *Audit Lingkungan* (Yogyakarta: Gadjah Mada University Press, 2008).

environment, a growing production environment, a multi-purpose environment, and a residential and industrial environment. In this concept, the production environment cannot exist without the protection environment, as well as the residential and industrial environments, and so on. This means that natural resource allocation and the balance between various natural resources and the environment must be done carefully, completely, and holistically. Furthermore, appropriate policy and planning are required in natural resource management, which implies employing a pattern of use that focuses on genuine requirements rather than the sheer exploitation of natural resources.

According to I Nyoman Nurjaya, increasing community participation, transparency, and support for democratic processes in natural resource management, creating coordination and integration between sectors, and supporting the realization of *good environmental government* can also be used to address the problem.<sup>10</sup> This can be achieved by establishing a natural resource management law that reflects the principles of justice, democracy, and the sustainability of natural resources. Apart from that, according to Elfian Effendi <sup>11</sup> it is necessary to anticipate the use of natural resources. Natural resources can still be used, but they must be able to be directed for a longer period of time, by taking into account ecological and social aspects. For the implementation of this strategy, it is necessary to have wise and sustainable management of natural resources.

The implementation of the aforementioned resource management policy is not only the duty of the regions, but also of the central government. To build a grand strategy for the usage of regional natural resources, the existence of regional natural resource stakeholders must be utilised as a public resource. It means that local governments must transfer to the people the authority to manage natural resources. Public participation can be achieved by public participation in the process of establishing regional regulations through public consultation mechanisms.<sup>12</sup> So that it can be used as a rule that clarifies the central laws and regulations relating to natural resource management. According to Alfian Effendi, it would be extraordinary progress if each regional government issued a regional regulation on natural resource management.<sup>13</sup> This view is based on the fact that, until now, there has been no law on natural resource management.

This research is a normative legal study that examines legal principles using a statutory approach and Islamic law which examines various laws and regulations in the environmental field, especially laws and regulations concerning

http://jurnal.ar-raniry.ac.id/index.php/samarah

<sup>&</sup>lt;sup>10</sup> I Nyoman Nurjaya, *Pengelolaan Sumberdaya Alam Dalam Perspektif Antropologi Hukum*, (Jakarta: Prestasi Pustaka Publiser, 2008), p. 128.

<sup>&</sup>lt;sup>11</sup> Elfian Effendi, *Tuntutan Itu Masih Menyala, Delapan Indikasi Kuat Otonomi Daerah Terancam Gagal*, (Jakarta: Fakultas Ekonomi Universitas Indonesia, 2001), p. 94.

<sup>&</sup>lt;sup>12</sup> Elfian Effendi, Pengelolaan Sumberdaya Alam..., p. 95.

<sup>&</sup>lt;sup>13</sup> Elfian Effendi, *Pengelolaan Sumberdaya Alam...*, p.109.

natural resources (legislation and regulation approach).<sup>14</sup> This normative legal research examines primary and secondary legal materials, both national and Islamic. Primary legal materials are sourced from the Qur'an, hadiths, and fatwas of ulemas, laws, and regulations related to the environment, and laws and regulations on natural resources. The secondary legal material includes articles, textbooks, papers, and other documents related to the object of research.

### Human Conflict with Elephants and Environmental Damage in Aceh

Environmental components of living natural resources and their ecosystems are fundamentally interrelated and influence one another, therefore damage or extinction of one environmental component will have an effect on the other environmental components. The biological environment component is one of the environmental components that can have an impact on the other environmental components. Elephants are a component of the biological environment. Elephants are traditionally divided into two species: African elephants (*Loxodonta africana*) and Asian elephants (*Elephas maximus*).

The Asian elephant consists of three subspecies: *Elephas maximus*, *Elephas maximus indicus*, and *Elephas maximus sumatranus*. The African elephant, according to the International Union for Conservation of Nature (IUCN), is categorized as a vulnerable species, while the Asian elephant is classified as a threatened species. One of the biggest threats to elephants is poaching, habitat destruction, and conflict with humans. The conflict between elephants and humans on the island of Sumatra is a problem that, until now, has not been resolved. Areas on the island of Sumatra where elephant-human conflicts often occur include Aceh, Lampung, Bengkulu, and Riau.

In Indonesia, based on the Regulation of the Minister of Environment Number P.20/Menlhk/Setjen/Kum.1/6/2018, the Asian Elephant (*Elephas maximus*) is included in the category of protected animals.<sup>15</sup> Therefore, these animals need to be protected because humans often kill elephants. Cases of elephant deaths due to being killed by humans have also occurred in several districts and cities within the province of Aceh.

According to the study, elephant and human confrontations were fairly frequent between 2012 and 2017, particularly in East Aceh (47 cases), Aceh Jaya (44 cases), and Pidie (high, low, and medium).<sup>16</sup> The factors that caused the

<sup>&</sup>lt;sup>14</sup> Soerjono Soekanto dan Sri Mamudji, *Penelitian Hukum Normatif* (Jakarta: Rajawali Pers, 2010). p. 63. Muhaiman, *Metode Penelitian Hukum*, (Mataram: Mataram University Press, 2020).

<sup>&</sup>lt;sup>15</sup>Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number P.20/Menlhk/Setjen/Kum.1/6/2018 concerning Determination of Types of Protected Plants and Animals.

<sup>&</sup>lt;sup>16</sup>R. Rachmawaty, et.al., "The Human-Elephant Conflict: Mapping the Elephant Area and

conflict were "distance from human settlements," which contributed 84.7%, followed by "loss of primary forest," which contributed 14.1%. As a result, efforts are being done to reforest elephant home ranges and to establish conservation forests. Furthermore, immediate mitigation actions on the Provincial Spatial Plan (*Rencana Tata Ruang Ruang-Province*) are required to limit further economic losses and wildlife extinction.<sup>17</sup>

The districts of Aceh Tamiang, East Aceh, West Aceh, and several others had the highest number of elephants poaching cases. Apart from ivory hunting, elephants are killed due to conflict with humans. Apart from hunting for ivory, the death of elephants is also due to conflict with humans. According to the Environment and Forestry Law Enforcement Agency (*Penegak Hukum Kementerian Lingkungan Hidup dan Kehutanan/Gakkum LHK*), Ministry of Environment and Forestry (KLHK) for the Sumatra Region, from 2015 to 2020 there were 582 cases of conflict between elephants and humans in Aceh: 49 cases in 2015, 44 cases in 2016, 103 cases in 2017, 73 cases in 2018, 107 cases in 2019, 130 cases in 2020, and 76 cases in 2021, from January to August. Of the hundreds of cases of elephant conflict, 46 cases resulted in the death of elephants.<sup>18</sup> Based on this data, it shows that the conflict between elephants and humans in Aceh continues to increase from year to year.

The conflict between elephants and humans is a complicated issue because it threatens both human and elephant life. Humans are threatened because these elephants intrude human settlements and destroy agricultural land and plantations,<sup>19</sup> while elephants are threatened because some people hunt and kill them. The causes of conflict between elephants and humans include, for example,

http://jurnal.ar-raniry.ac.id/index.php/samarah

The Level of Conflict Vulnerability in the Mila Landscape, Pidie District, Aceh, Indonesia," *IOP Conf. Ser.: Earth Environ. Sci.* 956 012008, (2022), p. 1-6.

<sup>&</sup>lt;sup>17</sup>Indira Nurul Qomariah et.al., "Conflict Between Human and Wild Sumatran Elephant (*Elephas maximus sumatranus* Temminck, 1847) in Aceh Province, Indonesia," *Biodiversitas Journal of Bioligical Diversity* 20, No. 1 (2019), p. 77-84.

<sup>&</sup>lt;sup>18</sup>Tujuh Tahun Terakhir ada 46 Gajah Mati di Aceh, https://betahita.id/news/detail/6442. (Accessed, 9 September 2021).

<sup>&</sup>lt;sup>19</sup> Abdullah, et. al., "Persepsi Masyarakat Sekitar Kawasan Konflik Gajah Dengan Manusia Terhadap Konservasi Gajah dan Habitatnya di Kecamatan Lembah Seulawah, Aceh Besar," *Jurnal Biology Edukasi* 9, No. 1 (2017).

overlapping interests in land use between elephants and humans.<sup>20</sup> The simultaneous usage of areas and land causes the most intense of these conflicts.<sup>21</sup>

In addition, according to Gubbi, habitat fragmentation, forest degradation, habitat quality, forest cover loss, and inappropriate use of natural resources all contribute to elephant-human conflicts.<sup>22</sup> The community's traditional forest management practices are one of the causes of forest deterioration. They employ cultivation techniques. According to Syarifuddin, shifting cultivation is a traditional farming method in forested regions where land is cleared by fire. This method is used since it is simpler and more practical.<sup>23</sup> Although this technique is implemented in a limited and controlled manner, it is still highly possible to create forest fires, which degrade forest function and lead to conflict between elephants and humans.

One of the causes of conflict between elephants and humans is the absence of specific policies and strategies from the government. As a result, the environment and the habitat of the elephants, where these animals live, are disrupted and even threatened. When the habitat of the elephants is disturbed, their food chain is lost, and they will come out and "disturb the crops" planted by residents and even threaten human lives. This condition raises the question, "Has the government, as the maker of laws and policies, not been able to realize the principle of state responsibility in the form of laws and policies that can protect elephants in conflict with humans, as referred to in Law Number 32 of 2009? The principle of state responsibility referred to here is the responsibility of the Government of Aceh in preventing human actions that result in the death or destruction of animals, especially elephants as protected animals.

Hence, in order to prevent a recurrence of the conflict between elephants and humans, the government of Aceh must implement a strategic policy. Thus, if the policy is well enforced, the elephants' environment and habitat will not be harmed. Elephants inhabit a forest ecosystem and will not harm inhabitants' crops or endanger human lives.

http://jurnal.ar-raniry.ac.id/index.php/samarah

<sup>&</sup>lt;sup>20</sup> Wardana, et.al., "Risk Level Analysisof Sumatera Elephant Conflicts (Elephas Maximus Sumatranus) With Human at Subussalam the Province of Aceh," IOSR Journal of Environmental Science, Toxicology and Food Technology (IOSR-JESTFT) 14, No. 2 (2020). 14, (2), (2020). C.E. Diana, et.al., "Risk Level Analysis of Human-Elephant in The *Peusangan* Watershed of Aceh Province, Indonesia," *IOP Conf. Ser.: Earth Environ. Sci.* 922 012052.

<sup>&</sup>lt;sup>21</sup> Yoza, *Pemetaan Sebaran Gajah di Area Konsesi PT. Chevron Pasific Indonesia* (Laporan Penelitian Bekerjasama dengan PT. Chevron Pasific Indonesia, Riau), Pekan Baru: Pt Chevron Pasific Indonesia, (2009).

<sup>&</sup>lt;sup>22</sup> Sanjay Gubbi, "Patterns and Correlates of Human-Elephant Conflict aroun a South Indian Reserve," *Biological Conservation* 148, No. 1 (2012).

<sup>&</sup>lt;sup>23</sup> Syarifuddin Hasyim, dkk "Forest Damage and Preservation Through Forest Resources Management in Indonesia," *GeoJournal* 86, (2020).

#### Protection of Elephants According to Positive Law

National natural resource development and management policy directions are stipulated in MPR-RI Decree No. IX/MPR/2001 concerning agrarian reform and the management of natural resources. In Article 3 of the decree, it is stated that the management of natural resources contained in land, sea, and space is carried out in an optimal, fair, sustainable, and environmentally friendly manner. Furthermore, Article 4 letter g MPR-RI Decree No. IX/MPR/2001 states that natural resource management must be carried out with the principle of maintaining sustainability that can provide optimal benefits, both for present and future generations, while taking into account the carrying and supporting capacities of the environment. The goal stated in MPR-RI Decree No. IX/MPR/2001 above is an ideal ambition, but in reality, there are still laws and government policies in the natural resources sector, particularly those related to the protection of living natural resources, that have not guaranteed the achievement of this objective. This happens due to policy errors in the management and utilization of living natural resources. These errors include; misinterpretation of the essence of Article 33 of the 1945 Constitution, weaknesses in the formal juridical basis regarding management and utilization, and taking advantage of misinterpretations and weaknesses in laws and regulations to take advantage of natural resources for personal gain.<sup>24</sup>

Failing to achieve the ideals of the regulations and having several errors in the utilization and management of the living natural resources mentioned above, it is necessary to have good legal rules and policies that contain the values of justice for all environmental components, both biotic (animals and plants), abiotic (such as water, soil, and rocks) and social components (humans). In terms of natural resources (biotic and abiotic), the laws and policies must pay attention to natural interests or laws that are oriented towards nature's interest-oriented law. Therefore, in order for laws and policies related to natural resources to be considered good laws and policies, they must function as a tool for justice (law as a tool to reach justice). Such justice is called environmental justice.<sup>25</sup> Environmental justice, as referred to here, is justice for all components that exist in nature, both biological components (animals and plants) and non-biological components (the physical environment) and humans.

Elephants are biological components, and as such, they require space for environmental justice, the right to life, and the right to seek food and water. Disputes between elephants and humans have the potential to jeopardise these rights. Because humans are smarter and can devise tactics to paralyse elephants,

<sup>&</sup>lt;sup>24</sup> Iskandar, "Perlindungan Hukum Kawasan Hutan di Provinsi Bengkulu Ditinjau Dari Segi Hukum Lingkungan Administrasi," *Kanun: Jurnal Ilmu Hukum* 38, (2004).

<sup>&</sup>lt;sup>25</sup> NHT Siahaan, *Hukum Lingkungan* (Jakarta: Pancuran Alam, 2009), p. 49-50

then the victims of the conflict are elephants. People in Aceh employ high-voltage electric currents to paralyse elephants as part of their elephant-paralysis technique. This is evidenced by the finding of an electric fence measuring around 1.5 metres in height in the palm oil plantation region of Gampong Tuwi Pria, Pasie Raya District, Aceh Jaya Regency.<sup>26</sup> Considering these many events, it is clear that elephants are extremely susceptible; so, in order to safeguard elephants, the government must adopt rules and policies at both the national and regional levels (Aceh Province).

No.	The National Level	Aceh Province Level
1.	Law Number 32 of 2009 on Environmental Protection and	Aceh Qanun Number 2 of 2011 on Environmental Management
2.	Management Law Number 5 of 1990 on Sustainable Natural Resources and Ecosystem Conservation,	Qanun of Nanggroe Aceh Darussalam Province Number 20 of 2002 on Conservation of Natural Resources
3.	Government Regulation Number 7 of 1999 Preservation of Plant and Animal Species.	Nanggroe Aceh Darussalam Provincial Qanun Number 21 of 2002 on Natural Resource Management
4.	Government Regulation Number 8 of 1999 on Utilization of Wild Plants and Animals.	Qanun Number 11 of 2019 On Wildlife Management.
5.	Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number P.20/ Menlhk/ Setjen/ Kum.1/6/2018 on Determination of Types of Protected Plants and Animals.	Governor of Aceh Decree Number: 522.51/1097/2015 on Establishment of a Task Force for Handling Conflicts Between Humans and Wildlife
6.	Government Regulation of the Republic of Indonesia Number 28 of 2011 on Management of	Governor of Aceh Decree Number: 522.51/1098/2015 on the Coordination Team for

# **Table 1: Indonesian Regulations and Policies on Animal Protection**

<sup>&</sup>lt;sup>26</sup>Warga Aceh Temukan Kerangka Gajah Diduga Mati Terkena Pagar Listrik, https://regional.kompas.com/read/2020/01/02/14442341. (Accessed, 9 September 2021).

	Nature Reserve Areas and	Conflict Management between
	Nature Conservation Areas	Humans and Wildlife."
	Presidential Decree No. 43 of	Decree of the Governor of Aceh
7.	1978 on Convention on	Number 5 of 2020 on the
	International Trade in	Coordinating Team for Handling
	Endangered Species of Wild	Cross-Sectoral Elephant and
	Fauna and Flora	Human Conflicts.
8.	Decree of the President of the	
	Republic of Indonesia Number	
	4 of 1993 on National Animals	
	and Flowers	

Elephants are part of the components of living natural resources protected by Law Number 5 of 1990; this can be found in the provisions of Article 21 paragraph (2) letter a, which states that it is prohibited for everyone to catch, injure, kill, store, possess, raise, transport, and trade protected animals alive. If the provisions of Article 21 paragraph (2) of Law Number 5 of 1990 are ignored, the perpetrators based on Article 40 paragraph (2) and paragraph (4) are subject to sanctions of imprisonment and fines. The wording of the provisions of Article 20 paragraph (2) is: Whoever deliberately violates the provisions referred to in Article 21 paragraphs (1) and (2) and Article 33 paragraph (3) shall be punished with imprisonment for a maximum of five years and a maximum fine of Rp. 100,000,000.00 (one hundred million rupiah). Furthermore, in Article 40 paragraph (4) it is explained that whoever, because of negligence, violates the provisions referred to in Article 21 paragraph (1) and paragraph (2) and Article 33 paragraph (3) shall be subject to imprisonment for a maximum of 1 (one) year and a maximum fine of Rp. 50,000,000.00 (fifty million rupiah).<sup>27</sup>

The state issued Government Regulation of the Republic of Indonesia Number 7 of 1999 on the Preservation of Plant and Animal Species in order to implement animal protection as referred to in Law Number 5 of 1990. The considerations issued by this government regulation are that plants and animals are part of natural resources that are priceless, so their sustainability needs to be be maintained through preservation efforts to keep the diversity of plant and animal species and their ecosystems both inside and beyond their habitats from extinction. Preservation is accomplished by efforts to identify and categorise

 $<sup>^{\</sup>rm 27}$  Law Number 5 of 1990 on Conservation of Living Natural Resources and Their Ecosystems.

protected and non-protected species; management of species and ecosystems; and maintenance and breeding (Article 3).<sup>28</sup>

Furthermore, the state issued Government Regulation Number 8 of 1999 concerning the Use of Wild Plants and Animals in order to fulfil its responsibility to safeguard animals (e.g., elephants). The considerations issued by Government Regulation No. 8 of 1999 are that wild plants and animals are living natural resources that can be used for the greatest prosperity of the people. Their utilization takes into account the continuity of potential, carrying capacity, and diversity of wild plant and animal species. In Article 3 letter a Government Regulation Number 8 of 1999, the use of wild animals is permitted if it is related to study, research, and development. Study, research, and development can only be carried out on protected or nonprotected wild plant and animal species by first obtaining permission from the minister (Article 4 paragraphs (1) and (2) of Government Regulation Number 8 of 1999). If protected wild animals are used for study, research, and development without a permit, an administrative fine of up to Rp. 50,000,000.00 (fifty million rupiah) and/or being punished is not allowed to carry out studies, research, and development activities on wild plants and wild animals for a maximum period of 5 years (Article 50 (1)).

The government's special attention to the protection of animals (elephants) can be seen in the issuance of the Minister of Environment and Forestry of the Republic of Indonesia of 2018 on the Second Amendment to the Regulation of the Minister of Environment and Forestry of 2018 on Protected Plants and Animals. Based on this regulation of the Minister of Environment and Forestry, elephants, as mammals in the *Elephantidae* family with the scientific name *Elephas maximus* (the Asian elephant), are also protected animals. For this reason, all provisions relating to the protection of protected animals apply in the context of protecting the Asian elephant.<sup>29</sup>

In Aceh, legal protection for wild animals (including elephants) is regulated in Aceh Qanun Number 11 of 2019 on Wildlife Management. Article 31 of this Qanun states that in the context of protecting wildlife, everyone is prohibited:

- a. to catch, injure, capture, poison, kill, possess, raise, transport, and/or trade protected wildlife while alive.
- b. to keep, possess, transport, and trade wild animals or the body parts of protected wild animals in dead condition.

<sup>&</sup>lt;sup>28</sup> Government Regulation of the Republic of Indonesia Number 7 of 1999 on the Preservation of Plant and Animal Species.

<sup>&</sup>lt;sup>29</sup> Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number P.106/Menlhk/Setjen/Kum.1/12/2018 on the Second Amendment to the Regulation of the Minister of Environment and Forestry Number P.20/Menlhk/Setjen/Kum.1/6/2018 on Protected Plants and Animals.

Animal Protection in the Perspective of Positive Law and Islamic Law Efendi Efendi, et.al.,

DOI: 10.22373/sjhk.v7i1.15381

- c. to take protected wildlife from one place in Aceh to another inside or outside Indonesia;
- d. to trade part of or the whole body of protected wildlife; and
- e. to keep, possess, and/or trade objects made of the skin, body, eggs, or other parts of protected wildlife.<sup>30</sup>

Furthermore, in Article 32 of Qanun Number 11 of 2019, it is stated that to protect wildlife habitats, individuals are prohibited:

- a. to disturb and destroy wildlife habitats;
- b. to carry out activities that can damage and/or threaten the germplasm;
- c. to use and install snares made of a type of material that can threaten the protected wildlife;
- d. to put poison and/or materials that endanger the life of protected wildlife;
- e. to perform activities and/or business that could potentially cause ecological damage to corridors and/or wildlife habitats;
- f. to contaminate water sources and/or food sources in wildlife habitats;
- g. to violate local rules or local wisdom regarding habitat and/or wildlife.

Anyone who violates the various prohibitions mentioned in Article 31 and Article 32 of Qanun Number 11 of 2019 will be subject to criminal sanctions. This is regulated in Article 37, paragraph 1, which states: "Anyone who intentionally violates the provisions referred to in Article 31 and Article 32 shall be punished according to the provisions of the legislation.

# Implementation of Legal Protection for Elephants in Conflict with Humans

From the normative perspective indicated in the previous discussion of the legal protection of natural resources in Indonesia, it is clear that the governments of Indonesia and Aceh have made attempts to conserve Asian elephants from risks posed by conflicts with humans. The most significant aspect of the many policies is how to implement or actualize all of them. Therefore, the government can act by performing the following:

# 1. Conflict Control

Conflict control is performed in a structured and systematic manner through post-conflict prevention, handling, and recovery. Prevention of conflicts between wild animals and humans is carried out by means of socialization and education spatial planning, monitoring (patrols/monitoring), barrier strategies and early warning systems; and/or. Meanwhile, the handling of conflict is carried out by the Aceh Working Unit which performs governmental affairs in conservation and conflict. Furthermore, post-conflict recovery is performed through assessing

<sup>&</sup>lt;sup>30</sup> Aceh Qanun Number 11 of 2019 on Wildlife Management.

http://jurnal.ar-raniry.ac.id/index.php/samarah

losses, mentoring, providing compensation, and/or preventing long-term negative consequences. In order to avoid adverse impacts on humans due to conflict, the following actions are also carried out: evacuation, asset rescue, relocation; and/or assistance.

# 2. Formation of a Coordination Team at the Aceh Provincial Level

The formation of an integrated team for handling elephant and human conflicts is stipulated in the 2020 Aceh Governor's Decree concerning Amendments to the Aceh Governor's Decree regarding the Coordinating Team for Conflict Management between Humans and Wildlife in Aceh Province.<sup>31</sup> The supervisor of this coordination team is the Governor, while the coordinator is led directly by the Aceh Regional Secretary, and the Deputy Coordinator is the Head of the Aceh Regional Secretary Office. Furthermore, the team secretary is the head of the Aceh Natural Resources Conservation Center (*Balai Konservasi Sumber Daya Alam/BKSDA*), with a total of 16 team members coming from various elements. In order to increase the effectiveness of controlling and handling conflicts between humans and elephants in Aceh, the Task Force Team for Management of Wildlife and Human Conflict in Aceh provides several recommendations in an effort to overcome conflicts between elephants and humans. The recommendations are as follows:

- a. It is necessary to identify the paths of wild animal habitats and corridors, which later can be used as a basis for managing wild animals and handling wildlife conflicts;
- b. It is necessary to create a strategy for handling wildlife conflicts (a road map) in a comprehensive manner, and it should be in accordance with the characteristics of the conflict resolution areas.
- c. Wildlife conflict management activities are executed by involving the parties in accordance with their authority at the central, provincial, and district government levels as well as the community.
- d. Wildlife conflict management must be done by considering short-term (emergencies), medium-term (mitigation and prevention), and long-term management strategies;
- e. It is necessary to develop operational standards (SOP) related to the implementation of the tasks and functions of the Task Force for Handling Wildlife and Human Conflict in Aceh.
- f. Encouraging the alignment of the budget allocation mechanism at the central, provincial, and district levels;

<sup>&</sup>lt;sup>31</sup> Governor of Aceh Decree Number 522.51/1521/2020 concerning Amendments to Aceh Governor Decree Number 522.51/1098/2015 concerning the Coordination Team for Conflict Management Between Humans and Wildlife in Aceh Province.

g. It is necessary to identify the potential of the land-based private sector, including opportunities to utilize the company's CSR for handling wildlife conflicts.

The establishment of an integrated team for managing elephant-human conflicts is critical because it may serve as a coordinating hub for numerous elements involved as implementers of complex and comprehensive wildlife protection legislation. The establishment of an institution that may operate as a coordinating centre for these numerous elements is particularly crucial in the application of legal norms that entail many interrelated elements, so that law enforcement can be harmonised.<sup>32</sup>

#### 3. Involvement of Non-Governmental Organizations and the Community

The Sumatran Tropical Forest Conservation Action (TFCA) is an example of a non-governmental organization's involvement in dealing with elephant and human conflicts. TFCA has done mini-conflict mitigation in dealing with elephant and human conflicts, notably by providing assistance for conservation initiatives carried out by the Aceh Conservation Response Unit (CRU) consortium in the Aceh Jaya Region. Routine coordinated patrols and the construction of artificial barriers are examples of activities to protect and manage elephants in conflict with humans. Furthermore, the World Wide Fund for Nature (WWF) offers training on the use of low-cost conflict mitigation tools such as carbide cannons and smoke balls. These low-cost tools could be used to replace the usage of expensive firecrackers when herding elephants. Other non-governmental groups also carry out the following activities: a) advocacy in terms of law enforcement; b) campaigns and outreach to keep elephant areas effectively managed; and c) community training.

Numerous training and education initiatives have been done, which are critical to achieving long-term preservation for Asian elephants in Aceh. The involvement of the government and non-governmental organisations is, of course, critical in elephant protection, but the presence of local people who are knowledgeable about various methods of dealing with elephant and human conflicts is an important component that will ensure long-term elephant protection in Aceh. Kaiwen Su explained that it is critical to strengthen local community education and encourage them to be directly involved in biodiversity conservation, such as joining an ecological patrol team, in order to increase

<sup>&</sup>lt;sup>32</sup> Efendi, et.al., "Conflict of Law Regarding Natural Resource Management in Indonesia," *International Journal of Criminology and Sociology* 9, (2020).

protection awareness and tolerance when confronted with conflicts with wild animals in the local community.<sup>33</sup>

The involvement of the local community (*Adat*) in the protection of elephants can be seen in the recognition of customary institutions in managing matters related to environmental protection and preservation. The recognition of the existence of these customary institutions is regulated in Article 2 paragraph (2) of Qanun 10 of 2008 on Customary Institutions. The customary institutions referred to are related to forests such as *mukim* (customary institution that oversee several villages) and *pawang glee/uteun* (forest keeper).

The Mukim institution is given the authority to exercise rights and authority over territory and natural resources. This institution can establish customary rules and values in the management and utilization of natural resources. In addition to the Mukim institution, in managing and protecting the environment among the people of Aceh, there is also a traditional institution called *Pawang Glee/Pawang Uteun* (Forest Keeper). This customary institution is a person who is entrusted with leading and regulating customs relating to the management and preservation of the forest environment. The rules that exist in this customary institution, among other things, are related to the customary prohibition of hunting elephants with the title *Teungku Rayek* (*Teuku Besar* and *Po Meurah*). This ban was made because the public realized that elephants are included in the category of protected and endangered animals.<sup>34</sup>

#### 4. Providing Compensation to the community

The availability of compensation mechanisms for people who have been directly or indirectly affected by human-wildlife conflicts is another approach that can enhance elephant protection. According to Karanth Krithi, the compensation mechanism will raise people's tolerance for wild animals that cause them harm.<sup>35</sup> Furthermore, the compensation will minimize economic losses caused by continuous human-elephant confrontations. Tolerance in the community is vital for reducing aggressive community behaviours that can result in elephant deaths. Alexandros<sup>36</sup> expressed a similar viewpoint, stating that compensation can raise

<sup>&</sup>lt;sup>33</sup> Kaiwen Su, et.al., "Human-Elephant Conflicts and Villagers' Attitudes and Knowledge in the Xishuangbanna Nature Reserve, China," *International Journal of Environmental Research and Public Health*, 17, (2020).

<sup>&</sup>lt;sup>34</sup> Evi Apriana, "Adat Aceh Dalam Praktek Konservasi Lingkungan," *Serambi Akademika* 3, No. 2 (2015), p. 166-173.

<sup>&</sup>lt;sup>35</sup> Karanth Krithi, et.al., "Patterns of Human–Wildlife Conflicts and Compensation: Insights from Western Ghats Protected Areas," *Biol. Conserv* 166, (2013).

<sup>&</sup>lt;sup>36</sup> Alexandros, K, et. al., "Structural and Economic Aspects of Human-Bear Conflicts in Greece," *Ursus*, 22, (2011).

people's tolerance for wild animals that attack them because the impact of economic losses they have incurred has been adequately compensated.

### 5. Law Enforcement

Law enforcement in this context can be performed by the police and BKSDA investigators. In protecting elephants in conflict with humans, police investigators use pre-emptive, preventive, and repressive means. Preventative activities are taken through imparting beliefs and norms about the need of elephant protection for the survival of both humans and elephants. This preventative intervention is meant to prevent the emergence of the attackers' intentions. While outreach to the community, coordination with various relevant agencies, patrols and raids, observing and mapping various criminal acts, and mapping areas prone to the poaching of protected animals, particularly elephants, are all part of preventive efforts. Police investigators also take repressive measures, such as taking firm action against hunters and sellers of protected animals through litigation (legal process).

### Animal Protection in the Perspective of Islamic Law

The goal of Islamic law is to benefit or serve all humans and the universe. So that the teachings of Islam are referred to as *rahmatan lil alamin* (grace to the entire universe). The universe is not only human but includes the earth, water, forests, animals, oceans, fish, sky, and all inhabitants of this earth. The entire universe must be cared for and protected by humans because humans were created as caliphs on earth, one of the meanings of caliphs is caretakers.

Therefore, the Islamic law that refers to the Qur'an, hadith, and the opinions of ulema emphasizes that animals are creatures created by Allah SWT and they must be protected and treated as other creations of God. In the Qur'an, several verses explain that the earth, which contains animals and birds, including people (creatures), is the same as humans. Allah says, "And there is not an animal that is on the earth and birds that fly on its two wings, but all of them are people (too) like you. There is nothing that We have omitted in the Book, then to Allah, they are gathered" (QS. Al-An'am (38).

Then the damage to ecosystems and habitats both on land and in the sea that humans cause is a threat to humans themselves. Because the Quran has warned: "Corruption has spread on land and sea as a result of what people's hands have done, so that Allah may cause them to taste (the consequences of) some of their deeds and perhaps they might return (to the Right Path)". (QS. Al-Rum: 41)

Meanwhile, in the hadiths of the Prophet Muhammad, peace be upon him, it was also explained that a woman during the time of the Bani Israel (Children of Israel) who was diligent in worship would have her charity in vain because she treated animals arbitrarily, without giving them food or drink until they died.

From Abdillah Ibn Umar ra that Rasulullah PBUH said: "A woman entered Hell because of a cat she had, which she tied up and did not feed or let loose to eat the vermin of the earth until it died of starvation (Narrated by Bukhari).

On the other hand, a despicable woman who was a prostitute was considered noble because of her noble deed: she gives water to a thirsty dog. It is told in a hadith; From Abu Hurairah, the Prophet PBUH said that a prostitute had once been forgiven. She passed by a dog panting near a well. Thirst had nearly killed him, so she took off her sock, tied it to her veil, and drew up some water. Allah forgave her for that. (Narrated Muslim).

Moreover, the Indonesian Ulema Council in Jakarta also issued Fatwa No. 14 of 2014. Some important topics in the fatwa are: a) every living creature has the right to continue its life and be used for the benefit of human welfare; b) treating endangered species well (ihsan), by protecting and preserving them in order to ensure their survival, is legally obligatory; c) protection and preservation of endangered species, as referred to in number 2, among others, by means of: d) guaranteeing their basic needs, such as food, shelter, and the need for breeding; e) not giving a load that is beyond their ability; f) not uniting with other animals that endanger them; g) maintain the integrity of the habitat; h) prevent poaching and illegal trade; i) preventing conflicts with humans; j) maintain animal welfare.<sup>37</sup>

In addition, the Aceh Ulama Consultative Assembly (*Majelis Permusyawaratan Ulama/MPU* Aceh) also issued Fatwa Number 4 of 2019 on environmental preservation. The fatwa stipulates that the environment is a system formed by the reciprocal relationship between living things and their natural surroundings. Nevertheless, using the environment for its own benefit and not causing damage is permissible. Every Muslim is obliged to protect and preserve the environment, and most importantly, destroying the environment is forbidden.<sup>38</sup>

Therefore, in Islamic law, all animals, both those that are *halal* (permissible) to eat and those that are forbidden to eat, must be treated properly. As the explanation above exemplifies dogs that are treated well and cats that are treated badly, the individual gets a reward from God. Therefore, in Islamic law, all creatures of Allah on earth must be treated fairly. Moreover, destroying the ecosystem and habitat of elephants will actually bring danger to humans themselves. There is a rule of Islamic law that says, "Preventing damage is more important".

<sup>&</sup>lt;sup>37</sup>Fatwa of the Central Indonesian Ulema Council, Jakarta No. 14 of 2014 concerning Preservation of Endangered Animals for Ecosystem balance.

<sup>&</sup>lt;sup>38</sup>Fatwa of the Ulama Consultative Assembly Number 4 of 2019 concerning Preservation of the Environment According to Islamic Law.

http://jurnal.ar-raniry.ac.id/index.php/samarah

The meaning of the verses of the Quran, the hadiths, and the fatwas of the scholars above is that human life and its environment are related and interdependent; if humans take good care of the environment, then the environment will benefit humans. Conversely, if humans destroy the environment, then the danger can threaten the human soul.

### Conclusion

The elephant is a protected species in Indonesia. Yet, elephant-human conflict threatens the survival of both species. Conflicts between elephants and humans continue to rise in Aceh year after year. The rising confrontation between elephants and humans has resulted in a significant number of elephant deaths as well as tangible and immaterial losses for humans. To protect elephants and humans from the effects of conflict, the government has implemented a number of policies at both the national and regional levels. In addition to the policies that have already been issued, the government is taking additional steps, such as forming a Coordinating Team for Conflict Management between Humans and Wild Animals, involving Non-Governmental Organizations and the community, and enforcing the law through pre-emptive, preventive, and repressive channels. Despite these efforts, the confrontation between elephants and humans continues. As a result, the government must take additional efforts, such as implementing regulations preventing land use on elephant crossings, policies establishing elephant conservation areas, and policies moving communities near the elephant's trajectory, accompanied by compensation. If done correctly, this can lessen the chance of elephant deaths while also reducing dangers to human safety.

### References

#### **Journals and Books**

- Abdullah, et.al., "Perception of Local Community in Surrounding of Human-Elephant Conflict Area To Elephant Conservation and Their Habitat in Sub-District of Lembah Seulawah, Aceh Besar," *Jurnal Biology Edukasi* 9, No. 1 (2017).
- Apriana, Evi, "Adat Aceh Dalam Praktek Konservasi Lingkungan," Serambi Akademika 3, No. 2 (2015).
- Diana, C.E, et.al., "Risk Level Analysis of Human-Elephant In The Peusangan Watershed of Aceh Province, Indonesia," IOP Conf. Ser.: Earth Environ. Sci. 922 012052. Doi: 10.1088/1755-1315/922/1/012052.
- Efendi, et.al., "Conflict of Law Regarding Natural Resource Management in Indonesia," *International Journal of Criminology and Sociology* 9, (2020). DOI: https://doi.org/10.6000/1929-4409.2020.09.24.

Animal Protection in the Perspective of Positive Law and Islamic Law Efendi Efendi, et.al.,

DOI: 10.22373/sjhk.v7i1.15381

- Effendi, Elfian, *Tuntutan Itu Masih Menyala, Delapan Indikasi Kuat Otonomi Daerah Terancam Gagal*, Jakarta: Fakultas Ekonomi Universitas Indonesia, 2001.
- Fandeli, Chafid, et.al., *Audit Lingkungan*, Yogyakarta: Gadjah Mada University Press, 2008.
- Gubbi, Sanjay, "Patterns and Correlates of Human-Elephant Conflict aroun a South Indian Reserve" *Biological Conservation* 148, No. 1, (2012). Doi: 10.1016/j.biocon.2012.01.146.
- Hasyim, S., et.al., "Forest Damage and Preservation Through Forest Resources Management in Indonesia," *Geo Journal* 86, (2021).
- Iskandar, "Perlindungan Hukum Kawasan Hutan di Provinsi Bengkulu Ditinjau Dari Segi Hukum Lingkungan Administrasi," *Kanun Jurnal Ilmu Hukum* 38, (2004).
- Karamanlidis, A.A. "Structural and Economic Aspects of Human-Bear Conflicts in Greece," Ursus, 22, (2011).
- Karanth, K.K. "Patterns of Human–Wildlife Conflicts and Compensation: Insights from Western Ghats Protected Areas," *Biol. Conserv* 166, (2013).
- Miller, G. Tyler. *Living in The Environment: Principles, Connections and Solution*, Canada: Thomson Learning, 2007.
- Muhaiman, Metode Penelitian Hukum, Mataram: Mataram University Press, 2020.
- Nugroho, Wahyu, "Reorienting the Principle of Sustainable Development in Investing Policy Utilizing Natural Resources and Energy in Indonesia," *Indonesian Journal of Energy* 5, No. 1 (2022). https://doi.org/10.33116/ije.v5i1.119.
- Nurjaya, I Nyoman, Pengelolaan Sumberdaya Alam Dalam Perspektif Antropologi Hukum, (Jakarta: Prestasi Pustaka Publiser, 2008).
- Pimentel, David, et.al., "Natural Resources and an Optimum Human Population", *Population and Environment* 15, No. 5 (1994). https://www.jstor.org/stable/27503358.
- Qomariah, Indira Nurul, et.al., "Conflict between human and wild Sumatran Elephant (*Elephas maximus sumatranus* Temminck, 1847) in Aceh Province, Indonesia," *Biodiversitas Journal of Bioligical Diversity* 20, No. 1 (2019). DOI: 10.13057/biodiv/d200110.
- R. Rachmawaty, et.al., "The Human-Elephant Conflict: Mapping The Elephant Area and the Level of Conflict Vulnerability in the Mila Landscape, Pidie District, Aceh, Indonesia," *IOP Conf. Ser.: Earth Environ. Sci.* 956 012008, (2022). Doi:10.1088/1755-1315/956/1/012008.
- Rahmadi, Takdir, *Hukum Lingkungan di Indonesia*, Jakarta: Raja Grafindo Persada, 2011.

Animal Protection in the Perspective of Positive Law and Islamic Law Efendi Efendi, et.al.,

DOI: 10.22373/sjhk.v7i1.15381

Saleng, Abrar, Hukum Pertambangan, Yogyakarta: UII Press, 2004.

- Siahaan, NHT, Hukum Lingkungan, Jakarta: Pancuran Alam, 2009.
- Smith, M.J., et.al., "Managing Natural Resources for Their Human Values," *Ecosphare* 6, No. 8 (2015). https://doi.org/10.1890/ES15-00125.1.
- Soekanto, Soerjono and Sri Mamudji, *Penelitian Hukum Normatif*, Jakarta: Rajawali Pers, 2010.
- Su, Kaiwen et.al., Human-Elephant Conflicts and Villagers' Attitudes and Knowledge in the Xishuangbanna Nature Reserve, China, International Journal of Environmental Research and Public Health, 17, (2020). Doi: 10.3390/ijerph17238910.
- Sutikno and Maryunani, *Ekonomi Sumberdaya Alam*, Malang: Badan Penerbit Fakultas Ekonomi, Universitas Brawijaya, 2006.
- Taqwaddin, Aspek Hukum Kehutanan & Masyarakat Hukum Adat di Indonesia, Yogyakarta: Intan Cendekia, 2011.
- Wardana, et.al., "Risk Level Analysisof Sumatera Elephant Conflicts (Elephas Maximus Sumatranus) With Human at Subussalam the Province of Aceh," IOSR Journal of Environmental Science, Toxicology and Food Technology (IOSR-JESTFT) 14, No. 2 (2020). http://doi.org/10/9790/2402-1402012228.
- Wenwen, Li. et al. "Human Elephant Conflict in Xishuangbanna Prefecture, China: Distribution, Diffusion, and Mitigation," *Global Ecology and Concervation* 16, (2018). Doi: 10.1016/j.gecco.2018.e00462.
- Yeny, Irma, et.al., "Examining the Socio-Economic and Natural Resource Risks of Food Estate Development on Peatlands: A Strategy for Economic Recovery and Natural Resource Sustainability," *Sustainability* 14, No. 1 (2022). https://doi.org/10.3390/su14073961.
- Yoza, D. Pemetaan Sebaran Gajah di Area Konsesi PT. Chevron Pasific Indonesia (Laporan Penelitian Bekerjasama dengan PT. Chevron Pasific Indonesia, Riau), Pekan Baru: Pt Chevron Pasific Indonesia, (2009).

# **Rules of Law and Legislation**

Aceh Qanun Number 11 of 2019 concerning Wildlife Management.

- Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number P.106/Menlhk/Setjen/Kum.1/12/2018 concerning the Second Amendment to the Regulation of the Minister of Environment and Forestry Number P.20/Menlhk/Setjen/Kum.1/6/2018 Concerning Protected Plants and Animals.
- Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number P.20/Menlhk/Setjen/Kum.1/6/2018 concerning Determination of Types of Protected Plants and Animals.

- Governor of Aceh Decree Number 522.51/1521/2020 concerning Amendments to Aceh Governor Decree Number 522.51/1098/2015 concerning the Coordination Team for Conflict Management Between Humans and Wildlife in Aceh Province.
- Jakarta Central Indonesian Ulema Council Fatwa Number 14 of 2014 concerning Preservation of Endangered Animals for Ecosystem Balance.
- Fatwa of the Ulama Consultative Assembly Number 4 of 2019 concerning Preservation of the Environment According to Islamic Law.

### Media Data

- Tujuh Tahun Terakhir ada 46 Gajah Mati di Aceh, https://betahita.id/news/detail/6442. (Accessed, September 9, 2021).
- Warga Aceh Temukan Kerangka Gajah Diduga Mati Terkena Pagar Listrik, https://regional.kompas.com/read/2020/01/02/14442341. (Accessed, September 9, 2021).