



Forest Fire, Destruction, and Sanction: The Perspectives of Health and Law

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Abstract

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BACKGROUND: The search for the ideal concept to eradicate crimes of forest fire and destruction is inseparable from the sanctions for individual or corporate perpetrators, who fund and order for the forest to be burned and destroyed. It must also consider the health rights of the victims.

METHODS: This study used the normative legal research method.

RESULTS AND DISCUSSION: There needs to be a clear concept in punishing corporations so that they refrain from undergoing similar criminal actions in the future. The court that handles the forest fire cases may and has the right to improvise by burdening the health treatment fees of those who suffer due to the forest fires to the perpetrators.

CONCLUSION: The forest fire law enforcement system is not yet ideal as it cannot yet maximally punish corporations that burn forests. The Punishment of corporation hasn't considered the victims' health rights and their recovery. The authors suggest that the Law on Forestry should be revised so that it will be more effective in resolving the issue of health recovery for forest and land fire victims. The corporations that burn the forests should be responsible for its funding. The fines from the corporations should be used to treat the health of these victims.

Introduction

Forests have an important role in human life as it provides industrial materials. It is a source of income and it opens new job opportunities. Forest resources may be processed to increase their value. Forest resource usage is not limited to producing timber but should be expanded to the use of environmental services and genes. This is to optimize its function as stated in the Republic of Indonesia's Law No. 41 of 1999 on Forestry. This law states that forests are dominated by trees that produce oxygen for humans and animals to breathe.

Unfortunately, individuals and corporations often destroy forests to utilize their resources. Forest destruction does not only happen to production forests but also protected forests [1]. Forest destruction is an organized crime that involves many parties. This crime endangers the state and the nation. Thus, to handle it, there must be extraordinary measures as stipulated in Law No. 18 of 2013 on the Forest Destruction Prevention and Eradication. There are many forest-related issues, such as the lack of control over forestry crimes, forest degradation, and lack of investment. Thus, there need to be strategic efforts in the form of deregulation and debureaucratization [2].

The net deforestation rate in Indonesia in forest areas in 2013–2018 (hectares/year) was 223.323,9 ha,

then at non-forest areas was 216.115,2 ha and the deforestation was 439.439,1 ha. Deforestations are caused by illegal logging, illegal use of forest areas, and also weak law enforcement and supervision [3].

Deforestation due to illegal logging often happens because corporate or individual investors have the interest to open new plantations. It is an impact of the easy issuing of permits without adequate supervision. In 2019, the Ministry of Environment and Forestry investigated at least five companies. It also sealed 51 companies and one individually owned company, with a total area of 8.931 hectares [4].

In 2019, the police force only processed forest and land fire perpetrators determined by the Criminal Investigation Agency of the Indonesian National Police consisting of 365 individuals and 22 corporations. Then, in 2020, the forest and land fire perpetrators consisted of 129 and two corporations [5]. Strangely, none of the illegal logging perpetrators that are backed up and funded by corporations was processed.

So far, organized citizen lawsuits especially have concerns about handling the smog in Palangkaraya. Palangkaraya was one of the cities which are most impacted by the forest and land fires in 2016. On August 16, 2016, Palangkaraya people who were associated with the Anti-Smoke Movement (Gerakan Anti Asap/ abbreviated GAAs) of Central Borneo filed a class action

group lawsuit (citizen lawsuit) to the Palangkaraya District Court. They sued the President of the Republic of Indonesia, the Minister of Environment and Forestry, the Minister of Agriculture, the Head of the National Defense Agency, and the Governor. However, they did not specifically demand the recovery of their health rights from corporations. Even so, there have not been any citizen lawsuits that are especially directed to corporations.

Apart from the legal aspect, forest destruction by fire may cause serious health issues. Hidayat *et al.* stated that forest fires cause negative impacts to the local, regional, and national levels. The smoke produced from the fires can cause people to suffer from an upper respiratory infection. Law No. 18 of 2013 on Forest Destruction Prevention and Eradication can place corporations as subjects of this criminal action. This is found in several laws outside of the Criminal Code, as the Criminal Code only stipulates individuals as subjects of criminal actions.

As a legal entity given the normative right to undergo business activities, not all corporations comply with the law. Some even destroy forests. This is ironic as the corporations survive because they enjoy the forest's functions, as forests produce oxygen to breathe and provide timber for their office. Just like individuals, corporations have an important role in society while also having the capability to harm other people. Treating corporations like humans (a natural person) and burdening them with corporate crimes are in line with the principle of equality before the law [6].

The placement of corporations as criminal subjects can bring hope and optimism [7]. It is not new for corporations to become criminal subjects, though according to Muladi and Priyatno, the process of law enforcement is very slow [8].

Apart from that, laws still have not adopted humanity principles in the case of forest destruction, considering that there is no legal protection for the victims whose health rights are violated due to the smoke from forest fires or victims who suffer from other health issues such as illnesses or disabilities from floods or disasters caused by forest destruction. Based on the issue above, this paper aims to find the ideal way to prevent forest fires and the fulfillment of the health rights of forest and land fire victims from the perspectives of law and health. This is important, considering that the health recovery and the fulfillment of the health rights of forest and land fire victims are not yet given much attention if the forest fire perpetrators are corporations.

Methods

This research used a normative legal approach. Such type of research comprised a study of legal

principles, a study of legal systems, a study of legal synchronization levels, a study of legal histories, and a study of legal comparison. The normative or doctrinal legal research is comprised some approaches, such as the statute approach, the case approach, the historical approach, and the conceptual approach. From these approaches, the researcher obtained information from various aspects of the issue analyzed [9].

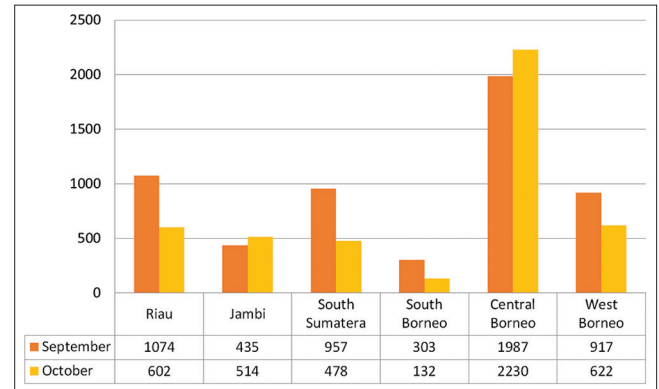


Figure 1: The number of forest and land fire victims, Source: Ningrum [14]

Most researches on forest and land fires in Indonesia were sociological. Thus, the authors chose the normative method with such an approach to holistically and non-partially see the issue on forest and land fires and the fulfillment of the health rights of the forest and land fire victims that have not obtained enough attention. From a more comprehensive understanding, this paper found a solution on the issue of forest and land fires and especially the fulfillment of the health rights of the forest and land fire victims that are the responsibility of the corporations that burn the forests.

Results

The total loss from the forest and land fires in 2020 was estimated to reach 221.415 billion rupiahs or 221 trillion rupiahs (Table 1). This was a great loss that cannot be underestimated as it was comprised of many sectors.

These were the verdicts of companies that allegedly burned forests. They were sanctioned greatly

Table 1 : The losses in various sectors caused by forest and land fires

S. No.	Sector	Amount (Rp billion)
1	Agriculture	66.452
2	Environment	58.406
3	Forestry	53.977
4	Trade	18.289
5	Manufacture and mining	8.382
6	Tourism	5.474
7	Transportation	5.107
8	Fire brigade fees	2.700
9	Health	2.079
10	Education	540
	Total	221.415

Source: The World Bank [10].

AQ11 **Table 2: The verdicts of companies and other parties on their alleged crimes on forest and land fires**

S. No.	Defendant	Year	Sanction	Allegation
1	PT Kalista Alam ©	2012	335 billion rupiahs	They burned 1.000 ha of peatland between 2009 to 2012 in Aceh Province
2	Keang Nam Development Indonesia ©	2007	119.8 billion rupiahs and 2.398 million dollars	They burned forests in Mandailing Natal
3	Torganda ©/DL Sitorus	2006	5 billion rupiahs and 47.000 hectares forest confiscated, Sitorus is punished with 8 years of imprisonment	Burned forests at Padang Lawas and South Tapanuli
4	Bumi Mekar Hijau	2016	78 billion rupiahs	They burned 20.000 hectares in Ogan Komering Ilir
5	The President of the Republic of Indonesia, the Minister of Forestry, the Minister of Health, the Governor of Palangkaraya, and the Regional Legislative House	2019	They must make new policies on forest protection, establish a hospital for lung diseases and health treatment shelters. They must make a public announcement on the companies that burned the forests and criminalize them according to the court proceedings	They were negligent in carrying out their tasks on extinguishing fire and in protecting the health of citizens impacted by forest and land fires

Sources: Greenpeace[11] and Rumapea [12].

AQ11 **Table 3: The number of forest fire-related casualties in Indonesia**

S. No.	Area	Number of casualties
1	Sumatera Island	6 people
2	Borneo Island	6 people
3	Forests at border East Java and Central Java	8 people
4	Ponorogo Regency Area	4 people

Source: Hadi [15].

as their crimes were severe. The data also included the verdict from a civil lawsuit to the President of the Republic of Indonesia and his staff, namely, the Minister of Forestry, the Minister of Health, the Governor of Palangkaraya, and the Regional Legislative House for their negligence in their policies to prevent forest fires and to extinguish them (Table 2).

The Ministry of Health reported that many people were inflicted with diseases due to the forest and land fires and smog. As many as, 21.085 suffered from an upper respiratory infection and 6.835 people suffering from diarrhea. Most sufferers were toddlers (0–5 years of age) and the elderly [13]. Then, according to the data, around 60 million people were exposed to smog (Figure 1).

Apart from financial losses and health impacts, there were many casualties in the forest fire case, especially in 2015, which was the peak of the forest fire tragedy in Indonesia (Table 3).

Discussion

Ideal concept in the legal perspective

The search for the ideal concept to eliminate the crimes of forest fire and destruction cannot be separated from sanctions to perpetrators, both individuals and

corporations. This is important considering that most forest destruction and fire cases were carried out by corporations. It is not ideal to only punish individuals whilst leaving corporations, as some of the latter placed forests as an exploitable object of a commodity to obtain profit. The principle “to obtain profit at all costs” encouraged corporations to burn and destroy forests.

Some cases only demanded criminal liability to the corporation’s Financial Director without uncovering the involvement of other managers. The handling of a forestry criminal case sometimes only stopped at the executive employee level without touching the higher corporate managers who enjoy greater profits, although in this case, the perpetrator ran away and is a currently fugitive of the Indonesian police force and the Interpol [16]. Another case of corporate forest destruction crime treatment was different from the previous case. The mastermind of the crime was punished without touching the pledgers that participated in the crime [16].

Article 10 clause (2) stated that forest management includes planning, developing, and monitoring the forests, although it is difficult to comprehend how 27.3 million hectares of conservation forest can be monitored by 2.162 Natural Resource Conservation Agency personnel [16]. Article 78 of the Law on Forestry stipulated three punishments, namely, imprisonment, fines, and confiscation. These punishments may be given cumulatively to perpetrators of crimes as regulated in Article 50 of the Law on Forestry [3].

Criminal actions and their sanctions have clearly been stipulated in the Law on Forestry. This law has included corporations as legal subjects, such as legal entities or business entities, limited companies, limited partnerships (*comanditer vennootschap*), firms, and cooperatives (Article 78 of the Law on Forestry). Even so, it lacks clear punishments for corporations. It tends to only punish individual perpetrators.

It means that in forestry criminal actions carried out by legal entities or business entities according to Article 78 of the Law on Forestry, the criminal liability may be imposed on managers both individually and collectively. The threat of imprisonment for each is added with a third from the punishment given [17]. This law used the direct corporate criminal liability theory, meaning that the attitudes of legal entity or business entity managers are reflections of the attitudes of the legal entities or business entities. Thus, criminal liability can be demanded by the managers both individually and collectively.

According to the Law on Forestry, in a corporate crime, managers must be responsible. The liability system is regulated in Article 78 of the Law on Forestry, “If it is carried out in the name of a legal entity or a business entity, the criminal demands and sanctions are imposed to the managers both individually and collectively.”

The Forest Destruction Prevention and Eradication Law is positive in the enforcement of forestry criminal laws in Indonesia. It contained twelve chapters and 114 articles. Just as the Law on Forestry, this law applied the corporate criminal liability theory, as stated in Article 109 clauses (3) and (4). It emphasized the criminal liability of corporate managers, as the attitudes of corporate managers are reflections of the corporations' attitudes [7]. Even so, the stipulations on corporate crime in Forest Destruction Prevention and Eradication Law are not clear. Thus, it is often misused by police officers who enforce the law in the field [18]. Thus, there needs to be a legal certainty to revise it or to create new laws or new entities to fulfill the legal certainty principle. This is to protect society and to properly punish wrongful corporations [7].

The corporate criminal sanctions are regulated in Articles 82 to 103 of the Forest Destruction Prevention and Eradication Law, stating that corporate perpetrators may be imprisoned or fined. The stipulation on corporate imprisonment in Article 17 clause (2) letters c, d, and e of the Forest Destruction Prevention and Eradication Law contradicted the legal facts and some legal theories on corporate crimes, as it is strange to imprison non-living things. The sanctions for corporate violators of the Forest Destruction Prevention and Eradication Law should instead be fines, the revocation of business permits, or the confiscation of assets [2].

Such unclear stipulations should be revised or new laws should be issued, as these articles are counterproductive. They lacked comprehensive thought. It might mean that imprisonment will be imposed on the managers or directors of the company. However, the Forest Destruction Prevention and Eradication Law does not state so, as corporations have their own imprisonment systems. Thus, there must be a clear concept to give a deterrent effect to the corporations [19].

Ideal concept in the health perspective

In Indonesia, forest fires happen almost every year. Investigations indicate that such fires and destruction did not happen due to natural causes. Even though studies show that smoke from forest fires have a great impact on human health, the authorities still consistently and massively underestimate these health-related impacts. The levels of severity and the risk of upper respiratory infection from forest fires significantly increased among people who are already prone to be exposed to high-level air pollution. Authorities from the past up to now still tend to underestimate the scale of air pollution's impacts on human health. After the destructive forest fires in 2015, the official number of victims was only 24 people. On the contrary, epidemiologic experts estimate that tens of thousands of people have died. Reports from the monitoring stated that these fires have created "the possibly the worst

sustainable air quality the world has ever recorded." Other researchers estimated that tens of millions of people have been exposed to various levels of air pollution, from "unhealthy" to "dangerous."

The health of people in the ASEAN area was disturbed, and thousands of others experienced early deaths due to the actually avoidable smoke exposure. Commercial activities, especially opening forests and drying peatlands by oil palm and paper industries, have dried some of the Indonesian landscape, creating the perfect condition for fires. Even though the government had the authority to prevent this process, it still consistently permitted oil palm and paper industries to carry out this disruptive method.

Some researchers found that half of the fires in Indonesian peatlands happen in commercial concession areas. Such fires produce pollution that is hazardous to the health, as the particles are very fine (PM 2.5), smaller than the particles from the fires of other forests. These particles are 30 times finer than human hair. They are easily absorbed and are highly dangerous for human health. Health issues caused by air pollution from forest and plantation fires have long been documented. However, the official monitoring of air quality in Indonesia is still inadequate. Pollution monitoring from other countries is far more reliable. The combination of the data from other countries and also accurate modeling research has provided strong proof of the great scale health impacts to that area [20].

Apart from causing serious health impacts such as chronic lung diseases, respiratory infections, and cardiovascular diseases, shreds of evidence showed that air pollution may increase one's risk to become infected by the COVID-19. Air pollution also increases the severity of people with upper respiratory infections and COVID-19 [20].

The research found that air pollution has significantly higher effects on patients who are positively infected by the COVID-19. It stated that patients of the COVID-19 with comorbid diseases such as diabetes, hypertension, cardiovascular disease, chronic lung diseases like asthma, and chronic obstructive lung disease have a higher risk. Many must obtain medical treatment at hospitals. Many also died. Such health issues also inflicted people who were exposed to forest fire, and those who have had it will experience worsened symptoms [21].

From the health perspective, forest fires cause a direct disease such as upper respiratory infection or diseases due to follow-up disasters such as floods. In this perspective, victims who suffer from upper respiratory infection due to forest fires from corporations or individuals may file a lawsuit to demand treatment fees. Such a lawsuit for the corporation never happened in Indonesia, considering that the mechanism is difficult [22]. Concerning the citizen lawsuit submitted to the Palangkaraya District Court in

2016, the defendants were the President of Indonesia, the Minister of Environment and Forestry, the Minister of Agriculture, the Head of the National Defense Agency, the Governor of Palangkaraya, and the Regional Legislative House. In the lawsuit, GAAs demanded the responsibility of the defendants for their negligence in dealing with the smog.

In the lawsuit, the forest and land fires in Central Borneo in 2015 caused losses to many sectors, such as the health, education, and economic sectors. The Palangkaraya District Court granted the demands of the plaintiff on March 22, 2017 (Decision No. 118/Pdt.G/LH/2016/PN.Plk).

Another point of demand was ordering the president as Defendant 1 to immediately issue a derivative product of Law No. 32 of 2009 on Environmental Protection and Management, which was crucial to prevent and handle forest land fires. Defendant 1 was also demanded to create a joint team that consisted of the Ministry of Environment and Forestry, the Ministry of Agriculture, and the Ministry of Health. The joint team was demanded to undergo countermeasures against forest and land fires, establish a hospital for lung diseases, make an evacuation room, and make a special treatment and shelter for forest and land fire victims.

This decision was strengthened by the cassation decision of the Supreme Court. The decision also strengthened the health rights of the citizens, as it demanded the Minister of Health to establish a hospital for lung disease and special treatment for forest and land fires. With the success of this citizen lawsuit, citizens obtained a great opportunity to sue corporations by demanding health treatments and the fulfillment of the health rights of forest and land fire victims.

The successful Citizen Law Suit against the government was organized by the Non-Government Organization (NGO) and it's a proof that's NGO could advocate the legal protection for health rights victims forest fire. The NGO was one of the best advocating and proposed legal protection for the forest and land burning. Aside of NGO, the public himself could protect its own rights for legal protection because the public was the most harmed by the corporation forest and land burning act.

The legal protection for the victims whose health rights were violated due to the smoke from forest fires or victims who suffer from other health issues will be better accommodated if it is inserted in the existing Law on Forestry. It may be carried out by undergoing the Law on Forestry amendment mechanism while also issuing derivative products such as Governmental Decrees.

The compensation funds or fines obtained from perpetrators in court may be allocated to recover the environment and to recover the health of victims who suffer from upper respiratory infection due to forest fires.

They may also be used to build health facilities for people who were exposed to smoke from forest fires [22]. The court that handled the forest fire cases has the right to improvise by burdening the health treatment fees of people who suffer from diseases due to the smoke from the forest fires to the corporations that caused the fires, apart from imprisonment and fines.

Conclusion

The handling of forest destruction and forest fires from the legal and health perspectives is not yet ideal. Law enforcement must be having a deterrent effect. Victims should have the opportunity to file a lawsuit against the guilty corporations to compensate for their medical treatment, medical treatment for the victims mostly out of pocket, and a small amount from the government.

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