

HAZE POLLUTION IN INDONESIA

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ABSTRACT

Haze pollution has been one of the most serious environmental catastrophes in countries with wide areas of forest, such as Indonesia. Efforts to combat haze pollution have been carried out at the national, regional and international levels. Adopting principles developed within international law arena such as sustainable development, precautionary principle, foreseeability, due diligence and good neighbourliness have been canvassed for every state in the world especially those having activities which have potential impact to cause transboundary pollution. Indonesia has been experiencing forest burns from time to time and trying to combat it ever since. National law has been developed, institutions have been designated, and mechanisms have been created. These efforts are however far from complete. Indonesia needs to go much further than what have been undertaken this far. A necessary way forward would be to ratify the 2002 Association of Southeast Asian Nations (ASEAN) Agreement on Transboundary Haze Pollution, which Indonesia fails to ratify.

This paper discusses the problems of haze pollution in Indonesia, the applicable rules under international law including the state responsibility doctrine, the mechanism developed within the ASEAN Agreement, what steps have been taken by Indonesian Government in combating haze pollution, and the need for Indonesia to ratify the ASEAN Agreement.

Keywords: Haze, Pollution, ASEAN, Indonesia

I. BACKGROUND

Haze pollution caused by forest fires in Indonesia do not only pollute the air of Indonesia; they also spread to other countries such as Brunei Darussalam, Malaysia, and Singapore. Indonesia's forest region is one of the largest in the world. Its forest area amounting to 109 million hectares (2003) makes Indonesia the owner of the third largest tropical rainforest in the world after Brazil and Congo.¹ However, the rate of deforestation in the tropics has been steadily increasing. Based on a global survey, during the years 1990 to 2000, the rate of deforestation in the world reached nearly 1 percent of all natural forests in tropical regions in the world.² According to the survey, about 14.2 million hectares were destroyed gradually, mostly caused by the conversion of tropical forests into plantations. Indonesia's forest fires have caused particular concern, as they impact other states as well. Three major conflagrations occurred in the period between 1982-1983, the period between 1991-1994, in 1997, as well as

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¹Robert AIKEN, "Runaway Fires, Smoke-Haze Pollution, and Unnatural Disasters in Indonesia in Geographical Review" (2004) 94 American Geographical Society 55.

²*Ibid.*, at 55.

in 2004 respectively.³ Haze pollution then happened almost every year in this area between June and September.

The recent haze disaster in ASEAN area was in June 2013 in which highly impacted Singapore and raised strong protest from Government of Singapore to Indonesian Government, which was quoted as the worst haze pollution sixteen years. This catastrophe has proven that haze pollution is beyond national issue relating to its transboundary movement in nature, thus the regional cooperation will be the only answer for enhancing the effort to combat haze pollution⁴.

Aiken has stated that fires in Indonesia have also been triggered by the activities of forestry-related industries, mainly due to forest clearing for palm oil and timber industries. The forests of Sumatra have mostly been used for oil palm plantations, while in Kalimantan they are generally used for wood and paper industries. Generally in Indonesia, forest fires are triggered by two main factors, namely prolonged drought and forest clearing. The problem is further aggravated by the fact that the fires are impacting not only the Indonesian population, but also neighbouring countries such as Malaysia, Singapore, and Brunei Darussalam.⁵

Indonesia has been experiencing difficulties in dealing with forest and land fires that cause haze; hence the need for cooperation among ASEAN member countries to cope with forest fires. The agreement that spells out the basis for such cooperation is the ASEAN Agreement on Transboundary Haze Pollution in 2002, which has been signed by all ASEAN member countries and has come into effect as from November 25, 2003. However, up to the present time, Indonesia has not ratified the Agreement. Calls urging the prompt ratification of the Agreement have continually received the same negative response from the Government of Indonesia; that Indonesia is not ready yet to ratify the treaty. One aspect of this standpoint has been the unpreparedness of the breadth and characteristics of easily combustible peatlands.⁶ Illegal timber supplies are also associated with the burning of land and the consequent land fires that have been occurring in Indonesia.⁷ For example, forest and peatlands fires have also occurred in the region of Central Kalimantan. Malaysia and Singapore as Indonesia's closest neighbours have therefore offered to help overcome the problem of illegal timber flow from Indonesia into these two countries.

This paper shows that the opening of new land has been conducted by performing large-scale and uncontrolled burning to meet the needs of industrial tree plantations, oil palm plantations and peatland projects. Thus, it argues that efforts to prevent forest and peatland fires, as well as strict enforcement against arsonists need to be improved effectively in Indonesia, particularly by ratifying the 2002 ASEAN Agreement, which provides a framework for doing so.

³*Ibid.*, at 63

⁴ Lee Poh Onn, "End In Sight to Haze Dilemma", ISEAS Perspective No. 39, 2013. Lee has identified that haze pollution involving ASEAN Countries is just another complicated matter that needs immediate attention of the ASEAN leaders.

⁵*Ibid.*, at 57.

⁶ "ASEAN Turun Tangan Hentikan Asap" ("ASEAN Takes Action For Halting the Haze") *Pusdatarawa* (5 September 2010), online: <http://www.pusdatarawa.or.id/index.php/2010/01/02/asean-turun-tangan-hentikan-asap/>

⁷*Ibid.*

This paper is divided into six sections. This introduction is the first. Section two discusses the experience of haze pollution in ASEAN region; section three examines the concept of state responsibility in international law and its relation to the transboundary haze pollution; section four observes the ASEAN Agreement on Transboundary Haze Pollution as a regional instrument aimed at tackling the problem of such pollution in the South East Asian territories; section five focuses its analysis on Indonesian National Policy concerning Forest Fire Management as it frequently be the main source location of forest fires that caused transboundary haze pollution. This article wraps up with a number of conclusions and recommendations that may improve the Indonesian Government's policy in managing haze pollution that crosses its boundary.

2. HAZE POLLUTION IN THE ASEAN REGION

A. *Cross-Border Haze Pollution*

Haze pollution is pollution that often cuts across national borders ("transboundary pollution")⁸, because it covers a large area and moves quickly between regions, regularly affecting adjacent countries as well as countries in Southeast Asia. Haze caused by forest fires in Indonesia spread quickly to Malaysia as well as to Singapore. Therefore, haze pollution is a sub-regional issue in ASEAN involving the original member countries of ASEAN. To overcome the problem of air pollution resulting from forest fires, cooperation is required among Indonesia, Malaysia, Singapore, Brunei, the Philippines and others.

B. *Forest Fires in Indonesia*

There has been a rather long history of forest fires in Indonesia. A fairly large fire occurred in East Kalimantan in 1982/1983 and 1997/1998. In the year 1982/1983, covering an area of forest fires burned on about 3.5 million hectares in East Kalimantan, which has been a record for the world's largest forest fires after forest fires in Brazil, which reached 2 million hectares in 1963. This record was subsequently broken again by Indonesian forest fires happened in 1997/1998 that burned forestland covering 11.7 million hectares. The largest fire occurred in Kalimantan with a total of 8.13 million hectares of land burned, followed by 2.07 million hectares on Sumatra, 1 million hectares on West Papua, 400,000 hectares on Sulawesi 100,000 hectares on Java.

Forest and land fires in Central Kalimantan in 2002 were the biggest environmental disasters experienced by Central Kalimantan after a similar event in 1997. Catastrophic fires that occurred this year mostly in the area, especially in Ex-Peatland Million hectares (Block C and beyond), the area of peatlands in Palangkaraya city area and its surroundings, as well as forest fires in several areas and forest plantations.

In the period of July through the end of July 2005, there were forest and land fires in Central Kalimantan. They were mainly caused by the beginning of the dry season as well as the habit of the people living in the surrounding areas who clear land by burning. Fires occurred mainly on the

⁸ David L. Alles shows in his paper that haze pollution has also been a threat in other areas around Asia. David L. Alles "Asian Air Pollution", Western Washington University, 2013.

CilikRiwut and Trans-Kalimantan Palangkaraya-Banjarmasin road, at Kilometer 98, KabupatenPulangPisau.⁹

Later in the period from July to September 2006, fires in forest areas in the district of Garut reached more than 677.8 hectares, while fires on land owned by the community spread even more extensively, reaching 1,005.5 hectares spread over several locations. This occurred as farmers were burning land in order to prepare the land for the rainy season, which is the planting period. Fires also occurred in clusters of Gunung Guntur reaching more than 130 hectares. Fires spread from block Awilarangan, Cungurbedul, and Pasirbajing.

In January to about mid-January 2009, forest and land fires occurred in the Riau Province. Fires continued to occur despite the rain with mild to moderate intensity, occurring in almost all cities / districts. Based on the United States National Atmospheric and Space Administration (NOAA) 18 satellite observation, two areas in Riau experienced forest and land fires. These two areas are the district and county of Palelawan Indragiri Hilir. In addition to RIAU, NOAA 18 monitoring has also indicated that there are 17 points of fire / hotspots in other areas on the island of Sumatra.¹⁰

Then, there was a fire in an area of approximately one hectare in the Lematang Kota Indah Pagaralam, South Sumatra in late October 2009. According to monitoring carried out, a fire broke out as some residents had burnt the land to be used as plantations, but once burned it was not attended to so that the fire spread out quickly, causing the flames to spread and burn down the protected forest area. However, fires did not expand, as they were extinguished promptly and successfully by the firefighters' team and assisted by the local community. Citizens have been encouraged not to burn forests to clear land for plantations, however violations and clearing land by burning the forest plantations continue to occur.¹¹

On February 22, 2009, forest fires occurred in an area of 10 hectares in Tanjung Pinang, Bintan Island. This was due to the drought that had lasted for 3 months and caused some of the forests on the island of Bintan flammable due to the irresponsible disposal of cigarette butts.¹² In addition, in September 2009 forest fires occurred and spread rapidly on Mount Lawu located on the border between East Java, Central Java. The fire continued to spread due to strong winds and hot weather and it was approaching the central part in Argo Dalem and Spring Drajad at the top of the mountain.¹³

⁹"KebakaranHutandanLahanMerambah Kalimantan Tengah" ("Forest and Land Fires Spread to Central Kalimantan") *TempoInteraktif*(16 September 2010), online: [TempoInteraktif<http://www.tempo.co.id/hg/nusa/kalimantan/2005/07/27/brk,20050727-64473,id.html>](http://www.tempo.co.id/hg/nusa/kalimantan/2005/07/27/brk,20050727-64473,id.html).

¹⁰ "KebakaranHutan di Riau Tidak Tersapu Hujan" ("Forest Fire in Riau is not swept by the rain") *Berita Sore* (16 September 2010), online: [Berita Sore <http://beritasore.com/2009/01/12/kebakaran-hutan-di-riau-tidak-tersapu-hujan/>](http://beritasore.com/2009/01/12/kebakaran-hutan-di-riau-tidak-tersapu-hujan/).

¹¹ "HutanLindungPagaralamTerbakar" ("Reserve Forest Pagaralam Burnt") *AntaraNews*(16 September 2010), online: [AntaraNews <http://www.antaranews.com/berita/1256912818/hutan-lindung-pagaralam-terbakar>](http://www.antaranews.com/berita/1256912818/hutan-lindung-pagaralam-terbakar).

¹²"KebakaranHutan" ("Forest Fire") *AntaraFoto*(16 September 2010), online: [AntaraFoto<http://www.antarafoto.com/peristiwa/v1266842105/kebakaran-hutan>](http://www.antarafoto.com/peristiwa/v1266842105/kebakaran-hutan).

¹³ "KebakaranHutanGunungLawu Makin Meluas" ("The Lawu Mountain Forest Fire Keeps Spreading") *Kompas*(16 September 2010), online: [Kompas<http://regional.kompas.com/read/2009/09/29/15085123/Kebakaran.Hutan.Gunung.Lawu.Makin.Meluas>](http://regional.kompas.com/read/2009/09/29/15085123/Kebakaran.Hutan.Gunung.Lawu.Makin.Meluas).

On January 17, 2010, hundreds of hectares of protected forest along the Pulai River which lies on the border between the city and county of TanjungpinangBintan, Riau Islands province, caught fire. The fire happened very fast and was largely caused by hot weather and strong winds. Based on information from residents, the fire originated from the region at the center of the cemetery in the protected forest area. It was suspected that there were people who burned trash when cleaning the tombs. Due to strong winds blowing, the fire spread out to hundreds of hectares¹⁴. Forest fires also occurred in October 2010, based on monitoring satellite Terra Modis Aqua conducted by Eyes on the Forest (EoF) in the period from October 18-21, 2010, when 172 hotspots were found in Riau Province, about 82 hotspots in the rest of the HTI concession, 90 points on land, with fire spreading to palm plantations, forests and grasslands¹⁵.

2. 1. Haze Pollution Prevention Efforts

Various diplomatic statements have been released by ASEAN member countries, including by Indonesia, which is arguably the main exporter of haze to some neighboring countries. Indonesia's position related to the problem of forest fires has expectedly been on the defensive side. It was mentioned in the "Declaration of War against Illegal Logging Practices and Forest Destruction" signed by the Minister of Environment that the entire Indonesian nation had declared war against the practice of illegal logging and forest destruction which were some of the main causes of forest fires.

As a neighbouring country located adjacent to Indonesia, forest fires occurring in Indonesia, particularly forest fire in Sumatra, directly affect Singapore. The most obvious impact of forest fires on Sumatra experienced by Singapore was the haze that swept across the territory of Singapore for a few days. When forest fires reoccurred in Indonesia in 2006 and the haze struck again Singapore, Malaysia urged Indonesia to ratify the ASEAN Agreement on Transboundary Haze Pollution, and the Indonesian government was criticized for the slow pace in addressing this issue. At the same time, Singapore demonstrated willingness to assist in handling the problem of forest fires in Indonesia. At a meeting held on October 13, 2006 in Manila, Borneo, Malaysia proposed rising regional funding for forest fires.

Similarly to Singapore, which is located adjacent to Indonesia, Malaysia, as Indonesia's neighbour has also been often the victim of haze caused by Indonesian forest fires, particularly fires in Sumatra and Kalimantan, affecting the state of Sabah and Sarawak on Borneo Island.

In response to the problem of forest fires in its member countries, especially Indonesia, ASEAN has expressed the desire to participate in tackling the problem of forest fires. The government of each member state has agreed to cooperate in tackling land and forest fires in all ASEAN countries. Such understanding between the governments of member countries was followed up by the formulation of ASEAN joint land and forest fire prevention.¹⁶

¹⁴ "Ratusan Hektar Lahan Hutan Lindung Terbakar" ("Hundred Hectares of Reserve Forest Burnt") *Yiela* (16 September 2010), online: Yiela <<http://www.yiela.com/view/861555/ratusan-hektar-lahan-hutan-lindung-terbakar>>.

¹⁵ Wahana Lingkungan Hidup Indonesia, "Kebakaran Hutandan Lahan Gambut di Riau" ("Forest and Peatland Fire in Riau") *WALHI* (16 September 2010), online: WALHI <<http://www.walhi.or.id/in/kampanye/hutan-dan-perkebunan/147-siaran-pers/1999-kebakaran-hutan-dan-lahan-gambut-di-riau>>.

¹⁶ 2006 Southeast Asian Haze" <http://en.wikipedia.org/wiki/2006_Southeast_Asian_haze>.

In connection with forest fires occurring in Indonesia, ASEAN member countries have understood that Indonesia has been making intensive efforts to address haze. The ASEAN delegations also agreed to conduct a meeting in early November 2006, to conduct workshops with experts and bring cutting-edge tools for tackling fires.¹⁷ In conjunction to a commitment to address the problem of forest fires together, on October 21, 1994 ASEAN held an informal meeting of environmental ministries in Kuching, Sarawak, Malaysia, to discuss the air pollution that crosses state boundaries. Conceptually, the Ministers agreed to cooperate in managing natural resources and control transboundary pollution in the ASEAN region as a single ecosystem. As a result of the said meeting, the ASEAN Meeting on the Management of Transboundary Pollution was held in Kuala Lumpur in June 1994. This meeting adopted the *ASEAN Cooperation Plan on Transboundary Pollution* surrounding atmospheric pollution, movement of hazardous wastes and ship pollution.¹⁸

In resolving this problem, the USA and the EU have provided technical assistance, such as satellite imagery managed by the United States National Atmospheric and Space Administration (NOAA) that detects fire directly and provides important information in the fight against forest fires. ASEAN ministers requested the Asian Development Bank (ADB) to finance the ASEAN Regional Haze Action Plan (RHAP).¹⁹

In 1999, ASEAN adopted a strict policy of so-called “Zero Burning Policy”. This policy was adopted to remove the burning action in clearing land for agricultural fields. This policy encourages ASEAN member countries to implement laws and other regulations relevant to the policy. In the year 2001, the implementation of the “Zero Burning Policy” proved extremely difficult in each member state. The 12th Meeting of the ASEAN Senior Officials on the Environment approved a two-step strategy to be adopted by member states. In the short term, the strategy is to continue the efforts of existing programs to enhance public awareness and also to develop procedures and techniques of controlling the combustion method on land. As for the long-term strategy, its main purpose is to prevent all forms of open burning during the west monsoon.²⁰

In line with the short-term strategy to increase public awareness, the Ministry of Environment-Ministerial ASEAN issued the ASEAN-Asian Development Bank publication (entitled Fire and Haze - the ASEAN Response Strategy) at the 6th Informal ASEAN Ministerial Meeting on the Environment. The most important development was the start of negotiations on the ASEAN Agreement on Cross-Border Pollution Haze in cooperation with the United Nations Environment Programme (UNEP) and the Hans Seidel Foundation. Four Intergovernmental Meetings were held, and the treaty

¹⁷ “ASEAN Turun Tangan Hentikan Asap” (“ASEAN Takes Action For Halting the Haze”) *Pusdatarawa* (5 September 2010), online: Pusdatarawa <<http://www.pusdatarawa.or.id/index.php/2010/01/02/asean-turun-tangan-hentikan-asap/par.6>>.

¹⁸ KOHKheng-Lian and Nicholas A. ROBINSON, “Strengthening Sustainable Development in Regional Inter-Governmental Governance: Lessons from the ‘ASEAN Way’” (2002) 6 *Singapore Journal of International and Comparative Law* 640 at 654-655.

¹⁹ *Ibid.*, at 656.

²⁰ Davinia FILZA, Geradine G. MEISHAN, Ernest L.W. KUAN, “South East Asia and International Law: July -- December 2001” (2001) 5 *Singapore Journal of International and Comparative Law* 814 at 841.

was ready for signature at the 7th ASEAN Summit in Brunei. However, the summit ended without a signed agreement.

Brunei, Singapore, Malaysia and Indonesia continued joint efforts at the sub-regional level in the 7th Joint Meeting of the Working Groups for the Sub-Regional Fire-Fighting Arrangements for Sumatra and Kalimantan. The ASEAN Agreement on Transboundary Haze Pollution was finally formed as a clear legal instrument for ASEAN countries related to the handling of haze. This agreement was made in 2002 and came into force on November 25, 2003. Until now, there are 7 countries participants, namely Singapore, Malaysia, Myanmar, Brunei, Vietnam, Thailand, and Laos. The main purpose of this agreement is to prevent and monitor transboundary haze through regional cooperation. This agreement also laid some of the obligations and rights for the country participants.²¹

At the 12th ASEAN Summit 2007 held in Cebu, the Philippines, ASEAN also reiterated its position concerning the problem of transboundary haze pollution affecting ASEAN countries every year. The following is stated in one of the points of the declaration of Cebu:²²

We discussed the transboundary haze pollution in the region and noted the work of the ASEAN Environment Ministers in developing effective strategies to address this problem and in mobilizing resources to implement the Plans of Action in Dealing with Transboundary Haze Pollution. We stressed the importance of bringing the Haze issue to the attention of other countries and international organizations. We noted the ASEAN Environment Ministers That Had adopted the Cebu Resolution on Sustainable Development to address critical environmental problems and persistent that generates economic and social dislocations. We also agreed to work on an ASEAN Leaders Declaration on Environmental Sustainability to be issued at our next Summit in Singapore.

All of the above statement demonstrates ASEAN's standpoint and serious concern about this issue, as well as its preparedness to make its best endeavors in order to overcome it.²³

2.2 STATE RESPONSIBILITY

A. General Principles of Liability

State responsibility in international law refers to the obligations of one state against another to carry out the obligations imposed by the international legal system. State responsibility is a complex issue. The main aspects of modern law concerning the responsibility of developing countries have historically been based on cases of violations of the law concerning the treatment of foreigners and so-called international minimum standards. Countries are not obliged to recognize stranger foreigner in their territory, but if such foreigner has permission to reside in the country, the State must treat them in a civilized manner. A country is considered guilty under international law when it causes potential injury to a stranger at a time when they are outside its territory. States must refrain from any government action in the territory of another country, without the consent of that other country.

²¹ Alan Khee-Jin TAN, "The ASEAN Agreement on Transboundary Haze Pollution: Prospects for Compliance and Effectiveness in post-Soeharto Indonesia" (2006) 13 New York University Environmental Law Journal 647 at648.

²²Cebu Declaration, "One Sharing and Caring Community" (January 2007), online ASEAN <<http://www.aseansec.org/19280.htm>>.

²³ See Note 4.

Failure to comply with minimum international standards has the consequences of 'generating the international responsibility of a country, and countries where the injured citizens may exercise diplomatic protection rights', i.e. by filing a claim, through diplomatic channels, to which other countries, in order to obtain compensation or other forms of other compensation. Such claims are usually resolved through negotiation; otherwise, if both parties agree, they can be handled by arbitration or legal settlement.

1. *Use of Terms*

Linguistic deficiency in English language and lack of proper grasp of the grammatical differences between "responsibility" and "liability" creates further difficulty in distinguishing between State Responsibility and the State's International Liability. The continental law vocabulary to express the idea of "liability" is the term "responsibility" or "civic responsibility". So, "state responsibility" refers to the responsibilities of States under international law in general, while "international liability" indicates a "states' civil responsibility", or the obligation to pay compensation or make repairs for the damage to foreign nationals who suffered outside national boundaries as a result of activities within its territory or under its control. A State has an international obligation not only under international law, but also in the national dimension of national legal systems in a state that involve transnational relationships.

According to Xue Hanqin, responsibility is a legal duty to answer the consequences of a wrong. At the same time, liability describes the legal responsibility to provide repair and compensation arising from damage due to breach of duty. Thus, responsibility is a broader concept which also includes liability when damage occurs.²⁴

According to Philippe Sand, liability is an obligation to make repairs. However, he does not elaborate on the definition of responsibility. He further argues that liability is portrayed differently. According to Dupuy and Smets, liability is an international obligation to compensate. Meanwhile, according to Goldie, the definition of liability is as follows:²⁵

The consequences of a failure to perform (a) duty or to fulfill the standards of performance required. That is, liability connotes exposure to legal redress once responsibility and injury arising from a failure to fulfill that legal responsibility have been established.

According to Peter Malanczuk, responsibility and liability are often used interchangeably, although each of these two terms has different meanings. Liability is often used to mean the obligation to pay compensation and also refers to the state's obligation arising as adverse consequences of harmful actions where the action is not prohibited by international law.²⁶ Peter Malanczuk's opinion is in line with the opinion of Patricia Birnie and Alan Boyle. According to them, liability is a liability within the terminology to describe the activities allowed under the law (lawful activities); while

²⁴ Patricia BIRNIE and Alan BOYLE, *International Law and the Environment*, 2nd ed. (Oxford: Oxford University Press, 2001) at 183.

²⁵ Philippe SANDS, *Principles of International Environmental Law*, 2nd ed. (Cambridge: Cambridge University Press, 2003) at 878.

²⁶ Peter MALANCZUK, *Akehurst's Modern Introduction to International Law*, 7th ed. (Great Britain: Routledge, 1997) at 254.

responsibility is used to describe activities that are prohibited by law (wrongful acts).

The opinion of Peter Malanczuk, Patricia Birnie and Alan Boyle is in line with the work of the International Law Commission. In a draft article about state responsibility, it appears that responsibility arises when there is a violation of international law by the state. In addition, the ILC has also completed another draft, entitled International Liability for Injurious Consequences Arising out of Act Not Prohibited by International Law. It is evident from the title of this draft that liability can be enforced when such liability arises from an adverse action, which is not prohibited by international law. In terms of liability, it means that the regulations are the result, rather than the action taken. However, because this draft is still new, so there have been no cases resolved on the basis of the existing principles.

2. 3. DEVELOPMENT OF CONCEPTION

Responsibility of the state was originally conceived as a set of international rules governing a state's international obligations in their relations with other States. A State has the primary obligation to pay compensation or make reparations for the damage suffered by citizens of another State. In traditional international law, the responsibility of the State is the classic way in dealing with violations of customary international law. From the perspective of countries suffering damage, the responsibility of the State represents the power of the State to protect its citizens beyond national boundaries or implementation by the State of rights and obligations. A State has traditionally been empowered to extend diplomatic protection to its citizens wherever they are located, including the territory of other States. Aspects of customary international law have been known as the "diplomatic protection of citizens abroad". The State of the injured is in power under diplomatic protection or improvements to demand compensation for citizens who were injured, loss of life, economic or financial injury, including loss of property or assets; and property damage, including loss of investment, expropriation, nationalization and confiscation of property owned by foreigners.

The term "diplomatic protection" has never been limited to diplomacy or diplomatic channels to negotiate a settlement of international claims. In contrast, the adjective "diplomatic" refers to the level of "government" protection, which can include any means adopted by the State that suffered losses. Thus, under traditional international law, a State may use force to compel payment of debts to other countries of the foreign country's debt to one of its citizens. Citizens here include natural or juridical persons, such as corporations or business entities. A State collecting private debts of other countries was common in the western hemisphere at the time of the Hague Peace Conference in 1899 and 1907 respectively. Following the end of World War I, the community eventually denounced the use of violence or war as an instrument of national policy.

Indeed, for some countries, notably the United States, the law of State responsibility basically means responsibility for aliens who are disadvantaged as well as the diplomatic protection of nationals abroad. In the early stages, the responsibility of State was not only regarded as a major component of international law, but it was also considered as the exclusive territory law of nations. In the primitive stage, international law provided the basis for giving the use of force to enforce the payment of compensation or loan repayment, even in the international arena. European practice and the Inter-American

countries produce a lot of dispute resolution related losses suffered by strangers and mingled with the claims commission, as well as other types of international arbitration, conciliation and mediation, including good offices and fact-finding mission.

Personal injury and economic loss suffered by a foreigner were at first restored by resolving at the local level, which could go on indefinitely. Shortly thereafter, the rules of exhaustion of local remedies were developed, which require the presence of exhaustion of local remedies before the country where foreigners who suffered losses can support or take over a claim against another State of its citizens. These requirements form an integral part of the law of State responsibility for aliens who suffered losses, as has been well established in the Trail Smelter Case.

2. 4. STATE RESPONSIBILITY IN HAZE POLLUTION

A State has the right to exploit its natural resources in accordance with its environmental policy. However, in doing so, the State concerned also has the responsibility to ensure that the activities related to the utilization of natural resources do not interfere with the rights of other nations. This principle is derived from Roman law, which reads *ut sic uteretur non laedas* or the principles of good neighborliness.²⁷ This principle has been widely accepted in international environmental law.

However, occasionally, the activities conducted in a country may be detrimental to its neighbors or other nations. If such is the case, the activities of a country that are detrimental to other countries is a violation of international law, hence the country concerned must take responsibility for its actions as expressly provided for in the ILC draft on State's Responsibility 2001.

In the context of environmental contamination or cross-border pollution, the State has two main functions, namely as follows:²⁸

1. To support preventive legislation with treaty or customary law; and
2. To grant the right to compensation and improvement to the polluted State.

The State has the obligation to prevent any cross-border pollution coming from such State. This is not an obligation to prevent pollution only directly, but also indirectly, and if pollution hazard occurs, there is an obligation on the part of the State concerned to prevent it from spreading, including the obligation to reduce its impact.

States have the obligation to prevent the pollution of air passing across their state border. In connection with Transboundary Pollution, the international obligation of a State, based on the accumulation of state practice, arbitral awards and the writings of experts, is to prevent damage caused by cross-border incident. "The duty to prevent is a form of due diligence". In connection with state instruments, the State concerned should exercise due diligence in order to prevent damage across national boundaries arising from actions taken by the organs, agencies, or state representatives as required by

²⁷Huala ADOLF, *Aspek-Aspek Negara dalam Hukum Internasional* (Aspects of State in International Law), (Jakarta: PT RajaGrafindo Persada, 2002)at 305.

²⁸Roda VERHEYEN, *Climate Change Damage and International Law Prevention Duties and State Responsibility*, (Leiden: MartinusNijhoff Publishers, 2005)at 232.

international law. In connection with damage caused by private actors, the government needs to exercise due diligence to prevent and punish such acts, whereas in cases where the State is the actor, it is considered that the State concerned has violated its international obligations. Accordingly, in the context of environmental damage, the State has the obligation to exercise due diligence in order to prevent private actors within its territory from doing transboundary environmental harm to other countries or to areas beyond its national jurisdiction. The State also has the obligation to punish perpetrators. At the same time, States should not violate the obligation to prevent losses in the territory of another State.

When a State is clearly responsible for environmental damage, it is obligated to make improvements as a consequence of the previously described breach. In most cases of environmental pollution, the aggrieved party usually requires that violations be stopped, restitution or financial compensation be paid to cover any costs incurred in connection with material damage to natural resources and human suffering. However, it is rather difficult to assess compensation in accordance with the environmental damage that has occurred.

Before determining whether or not a country is responsible for an environmental damage, it should also be determined whether the country's responsibility is absolute (strict / absolute liability), or liability under fault (fault liability). International law has no clear standards for the form of accountability; rather, it is determined based on each individual case.

The Stockholm declaration of 1972, which became part of customary international law in international environmental law explains under Principle 22 that the State should work together to develop international law on 'liability' and compensation for victims of pollution and other environmental damage caused by activities within the jurisdiction of a State against the territory outside the jurisdiction of such State.

According to David Hughes, transboundary pollution is the inclusion of material or energy into the environment caused by human actions, which have a bad influence on the environment, ecosystems, property, comfort, and enjoyment of the environment in which the contamination is derived in whole or in part of a country then occupied the territory of another country.²⁹ Transboundary pollution causes environmental damage that crosses national boundaries. According to Professor O. Schacter, there are four conditions that must be met in assessing whether damage is transboundary environmental damage, namely as follows:

1. defects must be caused by human activity;
2. damage should be a physical consequence of such human activities;
3. it must have influence across the territory of another country;
4. defects must bring a significant and substantial impact.

The ILC Draft on International Liability for Injurious Consequences Arising from Law Not Prohibited by International Law (hereinafter referred to as the ILC Draft Liability) is a draft issued by the International Law Commission relating to the accountability of the State in cross-border pollution caused by activities not prohibited by international law. ILC Draft

²⁹ David HUGHES, *Environmental Law*, 2nd ed. (London: Butterworths, 1992) at 60.

Liability consists of two sub-sections, namely: Prevention of Transboundary Harm from Hazardous Activities³⁰ and the Draft Principles on the Allocation of Loss in the Case of Transboundary Harm Arising Out of Hazardous Activities.³¹ In the first subsection, it is explained that cross-border environmental damage should be a significant transboundary damage that is “...something more than” detectable, but needs not be at the level of “serious” or “substantial”.

3. ASEAN AGREEMENT ON TRANSBOUNDARY HAZE POLLUTION

3. 1. Concept

In the regional scope of ASEAN, ASEAN member countries have agreed on Transboundary Haze Agreement (hereinafter referred to as the Agreement). Ten (10) ASEAN member countries signed this Agreement on June 10, 2002 at the time of the World Conference and Exhibition on Land and Forest Fire Hazards, in Kuala Lumpur, Malaysia. Under Article 29 of the Treaty, the Treaty can enter into force sixty days after ratification by six countries. Accordingly, the Agreement came into force on November 25, 2003 after Brunei Darussalam, Malaysia, Myanmar, Singapore, Vietnam, and Thailand ratified it.

According to this Agreement, transboundary air pollution (particularly haze) is a “haze pollution ... whose physical origin is situated wholly or in part within the area under the national jurisdiction of one Member State and which is transported into the area under the jurisdiction of another Member State”.

The ASEAN Agreement on Transboundary Haze Pollution was the first regional treaty regulating the handling of cross-border air pollution problems caused by forest and land fires in the ASEAN region. This Agreement contains provisions on monitoring, assessment and prevention, technical cooperation and scientific research, mechanisms of coordination, communication lines and simplification of immigration procedures for disaster management. Furthermore, the ASEAN Coordinating Centre for Transboundary Haze Pollution Control was established to function as a coordination center in dealing with various activities to be undertaken under this Agreement.

3. 2. Fundamental Principles

The Agreement consists of 32 Articles and an Annex, which contains the settings in the management of transboundary air pollution in the ASEAN regional scope.

Article 1

Article 1 contains definitions of terms used in the Agreement, namely assisting Party, Competent Authority, controlled burning, fire prone areas, focal point, and haze pollution. It also sets out the coverage of the Agreement.

³⁰ International Law Commission (a), Prevention of Transboundary Harm from Hazardous Activities as adopted by International Law Commission in 2001.

³¹ International Law Commission (b), Draft Principles on the Allocation of Loss in the case of Transboundary Harm Arising Out of Hazardous Activities, adopted by International Law Commission in 2006.

Article 2

Article 2 of this Agreement includes the formulation of the Agreement, stating that the main goal is to prevent and control transboundary air pollution, to be dealt with by making endeavors nationally and regionally, as well as through intensive international cooperation.

Article 3

Article 3 contains the general principles applied in the Agreement, namely as follows:

1. *State Sovereignty Principle (Principle of Sovereignty)*

States Parties, in accordance with the provisions in the UN Charter and principles of international law, hold sovereignty to exploit their natural resources. However, these countries must remain responsible for ensuring that the actions undertaken within the scope of their jurisdiction do not cause damage to the environment or endanger human health in other countries or in areas that are outside their jurisdiction.

2. *Solidarity and Partnership Principles (Principle of Solidarity and Partnership)*

The Contracting Parties shall have the spirit of solidarity and cooperation in matters relating to the needs, abilities, and situation, enhance cooperation and coordination to prevent and monitor transboundary air pollution from forest or land fires.

3. *Precautionary Principle*

States Parties should take precautionary measures to anticipate, prevent and monitor transboundary air pollution caused by forest or land fires that must be addressed to reduce the adverse effects caused. Although there is no scientific certainty, preventive measures should be taken by the country concerned if there is a serious threat or damage difficult to repair due to transboundary air pollution.

4. *Principles of Management (Management Principle)*

The Parties shall manage and use natural resources including forests and land owned properly and sustainably.

5. *Principles of Engagement (Involvement Principle)*

In addressing transboundary air pollution, States Parties must involve all stakeholders, including local communities, non-governmental organizations, farmers and private parties.

Article 4

Article 4 sets forth the obligations that must be implemented by the States Parties in order to achieve the purpose of formulating the Agreement. These obligations are as follows:

1. Mutual cooperation in implementing measures to prevent and monitor transboundary air pollution caused by forest or land fires and also to control the sources of fire, including identifying the fire, monitoring the development of outcome, assessment and early warning systems, exchange of information and technology-based mutual assistance.
2. Respond immediately in case of transboundary air pollution originating from its territory, request relevant information or seek advice from another country in order to minimize the consequences that may occur.

3. Take the necessary legislative, administrative, or other action to carry out their obligations under the Agreement.

Article 5

Based on Article 5, in an effort to address transboundary air pollution, the ASEAN Coordinating Centre for Transboundary Haze Pollution Control (hereinafter referred to as the ASEAN Centre) is to be formed. The agency is to facilitate cooperation and coordination among Member States in addressing the consequences of forest or land fires, in particular transboundary air pollution caused by these fires. However, the national bodies need to state it as an emergency situation prior to applying for assistance from the ASEAN Centre.

Article 6

Under Article 6, each Contracting Party shall designate one or more competent bodies and a focal point that is authorized to implement administrative functions. Other Participant countries and the ASEAN Centre should be notified about such agency or focal point. They also need to be notified promptly there are changes to such competent body. The ASEAN Centre shall provide this information periodically to the other Participant countries and other relevant international organizations.

Article 7

Article 7 requires the Parties to take adequate measures to monitor:

1. all fire-prone areas;
2. all land or forest fires experienced;
3. environmental conditions in the vicinity of land or forest fire;
4. a pollution originating from forest or land fires.

Each State Party is also obliged to designate one or more entities serving as the National Monitoring Centre in order to constantly monitor compliance with their respective national procedures. In the event of fires the States Parties shall promptly take action to resolve them.

Article 8

Under Article 8, every Contracting Party shall ensure that the National Monitoring Centre communicates with the ASEAN Centre, either directly or through the focal point; the data obtained relating to fire-prone areas, land or forest fires, environmental conditions and air pollution due to the fire. The ASEAN Centre shall receive, consolidate and analyze data obtained from the National Monitoring Centre or focal point. Based on the data obtained, to the extent possible, the ASEAN Centre provides an assessment through the focal point of each of the risks to human health or the environment caused by transboundary air pollution.

Article 9

Under Article 9, each Contracting Party shall take measures to prevent and control the activities carried out on land or forest which can lead to land or forest fires, including the following:

1. develop and implement actions, programs, and strategies to promote the policy of zero burning policy to deal with forest fires;

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2. develop appropriate policies to prohibit activities that can trigger forest fires;
 3. identify and monitor areas prone to fire;
 4. strengthen local fire management and improve their ability to cope with fires and coordinate in preventing the occurrence of forest or land fires that can lead to transboundary air pollution;
 5. promote public education, build awareness and strengthen participation in management to prevent forest or land fires;
 6. promote and use indigenous knowledge through training in fire prevention; and
 7. ensure that legislative, administrative and other relevant measures can be taken in order to control open burning and can prevent clearing by burning.

Article 10

According to Article 10, States Parties shall, either jointly or individually, develop strategies and response plans to identify, manage and control risks to human health and the environment arising from forest or land fires. The State are obligated to prepare a standard operating procedure in implementing regional cooperation and national action required under this Agreement.

Article 11

Article 11 obligates the Parties to ensure that legislative, administrative and financial actions may be taken to operate the equipment, materials, human resources and financial resources to respond to and handle the consequences arising from forest or land fires. State Parties are obliged to exchange information with each other and with the ASEAN Centre on the implementation of such measures.

Article 12

Under Article 12, a country needs assistance in coping with forest or land fires in its territory, it can apply for assistance to other participant countries either directly or through the ASEAN Centre, or to other related countries or international organizations. Assistance can be provided upon request and with the consent of the requesting State or offered by the State or other parties with the approval of the State that is to receive assistance.

Each State Party which requested assistance directly or through the ASEAN Centre must make a quick decision and inform promptly as to whether or not it will accept assistance. The state Participants who offered to help is expected to do the same. The State requesting assistance shall specifically describe the scope and type of assistance required and, if feasible, the State offering aid is to provide the information needed to determine whether such assistance has been requested in accordance with such description. If the State requesting assistance cannot describe the specifics of the scope and type of assistance required, the requesting State and the State offering aid may consult with each other to determine it mutually. States Parties may, at its limits, identify and notify the ASEAN Centre about the experts, equipment and materials that can be used to help the other participating countries in case of forest or land fires or trans-boundary air pollution.

Article 13

According to Article 13, the State requesting assistance or a recipient country should implement overall guidance, control, coordination and supervision assistance in each region. Before assigning personnel, the aid recipient should consult with the beneficiaries and explain about the personnel who will be in charge, and about the supervision of personnel and equipment which have been provided. The personnel assigned shall implement the oversight function through cooperation with other competent agencies in recipient countries. The State of the donor or recipient must provide adequate local facilities and services, as well as effective administration of such assistance. Furthermore, the protection of personnel, equipment and materials brought into the territory of the recipient country should also be guaranteed, as well as coordination with each other in the territory of each respective country.

Article 14

According to Article 14, the request or acceptance of the other party shall be in accordance with the aid of personnel acting on behalf of such party. The donor and recipient party agree to exempt the aid from tax provisions, duties or other levies on equipment and materials brought for the purpose of providing assistance. The beneficiary or other aid party should facilitate entry permits, residence permits as well as the departure of personnel and equipment and materials used.

Article 15

Under Article 15, any interested party should urge others to facilitate the transit permit in the territory of the other party to the personnel assigned to provide assistance.

Article 16

In order to improve preparedness and minimize risks to human health and the environment arising from land or forest fires or transboundary air pollution, Article 16 requires the parties to carry out technical cooperation, including the following:

1. facilitate and undertake actions inside and outside the parties;
2. promote the standardization of reporting formats for data and information;
3. promote the exchange of relevant information, expertise, technology and engineering;
4. provide or arrange the relevant training, education, awareness-raising campaigns, particularly in promoting zero burning practices and the influence of air pollution on human health and the environment;
5. develop and create techniques in controlling combustion, especially for small farmers and exchange experiences in controlling combustion;
6. facilitate the exchange of experiences and information among the relevant implementing agencies of the parties;
7. promote market development for the use of biomass and the appropriate method for the disposal of agricultural waste;
8. develop training programs for firefighters at the local, national and regional levels; and

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9. strengthen and enhance the technical capacity of the parties to implement this agreement.

The ASEAN Centre is to facilitate technical cooperation activities in implementing all of the above.

Article 17

According to Article 17, the parties may jointly or individually enter into cooperation with international organizations, to promote and support scientific research programs and related technical root causes, the consequences of transboundary air pollution, methods, techniques and equipment for the management of land, including forest fires or fire departments.

Article 18

Conference of the Parties established under Article 18. The first meeting of the conference proposed by the Secretariat is to be held not later than one year after the agreement comes into force. Following that, regular meetings are to be held once a year with respect to important ASEAN meetings. Extraordinary meetings may be held any time upon request of either party and supported by at least one other party.

Conference of the Parties shall continue to maintain the continuity and evaluate the implementation of the Agreement, which is expected to:

1. take such measures as may be necessary to ensure the effective implementation of the Agreement;
2. consider the reports and other information obtained from one of the parties through the Secretariat;
3. consider and adopt protocols in accordance with Article 21 of the Agreement;
4. consider and adopt any changes to the Agreement;
5. adopt, examine and amend the Annex of the Agreement;
6. establish subsidiary body in the context of the Agreement, and
7. consider and take additional action for the attainment of the objectives of the Agreement.

Article 19

The Secretariat established under Article 19 has the following functions:

1. organize and hold conferences of the parties and other bodies established under the Agreement;
2. send notifications, reports and other information received in connection with the Agreement to the parties;
3. consider the information and information from the parties and consult with the parties on questions arising in connection with the Agreement;
4. ensure the necessary coordination with other relevant international bodies, especially in terms of administrative arrangements required in order to fulfill the functions of the Secretariat; and
5. running other functions mandated by the parties.

The ASEAN Secretariat will serve as Secretariat based on mandate under the Agreement.

Article 20

The ASEAN Transboundary Haze Pollution Control Fund (hereinafter referred to as the ASEAN Fund) is established pursuant to Article 20 of the Agreement. The ASEAN Fund must be registered with the ASEAN Secretariat based on the instructions of the Contracting Party in the Conference. Based on the decision of the Conference, the States Parties are obliged to make voluntary contributions in the ASEAN Fund. In addition, the ASEAN Fund will also be directed to be able to receive contributions from various other sources that became the subject of the Agreement or based on the consent of States Parties.

Article 21

Under Article 21, the parties must cooperate with each other in making and adopting the Agreement protocols, determine the actions agreed, procedures and standards for the implementation of the Agreement. At the meeting of the Conference, the State may adopt a protocol to the treaty with approval by consensus of all States Parties. The material of the proposed protocol shall be communicated to all States Parties through the ASEAN Secretariat at the minimum of six months before the meeting is held. Requirements for the validity of the protocol should be made based on existing provisions.

Article 22

According to Article 22, each State Party may propose amendments to the Agreement. The materials of the proposed amendment shall be communicated to other parties through the ASEAN Secretariat at the minimum of six months before the Conference with the adoption of the agenda implemented. The ASEAN Secretariat shall also distribute the proposed amendment to States signatory to the Agreement. Amendments must be adopted by consensus at the time of regular meeting of the Conference of the Parties. Amendments to the Agreement shall be subject to acceptance by States Parties. The Depository shall distribute the amendment which would be adopted to all parties to obtain acceptance. The amendment can take effect 30 days after the receipt of instruments of acceptance from all parties. After the amendment becomes effective, the new party in the Agreement shall be accepted as a party to the treaty as amended.

Article 23

Under Article 23, unless otherwise stated, the Annex of the Agreement forms an integral part of the Agreement and the Agreement is also stated as a reference to the Annex. Annex Agreements must be adopted by consensus in a regular meeting of the Conference of the Parties. Any Party may propose amendments to the Annex where the amendment should be adopted by consensus at the regular meeting of the Conference of the Parties. Annex and the amendments to the Annex shall be subject to acceptance of the States Parties. The Depository shall distribute the annex or amendment to the Annex to be adopted to all parties in order to gain their acceptance. Annex and the amendments to the Annex shall enter into force 30 days after the receipt of instruments of acceptance from all parties.

Article 24

According to Article 24, in the first Conference of States Parties by consensus adopt rules and procedures for the parties and the financial rules for the ASEAN Fund to determine the financial participation of the parties in the Agreement.

Article 25

According to Article 25, the parties may provide reports to the ASEAN Secretariat on actions that have been undertaken in carrying out the provisions of the Agreement.

Article 26

According to Article 26, the provisions contained in the Agreement do not create any rights and obligations to any party in a convention or other agreement to which they are parties.

Article 27

Under Article 27, disputes arising between the parties, both regarding the interpretation or application of, or compliance with the Agreement or any other protocol should be resolved amicably through consultation or negotiation.

Article 28

According to Article 28, the Agreement may be subject to ratification, acceptance, approval or accession by all States Parties. The Agreement is open for accession from the date on which it is completed and formulated for signature. Instruments of ratification, acceptance, approval or accession are to be submitted to the Depository.

Article 30

Under Article 30, unless stated otherwise in the Agreement, no reservation is permitted under the Agreement.

Article 31

Under Article 31, the Agreement must be submitted to the Secretary General of ASEAN who will immediately deliver a certified copy of the same to all States Parties.

Article 32

According to Article 32, the Agreement must be written in English and it shall become an authentic manuscript.

3. 3. Related Regulations

The Agreement has Annex I with the Terms of Reference of the ASEAN Co-ordinating Centre for Transboundary Haze Pollution Control (hereinafter referred to as the ASEAN Centre). This Annex specifies the tasks of the ASEAN Centre, which are as follows:

- a. Create and maintain regular contact with the National Monitoring Centres regarding data, including the ones derived from satellite and meteorological observations associated with:

- 1) land or forest fires;
 - 2) environmental conditions conducive to fire; and
 - 3) quality and level of pollution primarily a result of these fires.
- b. Receive data from the National Monitoring Centres or Focal Points to be analyzed and processed into a format that is easily understandable and accessible;
 - c. Facilitate cooperation and coordination among the parties to improve readiness and response to forest or land fires or air pollution caused by such fires;
 - d. Facilitate coordination among the parties, other States and relevant organizations in taking effective action to tackle forest or land fires or air pollution generated;
 - e. Creating and maintaining lists of experts both contained within and outside the ASEAN region whose expertise can be utilized in taking action to address the impact of forest or land fires and see to it that the list is always available to all parties;
 - f. Create and maintain a list of equipment and technical facilities both inside and outside the ASEAN region which can be used properly when taking action to address the impact of forest or land fires and see to it that the list is always available to all parties;
 - g. Create and maintain lists of experts both contained within and outside the ASEAN region for the purposes of training, education and awareness-raising campaigns and see to it that the list is always available to all parties;
 - h. Create and maintain contacts with other countries to prospective donors and organizations to mobilize financial resources in order to prevent and overcome forest or land fires or air pollution generated and the readiness of the parties including the capacity of fire fighting units;
 - i. Create and maintain a donor list and see to it that the list is always available to all parties;
 - j. In response to a request or offer assistance in case of forest or land fires or air pollution is caused, it must:
 - 1) send a quick request for aid to other countries or other organizations; and
 - 2) coordinate such assistance if requested by another party or offered by State aid;
 - k. Create and maintain information systems for the exchange of relevant information, expertise, technology, engineering and pursue all these matters in a manner that they are always available to other parties in an easily accessible format;
 - l. Collect and disseminate information to the parties regarding the experience of the ASEAN Centre and other information relating to the implementation of the Agreement; and
 - m. Assist the parties in preparing Standard Operating Procedures (SOP).

4. INDONESIAN NATIONAL POLICY ON FOREST FIRE MANAGEMENT

4.1 *Indonesian National Legislation*

At the national level, Indonesia has had quite a lot of legislation regulating the environment in general, and specifically in the field of forestry. A description

of legislation that accommodates cross-border air pollution problems is provided below.

1. *Law Number 32 Year 2009 on Environmental Protection and Management*

Pursuant to Article 3 sub-article (a) of this Law, one of the objectives of environmental protection and management is to protect Indonesia from pollution and / or damage to the environment. It is further set forth in Article 13 paragraph (3) that the control of contamination and/or environmental damage is undertaken by the Government, the local governments, and those responsible for business and / or activities in accordance with their respective authorities, roles and responsibilities.

According to Article 21, standard environmental damage criteria for determining the occurrence of environmental damage are established, consisting of standard criteria or damage and standard criteria of damage to the ecosystem caused by climate change. Article 22 requires every business and / or activity that impacts the environment to possess Amdal (Environmental Impact Analysis). The criteria for businesses and / or activities which have a significant impact, and which must be equipped with Amdal according to Article 23, include the following:

- a. alteration of land form and landscape;
- b. exploitation of natural resources, both renewable and non-renewable;
- c. processes and activities that can potentially cause pollution and / or environmental damage and waste and deterioration of natural resources in their utilization;
- d. processes and activities which may affect the natural environment, built environment, as well as social and cultural environment;
- e. introduction of plants, animals and micro organisms;
- f. manufacture and use of biological and non-living substances;
- g. activities that have a high risk and / or affect the State's defense and / or
- h. application of technology with a high level of potential to affect the environment.

Every business and / or activity not included under the mandatory criteria must possess *AMDAL* (Environmental Impact Analysis) as mandated by Article 34 paragraph (1). Every business and / or activity which is required to possess *AMDAL* or Environmental Management Effort and Environmental Monitoring Efforts should obtain an environmental permit under Article 36. Environmental permit is a prerequisite for obtaining a business license and / or activities as defined in Article 40.

In cases of pollution and / or environmental damage, Article 46 stipulates that for the recovery of these environmental conditions, the Government and the local government concerned allocate funds for environmental restoration. Subsequently, every person polluting and / or destructing the environment is required to control pollution and / or damage to the environment under Article 53 paragraph (1). According to paragraph (2), the following endeavors to control pollution and / or environmental damage are to be undertaken:

- a. provide information warning about pollution and / or environmental damage to the community;
- b. isolate pollution and / or damage to the environment;

- c. stop pollution sources and / or damage to the environment; and / or
- d. other ways in accordance with the development of science and technology.

In addition, pursuant to Article 54, anyone who commits pollution and/or destruction of the environment must implement the environment recovery function in the following stages:

- a. cessation of pollution sources and cleaning pollutant elements;
- b. remediation;
- c. rehabilitation;
- d. restoration and / or
- e. other ways in accordance with the development of science and technology.

According to Article 65 paragraph (5), anyone can file complaints about pollution and / or destruction of the environment. However, under Article 69 paragraph (1) sub-paragraph a it is prohibited for any person to undertake acts that lead to pollution and / or destruction of the environment. Furthermore, sub-paragraph h prohibits any person from conducting land clearing by burning.

The Minister, Governor, or Regent / Mayor concerned shall conduct, in accordance with their respective authorities, surveillance of compliance by those responsible for the business and / or activity concerned with the provisions set out in the legislation in the field of environmental protection and management as mandated by Article 71 Paragraph (1).

Any violations of the provisions of this law are subject to administrative and/or criminal sanctions. According to Article 76 paragraph (1), the minister, governor or regent/mayor concerned shall impose administrative sanctions on the person in charge of the business and/or activities concerned if found in violation of the permit monitoring the environment. On the other hand, under Article 108, any person who commits land arson as referred to in Article 69 paragraph (1) sub-paragraph h, shall be punished with imprisonment for not less than 3 (three) years and a maximum of 10 (ten) years, and a fine of not less Rp3,000,000,000.00 (three billion rupiah) and a maximum of Rp10,000,000,000.00 (ten billion rupiah). Furthermore, according to Article 109, any person doing business and / or undertaking activity without an environmental permit as referred to in Article 36 paragraph (1), shall be punished with imprisonment for at least 1 (one) year and a maximum of 3 (three) years, and a fine of at least Rp1,000,000,000.00 (one billion rupiah) and a maximum of Rp3,000,000,000.00 (three billion rupiah). Article 112 stipulates that any officer authorized to supervise compliance not responsible for the business and / or activity covered by the regulatory and environmental permits as referred to in Article 71 and Article 72, which causes the loss of human life, shall be punished with imprisonment of not more than 1 (one) year or a fine of Rp500,000,000.00 (five hundred million rupiah).

2. Law Number 41 Year 1999 on Forestry as amended by Law Number 19 Year 2004

According to Article 3, the implementation of forestry is aimed at the attainment of the greatest welfare of the people in a just and sustainable manner, by undertaking the following:

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- a. guarantee the existence of the forest with an area of considerable and proportional distribution;
 - b. optimize the variety of functions which include functions of forest conservation, protection, and production functions to achieve environmental, social, cultural, and economic balance and sustainability;
 - c. increase the carrying capacity of the watershed;
 - d. improve the ability to develop community capacity and empowerment through participatory, equitable, and environmentally friendly endeavors so as to create social and economic resilience and resistance towards external change; and
 - e. ensure equitable and sustainable distribution of benefits.

It is further provided in Article 4 paragraph (1) that all forests within the territory of the Republic of Indonesia, including the natural riches contained therein, are controlled by the State for the greatest prosperity of the people. Paragraph (2) provides that the control of the Forest by any State member referred to in paragraph (1) grants to the government the authority to:

- a. organize and take care of all matters related to the forest and forest products;
- b. determine the status of certain areas as forest area or forest area as a non-forest area; and
- c. organize and establish legal relations between the people and the forest, and regulate the legal actions concerning forestry.

Paragraph (3) calls for ensuring that the control of forest by the state respects customary laws, as long as they exist and their existence is recognized, and to the extent that they are not contradictory to national interests. Article 5 paragraph (1) provides that based on the status of the forest, there are State forests and forest rights. Furthermore, in terms of function, according to Article 6 paragraph (1) the forest has three functions, namely forest conservation function, the function of protection and production functions.

According to Article 23, the utilization of forests is aimed at obtaining the optimal benefits for the welfare of all communities equitably while maintaining sustainability. Under Article 24, forest areas can be utilized in all forest areas except for nature reserves and forest core zone and the zone of jungle in national parks. Article 26 paragraph (1) provides that utilization can be in the form of protected forest area utilization, environmental services, and the collection of non-timber forest products. Paragraph (2) provides that the utilization of protected forests is carried out through the licensing of forest area, utilization of environmental services business license, and permit for non-timber forest product collection. Article 28 paragraph (1) provides that the utilization of production may be in the form of the utilization of forest areas, environmental services, utilization of timber and non-timber, and the harvesting of timber and non-timber forest. Paragraph (2) provides that the utilization of forest production is carried out through the licensing of forest area, utilization of environmental services business license, business permits for the utilization of timber, the license for utilizing non-timber forest products, timber harvesting permit, and permits for non-timber forest harvesting.

Pursuant to Article 50 paragraph (2), every person who holds area utilization license, environmental services business license, business permits for utilization of timber and non-timber, and timber harvesting permit and

non-timber harvesting, is forbidden to engage in activities that lead to forest destruction.

Paragraph (3) prohibits any person to do the following: work and or use or occupy forest land unlawfully; penetrate the forest area; cut down trees within a radius or distance of up to:

- 1) 500 (five hundred) meters from the edge of a lake;
 - 2) 200 (two hundred) feet from the edge of water and alongside the river in a swamp area;
 - 3) 100 (one hundred) feet from the left and right side of a river;
 - 4) 50 (fifty) feet from the left and right side of a river;
 - 5) 2 (two) times the depth of the abyss from the brink;
 - 6) 130 (one hundred thirty) times the difference between the highest and the lowest tide of the beach.
- d. burn forests;
 - e. cut trees or harvest or collect forest products in the woods without having any rights or permission from the competent authorities;
 - f. receive, buy or sell, receive rates, accept deposits, store, or forest products that are known or reasonably suspected to originate from forest areas taken or collected illegally;
 - g. conduct general investigation or exploration or exploitation of minerals in forest areas, without the permission of the Minister;
 - h. transport, control, or have a forest that is not equipped with certificate of legality of forest products;
 - i. graze cattle in the forest areas that are not designated specifically for that purpose by the competent authorities;
 - j. carry heavy equipment or other tools commonly or reasonably suspected to be used to transport forest products in forest area, without the permission of the competent authorities;
 - k. bring tools commonly used for cutting or splitting trees in the forest area without permission by authorized officials;
 - l. throw objects into forest areas that can cause fires and damage to and jeopardize the existence or continuity of the functions of forests, and
 - m. issue, carry, and transport plants and wildlife that are not protected by laws that came from the forest area without permission from the authorities.

Article 51 paragraph (1) provides that to ensure the protection of forests, forestry officials in accordance with the nature of their work are granted special police powers. Paragraph (2) provides that officials who were granted special police powers as referred to in paragraph (1) are authorized to do the following:

- a. conduct patrols / patrolling;
- b. examine papers or documents related to the transport of forest products in forest area or jurisdiction;
- c. receive reports on the occurrence of criminal acts relating to forest, and forest products;
- d. inspect statements and evidence concerning the occurrence of forest crime, forest, and forest products;
- e. in the event of being caught red-handed, mandatory arrest of suspects to be handed over to the authorities; and
- f. reports and signed statements regarding the occurrence of criminal acts relating to forest, and forest products.

Under Article 60 paragraph (1), it is provided that the Government and the local government are to supervise forestry. On the other hand, paragraph

(2) provides that the community and or individuals are to participate in the supervision of forestry. Furthermore, Article 78 paragraph (1) provides that whoever intentionally violates the provisions referred to in Article 50 paragraph (2) are punishable by a maximum imprisonment of 10 (ten) years and a maximum fine of Rp5.000.000.000,00 (five billion rupiah). At the same time, according to paragraph (3), whoever intentionally violates the provisions as intended in Article 50 paragraph (3) sub-paragraph d by burning the forest is punishable by a maximum imprisonment of 15 (fifteen) years and a maximum fine of Rp5.000.000.000,00 (five billion rupiah). If the violation occurs due to negligence, according to paragraph (4) the perpetrator is liable to a maximum imprisonment of 5 (five) years and a maximum fine of Rp1,500,000,000.00 (one billion five hundred million rupiah).

Article 80 paragraph (1) contains provisions for damages and administrative sanctions where any unlawful act provided for in the law, without prejudice to criminal sanctions as provided for in Article 78, invokes the responsibility to pay compensation in accordance with the level of damage or the consequences thereof to the State, for the cost of rehabilitation, forest recovery, or other necessary actions. Paragraph (2) provides that every holder of forest area license, utilization of environmental services business license, license for the utilization of forest, or forest harvesting licenses provided for under this law, is subject to administrative sanctions, if the violation concerned is other than the criminal provisions as stipulated in Article 78.

3. *Government Regulation No. 4 of 2001 on the Control of Pollution and Environmental Damage related to Land and Forest Fire*

According to Article 1 paragraph 1, the forest ecosystem is defined as a unitary form of land comprising biological resources, dominated by trees in their natural environment, forming an inseparable unity. Furthermore, Article 2 establishes that the land is an allotment of land ecosystem for business and or activities of lading and or gardens for the community. Article 8 sets forth that the environmental impacts associated with forest and or land fires are the influence of environmental changes in the form or damage and environmental pollution associated with forest and or land fires caused by a business or activity.

At the same time, environmental degradation associated with forest and or land fires according to Article 9 are the direct or indirect changes to the physical and or biological properties of the resulting forest or land which no longer function in support of sustainable development. Article 10 states that environmental pollution associated with forest and land fires is the entry or living things, substances, or energy and other components into the environment and forest or land fires as a result of which the quality of the environment is degraded to a certain level which causes environmental life being unable to function as it is supposed to.

Under Article 11, every person is prohibited from undertaking activities and causing forest or land fires. Accordingly, Article 12 requires every person to prevent the occurrence of damage to and or pollution of the environment relating to forest and or land fires. Specifically, Article 13 stipulates that every person in charge of business whose business can potentially have a great and significant impact on the damage and or pollution of the environment relating to forest or land fires must prevent the occurrence of forest fires at the location of their business or land; in addition, every person is required to combat forest and land fires at the site or their activities

under Article 17. According to Article 20, the recovery of environmental impacts shall be undertaken by any person who causes forest and land fires.

Article 23 provides for the authorities of the Central Government, whereby the Minister responsible for forestry is to coordinate forest or land fire fighting and cross-provincial or inter-State endeavors. According to Article 24, the Minister responsible for forestry is to coordinate the following:

- a. provision of fire fighting in forest or land fires;
- b. development of human resources for forest or land fire fighting, and or
- c. implementation of international cooperation for forest or land fire fighting related to forest and or land fires.

According to Article 44, in the event that the impact of forest and land fires exceeds or takes cross-or inter-provincial and State dimensions, the provision of information to the public on the forest and land fires and their impact shall be coordinated by the chief of the responsible government agency.

4. Government Regulation Number 44 Year 2004 on Forestry Planning

Pursuant to Article 2 paragraph (1), this rule includes the planning of forestry with the intention to provide guidance and direction to the government, the provincial, district / city governments, communities, entrepreneurs, professional institutions, which includes forestry strategies and policies to ensure the achievement of objectives of forestry administration.

At the same time, paragraph (2) sets forth that the purpose of forest planning is to ensure effective and efficient forestry management with the aim of achieving the optimum benefit functions and sustainability of forests.

Article 3 stipulates that forestry planning activities shall include the following: forest inventory; inauguration of the forest area; stewardship of the forest area; establishment of forest management area; and preparation of forestry plans.

Under Article 4, forestry planning is to be undertaken: in a transparent, participatory and accountable manner; in an integrated manner with due regard to national interests, related sectors and society as well as considering the economic, ecological, social and cultural global perspective; taking into account the particularities and aspirations of the regions concerned, including traditional wisdom.

The Minister sets the standards and criteria for forest inventory at both the national and regional level. Furthermore, pursuant to Article 24 paragraph (1), forest area is also divided on the basis of functions, consisting of the following: Forest Conservation comprising: Natural Reserve Forest Nature Reserve and Wildlife Sanctuary; Nature Conservation Forest consisting of National Park, Forest Park and Nature Park; Hunting Park; Protected Areas; Production Forests comprising the following: Limited Production Forest; Regular Production Forest; Production forest that can be converted.

According to Article 25 paragraph (1), the use of forest areas for development outside of forestry activities can only be undertaken in the area of production forest and protected forest areas. Paragraph (2) provides that the use of forest areas for development outside of forestry activities is to be regulated by a Presidential Decree.

5. Government Regulation Number 27 Year 1999 regarding the Environmental Impact Analysis

Under Article 1 sub-article 1, Environmental Impact Analysis (EIA) is a study on the effects of large and important business and / or planned activities on the environment necessary for the decision making process regarding business and / or activities concerned. According to Article 2, the EIA is part of the feasibility study business plan and / or activities through a single-study approach to activities, integrated or activities in the area that will be used as material for regional development planning.

4.2 . *Role of Stakeholders in the Handling of Cross-Border Forest Fire Haze Pollution Causes*

1. The Role of the Government

(a) House of Representatives

Commission IV of the House of Representatives (DPR) (which is in charge of: agriculture, plantation, forestry, marine, fisheries and food) has been engaging in close cooperation with the Ministry of Agriculture, the Ministry of Forestry, the Ministry of Maritime Affairs and Fisheries, the National Logistics Agency and the National Maritime Board. Commission IV of the House explained that in recent months a working meeting with the Minister of Forestry had been discussing the draft law for Prevention and Combating Illegal Logging (P3L). The Draft Law on the Prevention and Combating Illegal Logging was presented by the House Speaker to the President with letter No. LG.01.03/9456/DPR-RI/XII/2010 dated December 23, 2010. Subsequently, the President, through letter No. R-05/PRES/01/2011 dated January 12, 2011, assigned the Ministry of Forestry, the Minister of Justice and the Minister of Interior Affairs, either individually or jointly, to represent the President in discussing the draft law with the House of Representatives. The views and opinions of the President on the Bill on Prevention and Combating Illegal Logging were a result of a series of discussions on the bill in accordance with the mechanism set out in Law No. 10 of 2004 on the establishment of legislation. Commission IV also discussed the Draft Law proposed concerning illegal logging and forest destruction encroachment. In the context of the destruction of the forest region, it has often been subject to misinterpretation, because the damage can come from plantations, land mines and industrial land. This would mean an overlap in authorities among the Ministry of Forestry, the Ministry of Mines and the Ministry of Agriculture and Plantations.

(b) Ministry of Environment

The representatives of Indonesia in ASEAN meetings are frequently urged to ratify. Indonesia is one of the countries signatory to the ASEAN Agreement on Transboundary Haze Pollution represented by the Deputy Minister for Environmental Conservation, the Ministry of Environment. The Ministry of Environment has translated the ASEAN Agreement on Transboundary Haze Pollution to be attached to the proposal of ratification. There were 6-8 meetings held with the relevant sector or referred to as inter-departmental meetings involving the presence of representatives (staff) from the Ministry of Agriculture, the Ministry of Forestry, the State Secretariat, the Cabinet Secretariat, the Ministry of Health, the Bureau of Meteorology and Climatology and the Geophysics Agency for the Assessment and Application of Technology, to prepare the Draft Law on the Ratification of the ASEAN

Agreement on Transboundary Pollution Haze Countries (Ratification of the Draft ASEAN Agreement on Transboundary Haze Pollution). The draft law was submitted to Parliament in 2005.

However, this has been contrary to the standpoint of the Ministry of Forestry, the Ministry of Agriculture and Plantation and the Ministry of Foreign Affairs of Indonesia, which thought it best to not ratify the ASEAN Agreement on Transboundary Haze Pollution. The Ministry of Agriculture and Plantation did not wish to ratify because there was fear that Indonesia would remain in the spotlight if transboundary haze pollution continued to occur.

In addition, there were six reasons given by the Ministry of Forestry, namely as follows:

1. there was already a good work program in place;
2. there was a hotspot reduction target of up to 50% in 2008 so it had been greatly reduced;
3. there was already a Ministerial Decree on Zero Burning Policy and the need for prudence;
4. it could potentially create a bad precedent if there continued to be a lot of haze caused by natural factors and increased hotspot;
5. it would have to be the responsibility of the Ministry of Agriculture and Plantation, rather than the Ministry of Forestry.

In addition to the foregoing, the Ministry of Foreign Affairs reasoned that ratifying the ASEAN Agreement on Transboundary Haze Pollution would result in annual dues, while spelling out the following political reasons. Firstly, the MOU implemented by Singapore to help Muero District, Jambi, was not effective and only provided training rather than implementation in the field. Secondly, the MOU committed to Malaysia only provided weather monitoring tool with a value below the budget for the Ministry of Forestry, while providing these tools was constantly discussed by Malaysia in the ASEAN meetings to discuss the ASEAN Agreement on Transboundary Haze Pollution, and the “Bomba Forces” continuously wanting to help but encountering confusion in the field as they were unable to get into the forest, hence they were unable to help extinguishing the fire.

Each region has a work program, each with different priorities as well. For example, in Pekanbaru and Balikpapan the priority is to reduce and eliminate forest fires caused by humans. In addition to that, the MOE also has investigators (Civil Servant) who act as the environment police of the MOE without carrying firearms.

In the interview process, the MOE revealed the following desired ideal steps:

1. Ratify the ASEAN Agreement on Transboundary Haze Pollution.
2. There is a need for government regulation to implement Law No. 30 of 2009, considering that the law mandates that within one year after the enactment of the law there should be a government regulation (PP) as its implementing regulation; up until now, there has been none, consequently, the law cannot be implemented.
3. There needs to be outreach to the community so that zero burning policy is not limited to companies, but it is also applied to the local community concerned. As the actual facts in the field currently indicate, while the mastermind behind forest fires are basically companies, the executors in the field are the local people who are paid by such companies. This has been the case because people are not

suspected if they go into the woods at night to burn the forest with the aim of clearing the land, and they receive high pay from the company for doing so. This issue is always an advanced factor which makes it difficult to investigate forest fires.

In considering the advantages and disadvantages of the ratification of the ASEAN Agreement on Transboundary Haze Pollution, it has been realized that by ratifying it Indonesia will obtain assistance and training equipment, while the disadvantage of ratification is the obligation to pay fee and the obligation to implement any adopted policy into Indonesia's national law.

4.3. *The Role of Non-Governmental Organizations*

(a) Indonesian Center for Environmental Law (ICEL)

Since 1993, ICEL has been instrumental in efforts to prevent haze pollution across borders between countries, particularly by conducting study and advocacy in the area of forest fires. A study was undertaken by the ICEL in April 1999 for the purpose of mapping the problem or the causes of transboundary haze pollution. In this study ICEL indicates that the main causes of transboundary haze pollution have been conversion of land for industry, oil palm plantations, and transmigration. Conversion of land leads to land clearing. In clearing the land, the policy of open burning, controlled burning and zero burning is applied. Furthermore, open burning and controlled burning are likely to result in forest and land fires of cross-border nature, consequently resulting in economic losses, environmental damage and negative impacts on health.

In addition to its role in providing input to the Government, ICEL has also been conducting joint advocacy concerning forest fires. Advocacy activities were conducted in 2001 in South Kalimantan, and in 2007 in Pelalawan, Riau.

In principle, ICEL has been supporting efforts to tackle transboundary haze pollution. Accordingly, ICEL has been in support of the ratification of the ASEAN Transboundary Haze Pollution Agreement. ICEL had collaborated in the satellite mapping assisted by Singapore in Riau. Singapore helped collect data in the form of satellite images of hotspots.

For the application of this ASEAN Agreement, ICEL believes that the provisions in Indonesia should include more details and specifics necessary to determine which departments are to be the focal point, the authorities and mechanisms of cooperation and law enforcement. The official concerned should expressly limit the permits and prosecuting powers. ICEL's specific advice has been that there should be institutions conducting surveillance on the basis of Article 9 of the ASEAN Agreement on Transboundary Haze Pollution.

According to ICEL, the advantage of the ratification of this agreement would be that the Government of Indonesia's commitment to the handling of haze pollution would become more visible. This is particularly important, as Indonesia has been among the countries which are most likely to cause forest fires leading to transboundary haze pollution. However, weaknesses in this agreement include, among other things, the absence of sanctions and more provisions concerning cooperation.

This agreement, according to ICEL, is more focused on addressing fires on land such as existing land containing coal and peatland. Borneo has coal and peatlands, but Sumatra has only peatlands. The reason that Indonesia

has become the greatest causing country, according to ICEL, has been due to various deficiencies in control issues, as a result of which the preservation of forests and land for plantations have become depleted.

According to ICEL, there has been no government regulation dealing with the functional systems and institutions of forest fires and land fires disaster management and disasters in general. Even though there have been fire reduction initiatives forming units in each institution as a system of protection in their respective jurisdictions, these have not been very effective in the implementation stage, and they have not been integrated. Accordingly, ICEL's more specific advice concerning the formulation of an effective policy includes the following: 1. the existing regulations should be enforced; and 2. the implementation of existing policies needs to be reviewed, for example, concerning open peat thickness of less than 3.5 meters.

ICEL believes further that the licensing mechanism in Indonesia is quite good. However, ICEL calls for the licensing mechanism using zero burning. The problem is that there are hardly any investors who want to do this because it is more expensive. The implementation of zero burning requires human resources, so that investors are more likely to use controlled burning to clear land which technically makes it possible to extend the burning to a specific area.

In the context of environmental licensing, ICEL believes that there is a need for an integrated licensing system. For instance, if there was a parallel attempt to obtain plantation permit at the Ministry of Environment and also from the Ministry of Forestry, and if the permit is eventually revoked, would it be difficult to monitor whether such permit affects the other? In addition to the foregoing, inter-institutional coordination has also been weak. So, in fact, even when permission from the relevant ministry is not a problem, there still a needs for coordination.

In the view of ICEL, forest fires can be tackled in an integrated manner, ranging from licensing, surveillance and other preventive measures; law enforcement and protection to the public. ICEL also provides input regarding the EIA (Environmental Impact Assessment/AMDAL) requirements in manufacture. If any of these requirements is violated, all licenses need to be revoked by the integrated system. ICEL suggests to include an obligation for coordination between the Ministry of Environment with other agencies because, in reality, they are currently competing against each other in trying to take care of permissions. It would be advisable to have an accumulation of the requirements, e.g. the requirements of the Ministry of Environment, thus there would be no need for other agencies so that an overlap of authorities could be avoided.

From the standpoint of ICEL's policy, the zero burning policy is not efficient even though it would be good to implement it. However, due to weak supervision implementation has not been satisfactory. According to ICEL, the existence of this Agreement provides the opportunity to the Government to review the existing regulations regarding the environment. It should be underlined that this Agreement is not a solution, rather, it is only one way to help resolve the issues at hand. It cannot be concluded, therefore, that this Agreement is the most appropriate one. This Agreement is just another way for the Government of Indonesia to demonstrate its commitment to tackling the problem of forest fires in its own country.

Associated with the due diligence of private actors, there are various ways that demonstrate the need for adequate control of the fulfillment of the

requirements in licensing, supervision and enforcement. Constraints in law enforcement tend to be related to political will. For example, there has been no clear follow-up on cases involving private actors and the Government of Indonesia. The government needs to be more selective in choosing investors offering green investment program.

(b) *WALHI*

The Indonesia Forum for Environment (WALHI) is one of the nongovernmental organizations (NGOs) whose role is to prevent environmental pollution including haze pollution across national borders. In practice, WALHI, can sue the perpetrators of environmental damage, such as for example plantation companies, and it can also remind the government in the enforcement of national legislation related to environmental pollution at the Ministry of Environment and the Ministry of Forestry.

According to WALHI, forest fires in South Sumatra in 1997 - 1998 were initially caused by plantation companies where actual permission for the burning of forest land was only granted for up to 20 acres. To prevent the occurrence of forest fires, WALHI has conducted numerous environmental campaigns such as promoting the stopping of conversion through land clearing by burning.

In the case of transboundary haze pollution, WALHI agrees that Indonesia is one of the principal actors causing haze pollution. Accordingly, WALHI has been raising the question about the effectiveness of national legislation. WALHI also perceives three main issues arising in the State causing transboundary haze pollution, namely as follows: 1. permits are still being issued to burn the land; 2. monitoring remains extremely weak; 3. inadequate infrastructure.

WALHI has worked with the agency of the Government of Japan, JICA (Japan International Cooperation Agency), which has provided assistance to Indonesia to restore environmental damage, providing funds in the total amount of Rp.500 billion to wipe out fires by using helicopters.

WALHI has submitted two proposals for the management of environmental issues in Indonesia. Indonesia initially used the legal umbrella by adopting the law on the management of natural resources as mandated in the 2001 MPR mandate. Currently, the provisions of this legislation are in the form of sectoral laws, which can cause potential overlap among various relevant Ministries. Related to the legal umbrella, WALHI has also expressed the need for sub-coordination in the management of natural resources which can prevent the existence of overlapping policies and create more budget efficiencies.

Secondly, there is a need for regulation regarding indigenous peoples. Fires often occur in indigenous territories, so WALHI believes there should be a separate role for indigenous peoples in the ASEAN Agreement on Transboundary Haze Pollution. In practice, indigenous people have been blamed both in their position as perpetrators as well as victims at the same time.

Regarding corporate responsibility, companies which are in fact the actual actors of haze pollution do not wish to be held responsible for their actions and do not make their best efforts to stop forest fire activities. This has been the case in view of the fact that land clearing by burning the land is the least expensive way.

In the former Law on Environment No. 23/1997, the right to sue lies with the community and Non Governmental Organizations (NGOs); while under the new Law 32/2009, the right to sue lies with the community, NGOs and governments. Nevertheless, according to WALHI, implementation remains difficult. The Ministry of Environment has called on regional governments to stop companies which infringe the law, however, regional governments are hesitant to revoke such companies' permits, although they have the authority to do so.

Pollution in Indonesia such as in Riau, North Sumatra and North Sumatra. The largest pollution center is in Riau, and the second in South Sumatra. As for areas located in Kalimantan and West Kalimantan, the largest pollution center is in Central Kalimantan. The frequency of contamination can be seen from the hotspots in Sumatra.

According to WALHI, the Government should ratify the ASEAN Agreement on Transboundary Haze Pollution. Even if the Government does not ratify, it should revoke the granting of land burning. The government should also trust the community and society represented by local forces in handling the fire. Furthermore, the policy on the environment should start from Village Regulations dealing with indigenous groups, since indigenous groups possess knowledge both about the burning of land as well as also about the surrounding environment.

WALHI believes that Indonesia as a country should be responsible for damage to the environment, including those caused by forest fires. With regard to the effectiveness of legislation, according to WALHI there are two versions; the first from the standpoint of the government, and the second from the viewpoint of society. Viewed from the Government's standpoint, the existing legislation has been quite effective. However, from WALHI's perspective, it has been largely ineffective in helping the community. For instance, Law No. 4 of 2009 on Mining eliminates the right of people that seems to be obstructed; according to Law No. 41 of 1999, people who enter the forest without a permit may be subject to criminal sanctions; according to Law No. 7 of 2004 on Water Resources, if the source of water is found in front of a house and there are companies who obtain permission to manage the same, the residents of the home lose the right to utilize such water resources.

WALHI has proposed several ways and has made general attempts to prioritize the environment, including forests, namely as follows: first, once it becomes aware of a forest fire occurring in the same place, the Government should explicitly revoke the permit for land clearing. For example, a permit that allows 20 acres of land to be burned under supervision. However, when the situation gets out of control, the perpetrators (usually corporations) often use negligence as an argument. Second, the perpetrators should be punished, either administratively or criminally. Multilayer articles need to be used to press charges and punish the perpetrators.

In an effort to combat environmental damage such as transboundary haze pollution by the State, WALHI has also been working with other NGOs, for example Greenpeace and Friends of the Earth (FOA), which are located adjacent to WALHI headquarters. The overall numbers of FOA members are spread across 78 countries with headquarters in the Netherlands. WALHI FOA is part of Indonesia.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 *Conclusion*

Haze pollution is pollution that often cuts across national borders (“transboundary pollution”) because it covers a large area and moves quickly across regions, so that adjacent countries are usually affected, and so are countries in Southeast Asia. Haze caused by forest fires in Indonesia spreads quickly to Malaysia as well as to Singapore and vice versa through airspace. Therefore, haze pollution is a sub-regional issue in ASEAN, which involves the original member countries of ASEAN. To overcome the problem of air pollution resulting from forest fires, cooperation between Indonesia, Malaysia, Singapore, Brunei, the Philippines and others is required. ASEAN has tried to overcome this issue by agreeing on the ASEAN Agreement on Transboundary Haze Pollution in 2002, which came into force on November 25, 2003. Up to the present time, there are 7 participant countries, namely Singapore, Malaysia, Myanmar, Brunei, Vietnam, Thailand, and Laos. Indonesia has not ratified the treaty, although it has signed the Agreement. Indonesia’s participation in this Agreement is mostly expected, as Indonesia has been known as a country that often causes forest fires and haze in the surrounding country. These conditions have been affecting harmonious relations between Indonesia and its two neighboring countries namely Singapore and Malaysia. As a result of frequent forest fires, ASEAN’s priority for 2010 was the prevention of forest fires in Kalimantan.

In Indonesia, forest fires have been one of the major causes of transboundary haze pollution. Causes of forest fires have been primarily due to land conversion by plantation companies. In starting their business, plantation companies have to clear the land / forests to be planted with production plants. The most inexpensive and easy way to do so is through combustion.

The impact of the forest’s burning practice is however a cross-border haze pollution which affecting neighboring countries. The haze pollution of forest fires has impacted residents of Indonesia’s neighboring countries especially of Malaysia and Singapore. This has led to complaints from those two States to the Government of Indonesia. Under international law, the principles of State responsibility are set out in the ILC Draft on Responsibility of States in Internationally Wrongful Act 2001. This draft is a codification of international law principles. According to Article 2 of the draft it is stated that a State can be held accountable for its actions if it fulfills two elements, namely: a violation committed by State officials (agents of State), and the offense is a violation of the international obligations of a State.

International law regulates the State's responsibility in preventing cross-border pollution, including the obligation that needs to be fulfilled by a country in protecting the international environment. International law formed by countries is sometimes not in accordance with the national policy of a particular country, and it is therefore necessary to conduct a study on the state's responsibility in handling cross-border pollution that can be formulated into effective national policies and ensure good relations between neighboring countries. The Trail Smelter case has been a clear example demonstrating that a State must refrain from activities within its territory that may adversely affect other States. This case produces the principle of good neighborliness and polluters pays principle that have been adopted as general legal principles in international environmental law.

The provisions of the ASEAN Agreement on Transboundary Haze Pollution set forth prevention and cooperation among countries, namely ASEAN Countries. It does not, however, regulate compliance and dispute settlement mechanism. Nevertheless this Agreement has been quite effective tool to increase regional cooperation in combatting transboundary pollution such as haze pollution. The insufficient capability of one State will be tackled by the provided regional collaboration without sacrificing the national interest of that State.

Indonesia already has quite adequate regulations, both for the prevention as well as for the banning of burning forests. It is unfortunately there are some major deficiencies in the handling of forest fires in Indonesia cause of certain situations to include: overlapping functions between the various different agencies; unclear institutional authorities and responsibilities; inadequate mandates and a variety of weak local institutional capacities; failure to apply various rules as a result of lack of political will of law enforcement agencies; lack of access to fire data by law enforcement officials; limited facilities and equipment to support a variety of investigations in the field; a variety of different perceptions among the various institutions regarding the official proof of adequate reason; lack of understanding of the various regulations concerning corporate crime; “lack of integrity” on the part of law enforcement, and “conflict of interests” between the various institutions.

In February 2001, the Government issued Government Regulation No. 4 of 2001 which regulates pollution and environmental damage caused by forest and land fires. This rule has also set forth the responsibility of the central government, the provincial and the local governments in dealing with fires. It is however far from satisfactory in tackling this haze pollution problem.

Indonesia has had many good rules both in terms of prevention as well as the prohibition of burning forests. Actually, the obligations of relevant institutions and government agencies have been clearly stipulated in the existing regulations. Therefore, actually forest fires can be prevented provided, however, that there is adequate implementation scheme in the field including sufficient technical capacity. Criminal sanctions are rarely imposed on the CEOs of companies who are proven to have violated the provisions of environmental law. This is rather ironic, considering that the corporate criminal liability is actually recognized under Law No. 32 of 2009.

5.2 Recommendation

1. The Government can be more assertive in terms of granting permissions, for example in terms of environmental permits and licensing for mandatory EIA/AMDAL. In the event of violations and convictions, the Government should revoke not only the environmental permit, but also the business license of the perpetrators. The imprisonment sanction needs to reach the actor of the accused company as the part of the executing of corporate crime.
2. There is a need for improved coordination between government agencies in this regard, namely between the Ministry of Environment, the Ministry of Forestry, and the Ministry of Agriculture and Plantation in terms of dealing with forest fires, in order to ensure that there is a well-spread and effective outcome.

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3. Although the ASEAN Agreement on Transboundary Haze Pollution is not the only ways to overcome the problem of haze pollution, yet it is proven to be quite effective in developing regional mechanism in handling haze pollution wherever and whenever happens within ASEAN territory to include Indonesia. Any insufficient capacity faced of by Indonesian Government could be overcome by organizing regional actions controlled by Indonesian authority to hinder any negative impact to Indonesian national interest. As suggested by various prominent environmental NGO's in Indonesia, the option to ratify this Agreement is actually a quite logical one due to the insufficient capacity of Indonesia to technically put off the forest's burning in effective manner. Any necessary adjustment in implementation scheme of that regional cooperation could be adopted in consistent with Indonesian national interest.