STUDENT CONTRIBUTION

Transboundary Haze Pollution in Southeast Asia: The Effectiveness of Three Forms of International Legal Solutions

Kexian Ng*

Every September and October, entities in the palm oil and timber industries in Indonesia conduct slash-and-burn activities over peat land, causing transboundary 'haze' pollution. This paper analyzes the effectiveness of various legal solutions to tackle the transboundary haze pollution. There are mainly three forms of international law, customary international law, the ASEAN Agreement on Transboundary Haze 2002 and Singapore's extraterritorial Transboundary Haze Pollution Act 2014. Their effectiveness will be measured by Indonesia's increasing willingness to take domestic enforcement measures. This paper argues that the ASEAN Agreement is the primary instrument despite its lack of sanctions as it is neutral, non-confrontational and consistent with the 'ASEAN way.' The Singapore Act plays a complementary role, yet its invocation may strain relations between Singapore and Indonesia. Ultimately, the three forms of international law serve as a normative and facilitative source in nudging Indonesia to take more stringent domestic enforcement measures.

Keywords

International Environmental Law, Transboundary Air Pollution, Southeast Asia, Haze, Singapore, Indonesia, ASEAN

* LL.M. candidate (May 2017) at Columbia Law School; Advocate & Solicitor (Singapore); Solicitor (England/Wales); LL.M. Representative and Executive Board Member of Columbia Society for International Law. LL.B. (Bristol). ORCID: http://orcid.org/0000-0001-9893-4888. The author wishes to thank Professor Lori Fisler Damrosch and Ms. Susan Biniaz for their insightful comments during the preparation of this article. Any errors remain the author's own. The author may be contacted at: kexian.ng@gmail.com / Address: 67 Jalan Songket, S'537438, Singapore.

DOI: http://dx.doi.org/10.14330/jeail.2017.10.1.11

I. Introduction

Every September to October, the palm oil industry and the timber industry increasingly conduct slash-and-burn activities over peat land in Sumatra and Kalimantan in Indonesia as it is the most cost effective manner to clear the land.[1] This results in 'haze' pollution in Southeast Asia.

Its transboundary effects are acutely felt by Malaysia, Singapore and other neighbouring countries due to the South-westerly winds during these months that blow the haze in the Northeast direction of Kalimantan and Sumatra.[2] This phenomenon first emerged as an international issue in 1997, which set the record the Pollutant Standards Index ("PSI") reading of 226,[3] up until such record was broken on June 21, 2013 with a 3-hour PSI reading of 401.[4] The year 1997 was also significant as the El Nino effect was severe and the ensuing dry conditions made the forests more vulnerable to the spread of fires.[5] The intensity of such pollution has continued even until as late as 2015.[6]

A modelling study by Harvard University estimated that the haze incident in 2015 with a record reading 24-hour PSI reading of 341[7] resulted in 100,300 premature deaths across Malaysia, Indonesia and Singapore.[8] To place matters in context, according to the World Resources Institute, the total daily emissions from Indonesia exceeded the total daily emissions of the US, a country which is 20 times the size of

1 A. Tan, *'Can't We Even Share our Maps?': Cooperative and Unilateral Mechanisms to Combat Forest Fires and Transboundary 'Haze' in Southeast Asia, in* Transboundary Pollution: Evolving Issues of International Law and Policy 329 (S. Jayakumar et al. eds., 2015). *See also* S. Koplitz et al., *Public health impacts of the severe haze in Equatorial Asia in September-October 2015: demonstration of a new framework for informing fire management strategies to reduce downwind smoke exposure*, 11 Environ. Res. Lett. 094023, 5 (2016).

2 Koplitz et al., *id.* at 5.

3 PSI is an air pollution measurement index used by Singapore. *See Singapore Haze Hits Record High from Indonesia Fires*, BBC News, June 21, 2013, *available at* http://www.bbc.com/news/world-asia-22998592 (last visited on Apr. 26, 2017).

4 *Id.* A PSI reading beyond 300 is deemed to be hazardous. *See also Advisories: Haze Update (4pm on Jun. 21, 2013)*, Nat. Env. Agc., *available at* http://www.nea.gov.sg/corporate-functions/newsroom/advisories/haze-update-(4pm-on-21-june-2013) (last visited on Apr. 26, 2017).

5 L. Syarif, *Evaluating the (In)Effectiveness of ASEAN Cooperation against Transboundary Air Pollution, in* Jayakumar et al., *supra* note 1, at 297.

6 *See Haze situation improves on Saturday as 24-hour PSI drops to 'Moderate' range*, Straits Times, Sept. 26 2015, *available at* http://www.straitstimes.com/singapore/environment/haze-situation-improves-on-saturday-as-24-hour-psi-drops-to-moderate-range (last visited on Apr. 26, 2017).

7 *Id.*

8 Koplitz et al., *supra* note 1, at 7.

Indonesia, for 26 days in 2015.[9] The total annual emissions from Indonesia in 2015 were also higher than the annual emissions of each Japan and Germany.[10] There is thus a pressing need for the Southeast Asian countries to adopt solutions that would effectively solve this problem.

The primary purpose of this research is to untangle the complex web of legal solutions that have been developed to address the haze pollution, focussing primarily on the efforts of Singapore and Indonesia, and where applicable, Malaysia and the rest of the member States in the Association of Southeast Asian Nations ("ASEAN").[11] This paper is composed of five parts including Introduction and Conclusion. Part two will outline the sources of international law that impact the haze such as customary international law, multilateral instruments and Singapore's extraterritorial legislation. Part three will analyze Indonesia's actions to tackle the haze. Part four will address the relative effectiveness of the solutions set out in Part two against other non-legal solutions. Ultimately, none of the legal solutions above can be considered in isolation, but must be viewed within a complex web of international pressure upon Indonesia to fulfil its obligations.

At the outset, a few observations ought to be made. First, the issue does not sit squarely within the traditional lens of public international law where States are the primary actors.[12] Here, the responsible parties are primarily large corporations in the private sector and issues of attribution to the State will therefore arise.

Second, slash-and-burn activities are widely accepted as an intentional method, as it is the most cost effective way to clear the land.[13] According to research conducted by Riau University, the cost per hectare for slash-and-burn is as little as Indonesian Rupiah ("IDR") 600,000 (USD 44), against IDR 3,400,000 (USD 250) for alternative methods.[14]

Third, natural meteorological conditions in the form of El Nino and positive Indian Ocean Dipole is presumed to intensify the effects of the haze.[15] The impact on

9 N. Harris et al., Indonesia's Fire Outbreaks Producing More Daily Emissions than Entire US Economy, World Resources Institute (Oct. 16, 2015), *available at* http://www.wri.org/blog/2015/10/indonesia%E2%80%99s-fire-outbreaks-producing-more-daily-emissions-entire-us-economy (last visited on Apr. 26, 2017).

10 Chart on Fire emissions from Indonesia, Global Fire Emissions Database, *available at* http://www.globalfiredata.org/_plots/updates/emissions.pdf (last visited on Apr. 26, 2017).

11 Malaysia and Singapore are chosen as they are the countries most affected by the haze.

12 *See, e.g.*, A. Chayse & A. Chayse, The New Sovereignty: Compliance with International Regulatory Agreements 14 (1998).

13 Koplitz et al., *supra* note 1, at 5.

14 A. Chilkoti, *Joko Widodo Enters Firefight to Damp Climate Censure*, Fin. Times, Nov. 30 2015, *available at* https://www.ft.com/content/b7dc8b88-8e6e-11e5-8be4-3506bf20cc2b (last visited on Apr. 26, 2017).

15 Koplitz et al, *supra* note 1, at 6-7.

exogenous factors must be kept in mind when attributing liability of the haze.

Fourth, there are issues in attributing liability to the parties responsible. Concession maps may not always portray the owners or rights holders accurately, and there is often an issue of conflicting information based on different maps issued by the different authorities.[16] Further, fires easily spread to adjacent land.[17] This procedure makes it difficult to identify the actual party responsible for the original fire.

Fifth, while most of Southeast Asia has suffered from the haze, the effective solution of the problem depends almost disproportionately on Indonesia's efforts and actions.[18]

II. The Sources of International Law against the Haze of Indonesia

A. Customary International Law

International environmental law is "largely treaty law."[19] One would therefore be hard-pressed to find sources of customary international law that impose obligations on Indonesia to combat the haze. Nevertheless, it would still be imperative to begin with a discussion on the relevant principles of customary law.

The first is the duty of a State to prevent transboundary environmental harm. A discussion of customary international law on the environment would invariably start with the classic Trail Smelter arbitration.[20] This arbitration was concerned with whether the discharge of harmful substances into the Columbia River by a smelter in Trail, British Columbia, Canada could give rise to an internationally wrongful act by Canada when such substances were transmitted downstream into Washington

16 A. Tan, *The 'Haze' Crisis in Southeast Asia: Assessing Singapore's Transboundary Haze Pollution Act 2014*, NUS Law Working Paper 2015/002 (Feb. 2015), at 37, *available at* http://law.nus.edu.sg/wps/pdfs/002_2015_Alan%20Khee-Jin%20Tan.pdf (last visited on Apr. 26, 2017).

17 E. Harwell, *Remote Sensibilities: Discourses of Technology and the Making of Indonesia's Natural Disaster* 31 Dev. & Change 328 (2000).

18 A. Tan, *The ASEAN Agreement on Transboundary Haze Pollution: Prospects for Compliance and Effectiveness in Post-Suharto Indonesia*, 13 N.Y.U. Envtl. L. J. 720 (2005).

19 D. Bodansky, The Art and Craft of International Environmental Law 189 (2010). *See also* D. Bodansky, *Customary (And Not So Customary) International Environmental Law*, 3 Ind. J. Global Legal Stud. 106 (1995).

20 Trail Smelter (U.S. v. Can.), 3 R.I.A.A. 1965 (1941), *available at* https://www.ilsa.org/jessup/jessup17/Batch%202/Trail%20smelter%20case%20(United%20States,%20Canada).pdf (last visited on Apr. 26, 2017).

State in the US. Although this arbitration was commenced under the Boundary Waters Treaty of 1909, the Tribunal made a specific declaration that the duty to prevent transboundary environmental harm was recognized "under the principles of international law."[21] This principle has subsequently been reiterated as Principle 21 of the Stockholm Declaration[22] and restated with a slight modification as Principle 2 of the Rio Declaration.[23] The International Court of Justice ("ICJ") on several occasions affirmed this principle as forming part of customary international law,[24] which was shared by various legal scholars.[25] Further, this principle was codified by the International Law Commission's Draft Articles on Prevention of Transboundary Harm.[26]

The second is the duty to use due diligence which was developed as an elaboration to prevent transboundary harm. Indeed, the ICJ stated that the duty of due diligence was not limited to "the adoption of appropriate rules and measures," but included "a certain level of vigilance in their enforcement and the exercise of administrative control applicable to public and private operators … to safeguard the rights of the other party."[27] Although the standard applicable to each country depends on the level of development of the country, at the minimum, the standard of care is that of good governance which entails that the responsible State should have a legal system which is able to control and monitor the activities in question.[28] Accordingly, the mere enactment of laws in itself is not sufficient for a State to

21 *Id*. at 1965.

22 Stockholm Declaration on the Human Environment, U.N. Doc. A/CONF.48/14/Rev.1 (1972), *available at* http://www.un-documents.net/unche.htm (last visited on Apr. 26, 2017). It provides: "States have ... the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States."

23 Rio Declaration on Environment and Development, U.N. Doc. A/CONF.151/5/Rev.1 (1992), *available at* http://www.un.org/documents/ga/conf151/aconf15126-4.htm (last visited on Apr. 26, 2017). It provides: "States have… the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States."

24 *See*, *e.g*., Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, 1996 I.C.J. Rep. 226, ¶ 29 (July 8); Pulp Mills on the River Uruguay (Arg. v. Uru.), Judgment, 2010 I.C.J. Rep., 14, ¶ 101 (Apr. 20) [hereinafter Pulp Mills].

25 R. Wolfrum, *Purposes and Principles of International Environmental Law*, 33 Ger. Y.B. Int'l L. 309 (1990). *See also* P. Birnie & A. Boyle, International Law and the Environment 89 (1992); P. Dupuy, *Overview of the Existing Customary Legal Regime Regarding International Pollution, in* International Law and Pollution 63 (D. Magraw ed., 1991).

26 International Law Commission, Draft Articles on Prevention of Transboundary Harm from Hazardous Activities, with commentaries [hereinafter ILC Draft Articles], [2001] II Y.B. Int'l L. Comm'n 148 (general commentaries 3 & 4) &153 (art. 3), U.N. Doc. A/56/10; L. Henry et al., *From Smelter Fumes to Silk Road Winds: Exploring Legal Responses to Transboundary Air Pollution over South Korea*, 11 Wash. U. Global Stud. L. Rev. 590 (2012).

27 Pulp Mills, *supra* note 24, ¶ 197.

28 ILC Draft Articles, at 155 (commentary 17 to Article 3).

discharge their duty to prevent transboundary pollution. Instead, enactment of law must be coupled with effective judicial enforcement.

It is clear that the two principles cited above are too vague to frame the precise contours of Indonesia's exact obligations. Indeed, none of these principles would withstand scrutiny if a dispute were brought before an international tribunal on them alone. Nevertheless, they are still important in setting the skeleton within which more specific norms are negotiated and subsequently included in treaties.[29]

B. Multilateral Instruments

Unlike other areas of international environmental law, there is no single global instrument in which the law of air pollution is codified.[30] The only notable global agreement that touches peripherally on the issue of haze pollution is the Paris Agreement 2015 which addresses the conservation of forests in Article 5.[31] In its statement on signing the Paris Agreement on April 22, 2016, Indonesia specifically included commitments to reduce greenhouse gases emissions from forest fires over its peatlands, citing its forest fires of 2015.[32] Indonesia further expressed that it had established a Peatland Restoration Agency in February 2016 to tackle the issue.[33]

Apart from the tangential relevance of the Paris Agreement, the ASEAN Agreement on Transboundary Haze Pollution 2002 (hereinafter ASEAN Agreement)[34] is the primary multilateral consent-based agreement governing the haze pollution in Southeast Asia. Prior to this instrument, other regional agreements were all political agreements including the 1987 Jakarta Declaration,[35] the 1995 ASEAN Cooperation Plan on Transboundary Air Pollution[36] and the 1997 ASEAN Regional Haze Action Plan.[37] Negotiations for a hard law ASEAN instrument finally began in 1998,

29 Bodansky, *supra* note 19, at 119.

30 C. Redgwell, *Transboundary Pollution: Principles, Policy and Practice, in* Jayakumar et al., *supra* note 1, at 33.

31 Paris Agreement of 2015, art. 5. It provides: "2. Parties are encouraged to take action to implement and support … reducing emissions from deforestation and forest degradation, and the role of conservation, sustainable management of forests…"

32 Statement by Minister of Environment and Forestry of the Republic of Indonesia at "The High-Level Signature Ceremony of the Paris Agreement" in New York (Apr. 22, 2016), *available at* http://www.un.org/sustainabledevelopment/wp-content/uploads/2016/04/IndonesiaE.pdf (last visited on Apr. 26, 2017).

33 *Id.*

34 ASEAN Agreement on Transboundary Haze Pollution, signed June 10, 2002 (entered into force Nov. 25, 2003), *available at* http://haze.asean.org/?wpfb_dl=32 (last visited on Apr. 26, 2017) [hereinafter ASEAN Agreement].

35 Jakarta Declaration on Environment and Development (Sept. 18, 1997), *available at* http://environment.asean.org/jakarta-declaration-on-environment-and-development (last visited on Apr. 26, 2017).

36 1995 ASEAN Cooperation Plan on Transboundary Pollution (June 17, 1995).

37 1997 ASEAN Regional Haze Plan (Dec. 23, 1997), *available at* https://cil.nus.edu.sg/rp/pdf/1997%20Regional%20

precisely due to the inability of the aforementioned political agreements to combat the regional transboundary haze.[38] Indonesia only acceded to the ASEAN Agreement in January 2015, more than a decade after it came into force in November 2003.[39]

The main features of the ASEAN Agreement will be described briefly. The ASEAN Agreement stipulated that parties "shall co-operate in developing and implementing measures to prevent and monitor transboundary haze pollution."[40] Most notably, the ASEAN Agreement provided that each party shall develop and implement legislative and other measures to deal with land fires and land clearing.[41] To this end, the ASEAN Agreement established the ASEAN Co-ordinating Centre for Transboundary Haze Pollution Control which facilitated co-operation and co-ordination among the Parties.[42] It served as the focal point for parties to communicate data to the ASEAN Centre.[43] To enhance the implementation of regional cooperation under the ASEAN Agreement, the ASEAN Transboundary Haze Pollution Control Fund and other financial assistance arrangements were established,[44] a provision deemed as one of the ASEAN Agreement's main successes.[45]

Yet, the ASEAN Agreement had its limitations. Assistance was conditional upon the consent of the receiving party.[46] Further, the ASEAN Agreement did not provide any sanctions or stipulations on non-compliance.[47] Ultimately, the ASEAN Agreement was still very much premised on the 'ASEAN way' of conducting international relations.[48] The 'ASEAN way' focusses on unanimous and consent-based diplomacy, respect of national sovereignty and, above all, non-interference in other State's domestic affairs. The author will revisit these themes when discussing

Haze%20Action%20Plan-pdf.pdf (last visited on Apr. 26, 2017).

38 Syarif, *supra* note 5, at 313-4.

39 ASEAN Haze Action Online, *available at* http://haze.asean.org/status-of-ratification (last visited on Apr. 26, 2017).

40 ASEAN Agreement art. 4(1).

41 *Id.* art. 9(a) & (g).

42 *Id*. art. 5(1).

43 *Id*. art. 8(1).

44 *Id*. art. 20.

45 Tan, *supra* note 1, at 349.

46 ASEAN Agreement, art. 12(2).

47 Syarif, *supra* note 5, at 316. *See also* R. Razali, *The Shortcomings of the ASEAN's Legal Mechanism to Address Tranboundary Haze Pollution and Proposals for Improvement*, 1 Chi. Soc'y of Int'l Law (2011), *captured by* the Wayback Machine on Nov. 4, 2011 and *available at* https://web-beta.archive.org/web/20111104135105/http://a10014931063.oinsite.cn:80/_d271634123.htm (last visited on Apr. 26, 2017).

48 L. Nurhidayah et al., *The Influence of International Law upon ASEAN Approaches in Addressing Transboundary Haze Pollution in Southeast Asia,* 37 Contemp. Southeast Asia 184 (2015); D. Jones, *ASEAN and Transboundary Haze Pollution in Southeast Asia,* 4 Asia Eur. J. 446 (2006); Tan, *supra* note 1, at 332.

the extent of effectiveness of the ASEAN Agreement in Part four below.[49]

C. Singapore's Extraterritorial Legislation

Singapore is the only country in the ASEAN to have enacted extraterritorial legislation to target slash-and-burn activities that result in the haze. In August 2014, the Singapore Parliament passed the Transboundary Haze Pollution Act 2014 (hereinafter Singapore Act),[50] which is expressly stated to have 'extraterritorial application' for activities that contribute to the haze in Singapore.[51] The author would submit that such prescription of extraterritorial civil and criminal jurisdiction is consistent with the 'effects' doctrine or the objective territorial doctrine under international law. Such doctrines permit the exercise of jurisdiction for an act committed on foreign soil if it causes significant consequences within the territory of that country and the wording in the statue is sufficiently clear to displace the presumption against its extraterritorial application.[52]

The main functions of the Singapore Act are as follows. First, the Singapore Act establishes criminal liability[53] for entities which "cause or contribute" to the haze pollution.[54] It also establishes secondary or accessory liability for entities that condone any conduct by another entity or individual which causes or contributes to the haze.[55] As will be shown in the third point, this establishes liability not only for the entity in question, but also for parent companies if certain conditions are fulfilled.

Second, the Singapore Act permits civil actions to be filed against entities which "cause or contribute" to the haze if such actions lead to personal injury in Singapore, physical damage to property in Singapore, or economic loss in Singapore.[56] This is vaguely similar to the citizen action provision in the US Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA").[57]

49 *Id.*

50 Transboundary Haze Pollution Act 2014 (No. 24 of 2014), first published in the Republic of Singapore Government Gazette Acts Supplement No. 28: 2014 (Sept. 26, 2014). [hereinafter Singapore Act]

51 *Id.* § 4.

52 *See, e.g.,* J. Ellis, *Extraterritorial Exercise of Jurisdiction for Environmental Protection: Addressing Fairness Concerns*, 25 Leiden J. Int'l L. 401 (2012); M. Shaw, International Law 688 (n. 219) (6th ed. 2008); L. Damrosch et al., International Law: Cases and Materials, 757-70 (2014).

53 The Singapore Act § 5(1) & (4).

54 *Id.* § 5(1)(a).

55 *Id.* § 5(1)(b).

56 *Id.* § 6(1) & (3).

57 42 U.S.C.S. § 9659. Yet, the United States Court of Appeals for the Ninth Circuit recently held that CERCLA did not apply to transboundary air pollution, but only transboundary water pollution. *See* Pakootas v. Teck Cominco Metals, Ltd., 830 F.3d 975, 983-4 (9th Cir. 2016).

Third, the Singapore Act is significant in that it reverses evidentiary hurdles by establishing certain statutory presumptions. The Singapore Act presumes that an entity "owns or occupies" the land outside Singapore if a map which has been obtained from any of the statutorily prescribed sources shows the land as owned or occupied by that entity.[58] The Singapore Act further presumes that an entity which participates in the management of another entity 'condones' conduct that caused or contributed to the haze,[59] thereby giving rise to secondary criminal and civil liability. Accordingly, the Singapore Act presumes companies' control over their subsidiaries. Indeed, once the secondary liability presumption is triggered, the only defence available to that entity is to show that it took all reasonable measures to prevent, stop or substantially reduce such conduct by the other entity or individual.[60] Further, the evidentiary difficulty in terms of attributing haze in Singapore to forest fires in Indonesia is circumvented through the statutory presumption that the haze pollution is indeed caused if three cumulative conditions are fulfilled: (1) there is haze pollution in Singapore; (2) there is a fire outside Singapore; and (3) based on "satellite information, wind velocity and direction and other meteorological information," the smoke from the fire is moving in the direction of Singapore.[61]

Fourth, Part III (Administration) of the Singapore Act, specifically Sections 9, 10 and 11, empowers the Director-General of the National Environment Agency ("NEA")[62] to take additional steps to administer the Singapore Act. Section 9 of the Singapore Act permits the Director-General to send preventive measures notice to entities located outside of Singapore to prevent, reduce or control the haze (hereinafter Section 9 notice).[63]

In fact, the Director-General's powers under Section 9 are similar to the Environmental Protection Agency's powers to order extraterritorial clean-ups pursuant to CERCLA.[64] Section 10 of the Singapore Act permits the Director-General

58 The Singapore Act, § 8(4).

59 *Id.* § 8(3).

60 *Id.* § 7(3).

61 *Id.* § 8(1).

62 The National Environmental Agency is the relevant statutory body tasked to implement the Singapore Act. *See id.* § 2, 9-11; Environmental Protection and Management Act (Cap. 94A, 2002 rev. ed.), § 3(1).

63 The Singapore Act, § 9(5).

64 42 USCS § 9606. It states: "When the President determines that there may be an imminent and substantial endangerment to the public health or welfare or the environment… he may require the Attorney General of the United States to secure such relief as may be necessary to abate such danger or threat." *See* Pakootas v. Teck Cominco Metals, Ltd., 452 F.3d 1066, 1073 (9th Cir. 2006). (The EPA issued a Unilateral Administrative Order pursuant to this section directing a smelter located in Canada to perform a remedial investigation and feasibility study where its discharge of hazardous substances into the Columbia River in Canada impacted the residents in Washington State, US).

to furnish any person a notice to provide documents and information relevant to the matters under the Singapore Act (hereinafter Section 10 notice).[65] Section 11 further empowers the Director-General to issue a notice to secure the attendance of any person before himself for oral examination (hereinafter Section 11 notice).[66]

A brief mention should be made on the differences between the Sections 9, 10 and 11 notices. The failure to comply with Section 9 notice does not attract any consequences whereas Sections 10 and 11 notices do. The Singapore court may impose criminal liability on those who fail to comply with Section 10 notice.[67] The failure to comply with Section 11 notice may result in the issuance of a court warrant.[68]

III. What Has Been Done by Indonesia?

Having set out the framework for international environmental law with regards the transboundary haze pollution in Southeast Asia, this section and the next will proceed to analyze the effectiveness of the various solutions. Yet to do so, it would be imperative to appreciate what has actually been done by Indonesia. In this section, the paper will explore the shifting paradigm of Indonesia's attitudes to solve the haze pollution. In order to appreciate the significance of the acts taken by Indonesia in recent years, the preceding years of inaction must first be highlighted.

A good starting point would be Indonesia's Law No 23/1997 on Environmental Management (hereinafter 1997 Indonesian Law) which criminalizes the intentional carrying out of an action that results in environmental pollution, attracting a maximum imprisonment of 10 years and/or a maximum fine of IDR 500 million (USD 37,000).[69]

Yet, the 1997 Indonesian Law has only ever resulted in one conviction, even though 176 companies were publicly identified as violators, out of which, only 5 were eventually brought to court.[70] The one successful conviction relates to Goby, a

65 The Singapore Act, § 10(1).

66 *Id.* § 11(1)(b) & 11(2).

67 *Id.* § 10(6).

68 *Id.* § 11(4).

69 Law concerning Environmental Management (Law No. 23 of 1997), promulgated on September 19, 1997; State Gazette of the Republic of Indonesia Year 1997 Number 68, *available at* http://faolex.fao.org/docs/html/ins13056.htm (last visited on Apr. 26, 2017).

70 *See Legal Action on Forest Fires*, 53-54 Down to Earth (Aug. 2002), citing a statement from former environment

Malaysian who was the president of PT Adei Plantation and Industry.[71] Goby was sentenced by the Indonesian Supreme Court to eight months imprisonment, and was fined a meagre IDR 100 million (USD 10,000) for ground fires that occurred at his palm oil plantation in 1999. The weak rate of convictions is not surprising, given that the *mens rea* of the offence under the 1997 Indonesian Law is the high standard of intent. Critics have also cited corruption as a key factor for the consistent lack of prosecutions and acquittals even in the face of "clear proof of wrong doing."[72]

While this paper would be hard-pressed to state a definitive point in time in which Indonesia changed its policy to be stricter against errant polluters, any discussion must start with the enactment of Law No. 32/2009 on Environmental Protection and Management in 2009 (hereinafter 2009 Indonesian Law).[73] It has been heralded as providing "a complete set of provisions that deal with almost all the elements of modern environmental law."[74] First, this law imposes, in respect of a crime committed by an entity, secondary liability on "a person ordering the crime or person acting as activity manager in the crime."[75] Second, minimum terms of imprisonment and minimum fines have now been prescribed for offences relating to air pollution.[76] Third, the most egregious offence, that of causing air pollution with intent to cause serious injury or death, now attracts a maximum imprisonment term of 15 years and a maximum fine of IDR 15 billion (USD 1.1 million), a 30-fold increase from the maximum fine provided under the 1997 Indonesian Law.[77] Fourth, it also criminalizes offences where the *mens rea* is negligence, thereby reducing the *mens rea* from the high threshold of intent in the 1997 Indonesian Law.[78]

As stated above, the customary principle of due diligence in international environmental law dictates that it is not sufficient to merely enact laws prohibiting

minister Sonny Keraf as reported in Kompas (Mar. 28, 2000), *available at* http://www.downtoearth-indonesia.org/story/legal-action-forest-fires (last visited on Apr. 26, 2017). *See also* Tan, *supra* note 1, at 343.

71 H. Tanjung, *Malaysian businessman sentenced for plantation fires*, Jakarta Post, Aug. 31, 2002, *available at* http://www.fire.uni-freiburg.de/media/news_20020831_id3.htm (last visited on Apr. 26, 2017).

72 Jones, *supra* note 48, at 444-5 (citing a statement of Longenna Ginting, head of Walhi, an environmental NGO in Indonesia). *See* R. Go, *Activists Sue Forest-fire Offenders*, Straits Times, June 14, 2003.

73 Law on Environmental Protection and Management (Indonesia) (Law No. 32/ 2009, Oct. 3, 2009), *available at* http://faolex.fao.org/docs/pdf/ins97643.pdf (last visited on Apr. 26, 2017). [hereinafter Indonesian Law No. 32/2009]

74 Syrarif, *supra* note 5, at 322.

75 Indonesian Law No. 32/2009, art. 116(1)(b).

76 *Id.* arts. 98 & 99.

77 *Id.* art. 98(1) & (3).

78 An offence of negligently causing air pollution carries a minimum imprisonment term of one year and a minimum fine of IDR 1 billion (USD 75,000) and where such pollution has caused serious injury or death, carries a maximum imprisonment term of 9 years and a maximum fine of IDR 9 billion (USD 670,000). *See* Indonesian Law No. 32/2009, art. 99(1).

the creation of transboundary pollution. Such laws must be effectively enforced.[79]

The real turning point therefore starts with effective domestic enforcement. For Indonesia, this starts in 2015 with more consistent efforts to effectively prosecute those who caused forest fires.[80] As of November 2015, the Indonesian police were investigating 238 cases relating to the forest fires, had named 205 suspects in individual cases and 11 suspects in corporate cases, and had detained at least 72 people.[81] Between January and September 2016, the police arrested more than 450 individuals "suspected of starting fires."[82]

There have also been at least three known convictions since 2015. First, the provision in the 2009 Indonesian Law which pierces the corporate veil and criminalizes leaders of a business entity had been successfully invoked as the basis of a conviction.[83] In or around August 2015, the Rokan Hilir District Court in Riau sentenced the assistant of a plantation head of PT Jatim Jaya Perkasa to imprisonment of a term of two years with a fine of IDR 1 billion (USD 75,000) as a result of burning a palm oil plantation in June 2013.[84] Second, in September 2015, the Indonesian Supreme Court upheld the conviction of PT Kallista Alam with a fine of IDR 366 billion (USD 25.6 million).[85] Third, in a civil case brought by the Ministry of Environment and Forestry concerning pulpwood firm Bumi Mekar Hijau ("BMH"), the Palembang High Court overturned a lower court's decision which cleared BMH of illegally setting fires on its concession land in Sumatra in 2014, finding instead that BMH had "committed an unlawful act."[86] If a High Court overturned a lower court's decision of not guilty, it would be significant to demonstrate that private actors who

79 Pulp Mills, *supra* note 24, ¶ 197.

80 *See* T. Salim, *AGO to Scrutinize Prosecution in Haze Cases,* Jakarta Post, Nov. 7, 2015, *available at* http://www.thejakartapost.com/news/2015/11/07/ago-scrutinize-prosecution-haze-cases.html; *Govt Mulls over Harsher Sanctions for Perpetrators of Forest Fires*, Jakarta Post, Aug. 25, 2015, *available at* http://www.thejakartapost.com/news/2015/08/25/govt-mulls-over-harsher-sanctions-perpetrators-forest-fires.html; H. Jong, *Record Fine against Plantation Company Upheld*, Jakarta Post, Sept. 13, 2015, *available at* http://www.thejakartapost.com/news/2015/09/13/record-fine-against-plantation-company-upheld.html (all last visited on Apr. 26, 2017).

81 *Id*.

82 S. Schonhardt & A. Rachman, *Indonesia Vows Action After Haze Investigators Threatened*, Wall St. J., Sept. 6, 2016, *available at* http://www.wsj.com/articles/indonesia-vows-action-against-palm-oil-company-amid-effort-to-douse-fires-1473167596 (last visited on Apr. 26, 2017).

83 *Govt Mulls over Harsher Sanctions for Perpetrators of Forest Fires*, *supra* note 80.

84 *Id.*

85 This paper notes that the quantum of fine awarded is more than the maximum of IDR 15 billion. However, further details on the method of quantifying the fine are not available online. *See* Jong, *supra* note 80.

86 F. Chan & A. Arshad, *Pulp Firm Bumi Mekar Hijau Found Guilty of Starting Illegal Fires*, Straits Times, Aug. 31, 2016, *available at* http://www.straitstimes.com/asia/se-asia/pulp-firm-bumi-mekar-hijau-found-guilty-of-starting-illegal-fires (last visited on Apr. 26, 2017).

violate the law will no longer be granted impunity from the law. Taken in totality, these three judgments show a shift from the decades of impunity, sending a strong signal that the Indonesian courts and police are embarking on harsher enforcement measures against those who create forest fires that pollute the environment.

Such judicial enforcement must be analyzed within the backdrop of greater political will as demonstrated by stronger administrative and executive enforcement. In May 2014, Indonesia's then president Susilo Bambang Yudhoyono vowed to adopt a 'zero tolerance' policy towards the haze, being the first Indonesian president to publicly commit taking a tough stance against illegal forest fires.[87] In December 2015, the Ministry of Environment and Forestry announced that it had suspended or revoked concessions of 23 Indonesian paper and palm oil entities.[88] Indonesia also created the Peatland Restoration Agency ("PRA") in February 2016, an agency dedicated to reducing forest fires.[89] As set out above, it included this fact in its statement on signing the Paris Agreement.[90]

The PRA has taken concrete steps to compel the reduction of forest fires. The PRA ordered BMH to restore 95,000 hectares of damaged peatland.[91] It has been reported that the PRA was prevented from inspecting a forest concession in Riau managed by PT Andalan Pulp and Paper.[92] PT Andalan Pulp and Paper is an Indonesian company which owns and runs a paper mill and is also the subsidiary of one of the leading pulp and paper companies based in Singapore, Asia Pacific Resource International Holdings.[93] Separately, in September 2016, environmental investigators from the Ministry of Environment and Forestry were detained and threatened by firms they were investigating.[94] The fact that firms have tried for the first time to physically hinder investigators from pursuing their investigations demonstrates that private entities are now actually worried about administrative actions. It signifies

87 Z. Nazeer, *Zero tolerance for illegal land burning, vows Yudhoyono*, Straits Times, May 8, 2014, *available at* http://news.asiaone.com/news/asia/zero-tolerance-illegal-land-burning-vows-yudhoyono (last visited on Apr. 26, 2017).

88 *See Civil Lawsuit on Haze Kicks Off, Six Govt Officials Sued*, Eyes on the Forest, Mar. 31, 2016, *available at* http://www.eyesontheforest.or.id/?page=news&action=view&id=944 (last visited on Apr. 26, 2017).

89 Statement by Minister of Environment and Forestry (Apr. 22, 2016).

90 *Id*.

91 Chan & Arshad, *supra* note 86.

92 *Forest fires fuel political change*, Economist, Sept. 20, 2016, *available at* http://country.eiu.com/article.aspx?articleid=474619031&Country=Indonesia&topic=Economy&subtopic=Forecast&subsubtopic=Policy+trends# (last visited on Apr. 26, 2017).

93 Company Overview of PT Riau Andalan Pulp & Paper, Bloomberg, *available at* https://www.bloomberg.com/research/stocks/private/snapshot.asp?privcapid=31332811 (last visited on Apr. 26, 2017).

94 Schonhardt & Rachman, *supra* note 82.

a shift away from a culture of relying on corruption to gain legal impunity. Yet, instead of backing down, the Ministry of Environment and Forestry has vowed to continue pursuing the investigations[95] and has threatened to suspend Andalan Pulp and Paper's concession pending investigation.[96]

IV. Measuring Effectiveness of the ASEAN Agreement and the Singapore Act

Ultimately, political cooperation is a primary source of obligation, with the various international law instruments as secondary tools to pressure States to cooperate. In this sense, instead of being a positive obligation, international environmental law arises as a normative and discursive dialogue to provoke political reactions.[97]

Within this framework, the effectiveness of the ASEAN Agreement and the Singapore Act will be discussed as follows: (A) setting out the literature on measuring effectiveness of international environmental agreements; (B) measuring effectiveness of the ASEAN Agreement; (C) measuring effectiveness of the Singapore Act; and (D) analysing the role of third parties.[98]

A. Measuring Effectiveness of International Environmental Agreements

A discussion on the effectiveness of legal solutions must first begin with a discussion on key features of the existing literature discussing effectiveness of international environmental law.

First, a common criticism of the ASEAN Agreement is its lack of a compulsory dispute resolution mechanism and compulsive action.[99] It must be recognized that international environmental agreements lie on a separate playing field from other international agreements. The absence of a compulsory dispute settlement mechanism and sanctions for violations is not unique to the ASEAN Agreement, but

95 *Id.*

96 *Supra* note 92.

97 Bodansky, *supra* note 19, at 115.

98 This paper does not analyze the effectiveness of customary international law, given as it espoused in Section II(A) above that customary law on international environmental law is too vague to frame a specific obligation, but rather sets the terms of the framework within which more specific norms are negotiated and subsequently included in treaties. *See* Bodansky, *supra* note 19, at 119.

99 *See, e.g.,* Syarif, *supra* note 5, at 316; Tan, *supra* note 1, at 348; Tan, *supra* note 18, at 665; Nurhidayah et al., *supra note* 48, at 192.

pervades all international environmental agreements generally.[100]

Second, how does one measure compliance with international law? Does one measure the efforts taken by States to comply with their obligations, or in terms of the results based on the decrease of haze pollution levels?[101] As aforementioned, given the uncertainties in terms of quantifying effects of forest fires, and given the ability of natural meteorological elements such as El Nino and positive Indian Ocean Dipole to affect the severity of the haze pollution, the author argues in favour of measuring the steps taken by Indonesia to reduce the problem. Further, given that only 2 years have passed since 2015, when Indonesia stepped up its efforts to enforce its laws on forest fires, the correct perception to view effectiveness is with reference to the actions Indonesia takes, not with absolute decreases in pollution levels. Indeed, Singapore's Minister for the Environment and Water Resources, Masagos Zulkifli cautioned that it would be premature to conclude on the basis of improved air quality in the single year of 2016 that the problem has been solved, given the long history of the haze problem that has spanned decades.[102] A clear pattern of reduction of pollution levels over many more years is required before one can confidently conclude that transboundary haze pollution has been reduced.

This leads to the third point: how much time needs to pass before one can meaningfully measure compliance with the ASEAN Agreement and the Singapore Act? The Singapore Act was enacted less than three years ago, in August 2014, while Indonesia only acceded to the ASEAN Agreement just over two years ago, in January 2015. Would two years be a sufficient passage of time for one to measure compliance with either instrument?

Fourth, given that the Singapore Act establishes criminal and civil liability, should a conviction or a civil judgment be rendered under the Singapore Act before it is deemed successful? In other words, does the Singapore Act actually have to be invoked (and successfully invoked, on that note) before one can declare that it has served its purpose? As will be argued below, there need not be actual criminal or civil actions for the Singapore Act to be effective as long as the threat of such criminal or civil actions is credible.[103]

Bearing in mind such difficulties of measuring enforcement, this paper will now

[100] Bodansky, *supra* note 19, at 13.

[101] *See*, *e.g.*, Syrarif, *supra* note 5, at 320 (measuring effectiveness of the ASEAN Agreement statistically, based on the decrease of haze levels).

[102] M. Zulkifli (Minister for the Environment and Water Resources), Impact of Transboundary Haze Pollution Act on Air Quality, Singapore Parliamentary Debates, Official Report, Vol. 94 Sit. 27 (Nov. 8, 2016).

[103] J. Nye, The Future of Power 45 (2011).

proceed to analyze the effectiveness of the ASEAN Agreement and the Singapore Act.

B. Measuring Effectiveness of the ASEAN Agreement

As elaborated above, the ASEAN Agreement does not contain any mandatory dispute resolution or sanctions for those who violate the agreement. Any discussion that focuses on the effectiveness of the ASEAN Agreement must start with the acknowledgment that it is wholly reliant on the voluntary compliance of parties. In this case, the voluntariness is heightened by the fact that it is reliant on just one contracting party's compliance, being Indonesia.[104]

Indonesia only acceded to the ASEAN Agreement in January 2015, more than a decade after it came into force in November 2003. The effectiveness, or ineffectiveness, of the ASEAN Agreement, must therefore be measured in light of when Indonesia acceded to the ASEAN Agreement. There are two parts to measuring such effectiveness. One deals with the meaning of the act of accession, while the other tackles the impact arising from the act of accession.

Dealing with the first, Louis Henkin famously observed that: "Almost all nations observe almost all principles of international law and almost all of their obligations almost all of the time."[105] Academics have questioned whether States' accession to treaties ever compels them to do more than they have planned.[106] In light of such theories, it is questionable whether anything can be read into Indonesia's accession to the ASEAN Agreement.

Chayse and Chayse have opined that the principle source of States' non-compliance with international agreements is not 'wilful disobedience,' but a lack of capacity.[107] In Indonesia's case, its Minister for the Environment and Forestry publicly admitted in 2002 that Indonesia rated its ability to prevent forest fires a four on a scale of one to ten.[108] This lends credibility to the hypothesis that Indonesia wished to ensure that it would be in a position to comply with its obligations under the ASEAN Agreement before ratifying the agreement. As set out above, January 2015 (the date on which Indonesia acceded to the ASEAN Agreement) is generally in

104 For details on voluntary compliance, *see, e.g.,* Syarif, *supra* note 5, at 316; Tan, *supra* note 1, at 348; Tan, *supra* note 18, at 665; Nurhidayah et al., *supra* note 48, at 191.

105 L. Henkin, How Nations Behave 47 (2d ed. 1979).

106 G. Downs et al., *Is the Good News about Compliance Good News about Cooperation?*, 50 Int'l Org 383 (1996).

107 Chayse & Chayse, *supra* note 12, at 22.

108 Jones, *supra* note 48. (citing R. Go, *Minister Admits Jakarta Unable to Curb Forest Fires*, Straits Times, June 13, 2002).

line with when Indonesia started to take more stringent action to enforce its domestic laws.

Or was Indonesia's accession to the ASEAN Agreement a direct reaction to the enactment of the Singapore Act just five months before? The exact pressure point, or a combination of pressure points, for Indonesia's accession to the ASEAN Agreement might never be known. What is clear, however, is what Indonesia's accession means going forward.

This brings out the second point dealing with the impact of the accession. Within a year of its accession to the ASEAN Agreement, Indonesia submitted its Plan of Action and efforts to implement such plan to the ASEAN Centre focussing on monitoring and enforcement efforts, a move which gathered acknowledgments of appreciation by the majority of the ASEAN Ministers.[109]

The value of the ASEAN Agreement must also be analyzed against the backdrop of the 'ASEAN way,' which is the culture of consent-based diplomacy and non-interference in other party's domestic affairs in Southeast Asia.[110] Singapore's then Minister for the Environment and Water Resources, Dr Balakrishnan, stressed that the ASEAN cooperation "remains a critical pillar of the ultimate solution"[111] and that Singapore would continue to work with Indonesia to solve the problem "in the spirit of cooperation and mutual respect"[112] even after the enactment of the Singapore Act.

For all that it lacks in terms of sanctions and provisions to compel adherence, the ASEAN Agreement is the only instrument that provides a neutral, non-confrontational and acceptable forum in light of the 'ASEAN way' for States to come together to collectively tackle the haze pollution. Viewed in this regard, it lights the way for political co-operation to occur.

[109] *See* 17th Meeting of the Sub-Regional Ministerial Steering Committee (MSC) on Transboundary Haze Pollution, Jakarta, Indonesia, MEWR Press Release, July 28, 2015, *available at* http://www.mewr.gov.sg/news/17th-meeting-of-the-sub-regional-ministerial-steering-committee-msc-on-transboundary-haze-pollution--jakarta--indonesia (last visited on Apr. 26, 2017).

[110] Nurhidayah et al. *supra* note 48, at 184; Jones, *supra* note 48, at 446; Tan, *supra* note 1, at 332.

[111] Written Reply by Dr Vivian Balakrishnan, Minister for the Environment and Water Resources, to Parliamentary Question on Air Quality with enactment of the Transboundary Haze Pollution Act, MEWR Parliament Q&As (Jan. 20, 2015), *available at* http://www.mewr.gov.sg/news/written-reply-by-dr-vivian-balakrishnan--minister-for-the-environment-and-water-resources--to-parliamentary-question-on-air-quality-with-enactment-of-the-transboundary-haze-pollution-act (last visited on Apr. 26, 2017).

[112] *Transboundary Haze Pollution Act not about national sovereignty: MEWR*, Channel NewsAsia, June 15, 2016, *available at* http://www.channelnewsasia.com/news/singapore/transboundary-haze/2874888.html (last visited on Apr. 26, 2017).

C. Measuring Effectiveness of the Singapore Act

The discussion of the 'ASEAN way' brings us squarely to the next sub-section, the effectiveness of the Singapore Act. At first glance, the Singapore Act appears to go against the very notions of the 'ASEAN way,' given that the notion of 'unilateral'[113] extraterritorial jurisdiction is the 'antithesis'[114] to the ASEAN spirit of interstate cooperation.

This subsection will begin by setting out the actions under the Singapore Act. Thus far, Singapore's NEA has sent Section 9 notices to six Indonesian suppliers of the Asia Pulp and Paper Group, requesting them to take preventive measures to extinguish the fires on any land owned by them and submit a plan of action to prevent the recurrence of such fires.[115] The NEA has further sent Asia Pulp & Paper Company Ltd, a company listed on the Singapore Stock Exchange in Singapore, a Section 10 notice requesting information on measures taken by its subsidiaries and suppliers in Indonesia to put out fires in their concessions.[116]

The closest to a criminal action that has been threatened under the Singapore Act was the issuance of a court warrant against an unnamed director of an Indonesian firm after he failed to attend an interview with the NEA.[117] What is clear from the issuance of the court warrant is Singapore's unequivocal signal that it is prepared to prosecute Indonesian companies for causing transboundary haze pollution in Singapore under the Singapore Act.[118] According to the theory of coercive diplomacy, the existence of threat of criminal action in itself makes the Singapore Act effective, provided that such threat is credible.[119] Actual criminal or civil actions are not required to make the Singapore Act effective.

Yet, the effectiveness, or ineffectiveness, of the Singapore Act must also be viewed against the negative reactions by Indonesia and Malaysia to the Singapore

113 Tan, *supra* note 1, at 356.

114 *Id*. at 361.

115 Oral Reply by Mr Masagos Zulkifli, Minister for the Environment and Water Resources, to Parliamentary Question on Transboundary Haze Pollution Act, MEWR Parliament Q&As (Jan. 28, 2016), *available at* http://www.mewr.gov.sg/news/oral-reply-by-mr-masagos-zulkifli--minister-for-the-environment-and-water-resources--to-parliamentary-question-on-transboundary-haze-pollution-act. *See also* D. Roman, Singapore Aims to Prosecute Indonesian Polluters under Haze Law, Bloomberg, June 9, 2016, *available at* https://www.bloomberg.com/news/articles/2016-06-10/singapore-aims-to-prosecute-indonesian-polluters-under-haze-law (all last visited on Apr. 26, 2017).

116 *Id*.

117 *NEA obtains court warrant against director of Indonesia firm who failed to aid with haze investigations*, Channel NewsAsia, May 11, 2016, *available at* http://www.channelnewsasia.com/news/singapore/nea-obtains-court-warrant/2776046.html (last visited on Apr. 26, 2017).

118 Roman, *supra* note 115.

119 Nye, *supra* note 103.

Act, which sit squarely within the discomfort of non-conformity with the 'ASEAN way.' Indonesian Vice-President Jusuf Kalla, Indonesia's Environment and Forestry Minister Siti Nurbaya Bakar and the Indonesian Ambassador to Singapore criticized such act on the basis that it violated Indonesia's sovereignty.[120] The Indonesian Vice-President Jusuf Kalla said that "the [Indonesian] government will not allow its citizens … to be prosecuted under Singapore laws."[121] In response, Singapore's Ministry of the Environment and Water Resources defended Singapore's respect for Indonesia's sovereignty, stating that its acts were in compliance with international law as they were targeting the specific private actors.[122] The Indonesian Foreign Ministry subsequently clarified that Indonesia's concern was in relation to ensuring that the Indonesian director was given due process rights such as the right to counsel.[123] Indonesian Foreign Ministry's spokesperson Arrmanatha Nasir also rejected Singapore's request for information contained in notices issued under the Singapore Act.[124] He stated that the proper and most effective forum for solving the transboundary haze pollution problem was the ASEAN Agreement.[125]

Malaysia's reactions to the Singapore Act are also notable. It was reluctant to enact a similar extraterritorial law after consideration.[126] Instead, it focussed on reaching mutual agreements with Indonesia, at both bilateral[127] and the ASEAN [128]

120 Roman, *supra* note 115. *See also supra* note 112; S. Ismail, *Indonesia will not allow its citizens to be prosecuted under Singapore laws: VP Kalla*, Channel NewsAsia, June 13, 2016, *available at* http://www.channelnewsasia.com/news/singapore/indonesia-will-not-allow/2866306.html (last visited on Apr. 26, 2017).

121 Ismail, *id*.

122 S. Ismail, *Indonesia Protests against Singapore's Move to 'Interrogate' Company Director*, Channel NewsAsia, May 12, 2016, *available at* http://www.channelnewsasia.com/news/asiapacific/indonesia-protests-against-singapore-s-move-to-interrogate-compa-8000020 (last visited on Apr. 26, 2017).

123 S. Ismail, *Indonesia not Opposing Singapore's Efforts against Forest Fire Culprits: Official,* Channel NewsAsia, June 16, 2016, *available at* http://www.channelnewsasia.com/news/asiapacific/indonesia-not-opposing/2878506.html (last visited on Apr. 26, 2017).

124 It is not clear whether Indonesia was protesting against the six section 9 notices previously issued to Indonesian companies or a separate and unreported request for information issued by Singapore's NEA directly to the Indonesian government under the Singapore Act. *See* T. Salim, *Indonesia Rebuffs Singapore on Haze Again*, Jakarta Post, June 18, 2016, *available at* http://www.asianews.network/content/indonesia-rebuffs-singapore-haze-again-20075 (last visited on Apr 26, 2017).

125 *Id*.

126 *See Transboundary Haze Laws 'May Not be Best Option to Tackle Errant Firms,'* Today, Aug. 17, 2016, *available at* http://www.todayonline.com/world/asia/transboundary-haze-laws-may-not-be-best-option-tackle-errant-firms (last visited on Apr. 26, 2017).

127 *Malaysia and Indonesia to Discuss Haze Solution,* Star, Sept. 21, 2015, *available at* http://www.thestar.com.my/news/nation/2015/09/21/msia-and-indonesia-to-discuss-haze-solution (last visited on Apr. 26, 2017).

128 T. Leong, *ASEAN Countries Agree on Steps to Fight Haze, but Refrain from Pressuring Indonesia*, Straits Times, Aug. 11, 2016, *available at* http://www.straitstimes.com/asia/se-asia/asean-countries-agree-on-steps-to-fight-haze-but-refrain-from-pressuring-indonesia (last visited on Apr. 26, 2017).

levels. It also offered to dispatch aircrafts to assist Indonesia with putting out the forest fires.[129] Malaysia's actions show that an extraterritorial law might not be ideal in Southeast Asia.

The backlash against unilateral measures adopted by Singapore defies established norms of in Southeast Asia premised on the 'ASEAN way.' It also brings us back to primacy of the ASEAN Agreement given that it adheres to the 'ASEAN way' of consent-based diplomacy. This raises the question of whether Singapore committed an international relations *faux pas* by passing the Singapore Act.

The author argues that Singapore's position is consistent with the use of unilateral extraterritorial domestic legislation as a recent developing trend in international environmental law.[130] As international environmental law is primarily treaty-based, two factors should be considered. First, treaties require time to negotiate. They are unable to keep up with the proliferation of environmental problems caused by the rapid pace of economic development. Second, given that most international environmental agreements do not provide for compulsory dispute resolution mechanisms, traditional forms of transnational dispute resolution are unable to keep up with emerging trends in international environmental law.[131]

Indeed, in the context of discussing the legitimacy of the extraterritorial application in US CERCLA[132] and Canada's Clean Air Act,[133] academics have argued that such legislation is merely an interim relief that serves as a catalyst to pressure the other State to engage in bilateral negotiations and to regulate their domestic environmental problems more actively.[134] Consistent with the 'polluter pays' principle, extraterritorial domestic environmental legislation directs its focus towards the 'true parties' responsible, i.e. the private parties, instead of the States.[135] The author would argue that the Singapore Act conforms with the 'ASEAN Way' by directing the spotlight away from Indonesia's actions and focusing on the

[129] M. Goh, *Malaysia Offers Indonesia Assistance to Fight Haze: Minister*, Channel NewsAsia, Aug. 26, 2016, *available at* http://www.channelnewsasia.com/news/asiapacific/malaysia-offers-indonesia-assistance-to-fight-haze-minister-7888732 (last visited on Apr. 26, 2017).

[130] S. Hsu & A. Parrish, *Litigating Canada-U.S. Transboundary Harm: International Environmental Lawmaking and the Threat of Extraterritorial Reciprocity*, 48 Va. J. Int'l L. 57 (2007).

[131] *Id.*

[132] 42 U.S.C.S. § 9606.

[133] Clean Air Act. §21.1(1), Act of Dec. 17, 1980, ch. 45, 1980-81 82-83 Can. Stat. 1160.

[134] Hsu & Parrish, *supra* note 130, at 58. *See also* R. Abate, *Kyoto or Not, Here We Come: The Promise and Perils of the Piecemeal Approach to Climate Change Regulation in The United States*, 15 Cornell J. L. & Pub. Pol'y 398 (2006); D. Wooley, *Acid Rain: Canadian Litigation Options in U.S. Court and Agency Proceedings*, 17 U. Tol. L. Rev. 139 (1985).

[135] Henry et al., *supra* note 26, at 604.

responsible entities. Indeed, when Singapore's Minister of the Environment and Water Resources responded to Indonesia's allegation that Singapore had violated international law through its issuance of the court summons, the Minister focussed on the acts of the private actors, rather than Indonesia's role in this course. Also, Singapore stressed that the Singapore Act is not intended to replace other countries' domestic laws and enforcement actions, but merely complements efforts of other countries to hold errant companies to account.[136]

Further, the exercise of extraterritorial jurisdiction based on the 'effects' doctrine is not without its flaws. Jurisdiction based on the 'effects' doctrine or 'objective territorial' jurisdiction as it is otherwise known, is one of the most controversial bases of jurisdiction.[137] Critics have argued that it leads to jurisdictional conflict between States,[138] which can be a slippery slope towards asserting universal jurisdiction,[139] especially in relation to crimes that the international community has not yet recognized as having universal jurisdiction.

To prevent a jurisdictional conflict, this paper would submit that Indonesia ought to be the primary country exercising jurisdiction over such crimes given that it may assert jurisdiction based on territorial and nationality principles. It is only when Indonesia is unwilling and/or unable to effectively enforce its laws that Singapore may exercise its enforcement jurisdiction of the Singapore Act over actors based in Indonesia.

As such, while the Singapore Act has been successful by posing as a credible threat for Indonesia to take more effective measures to enforce its own laws and engage with the voluntary mechanisms of the ASEAN Agreement, its successes end there. Seeing the rootedness of the 'ASEAN way' in the context of diplomacy in Southeast Asia, the Singapore Act will ultimately yield to the ASEAN Agreement as the latter squares with established notions of the 'ASEAN way.'

D. Analysing the Role of Third Parties

Thus far, this paper has analyzed the effectiveness of solutions to solve the transboundary haze pollution problem through the lenses of state action, with a primary focus on legal action and a secondary focus on political action. However,

[136] V. Balakrishnan (the then Minister for the Environment and Water Resources), Transboundary Haze Pollution Bill, Second Reading Bills, Singapore Parliamentary Debates, Official Report, Vol. 92, Sit. 2 (Aug. 4, 2014).

[137] Shaw, *supra* note 52, at 688. *See also* Ellis, *supra* note 52, at 401; D. Ireland-Piper, *Prosecutions of Extraterritorial Criminal Conduct and the Abuse of Rights Doctrine*, 9 Utrecht L. Rev. 79 (2013).

[138] A. Parrish, *The Effects Test: Extraterritoriality's Fifth Business*, 61 Van. L. Rev. 1470 (2008).

[139] M. Akehurst, *Jurisdiction in International Law*, 46 Brit. Y.B. Int'l L. 154 (1972-3).

no discussion on solutions to combat the transboundary haze pollution would be complete without analysing the role of third parties, such as non-governmental organizations ("NGOs") and private entities.

Both NGOs and the private sector have been instrumental in applying pressure on actors that cause the haze pollution. An Indonesian-based NGO, WALHI, announced in October 2015 that it would be filing a class action suit against the largest palm oil and pulp and paper entities before the Indonesian courts on behalf of 50 residents in Jambi, South Sumatra who were affected by the forest fires in 2015.[140] It is reported that the total damages claimed in this class action stands at a stellar IDR 51 trillion (USD 3.5 billion).[141] This class action was reportedly tried before the Pekanbaru District Court in Riau, Indonesia in March 2016 in the absence of the defendants.[142] A representative from WALHI stated that they were emboldened to take such an ambitious step given that 2015 was 'extraordinary' and "different from earlier incidents" in terms of the extent to which it affected Malaysia and Singapore.[143] Likewise, an NGO based in Singapore, the Haze Elimination Action Team, contemplated filing a class action under the civil action provisions of the Singapore Act.[144]

The true power of third party actors lies beyond the legal framework, but in applying financial pressure. At the heart, there is the appreciation that the culpable actors are large profit-driven private companies. This is where the private sector comes in. The haze pollution, like every other environmental problem, is a negative externality. Effective solutions must therefore find a way to embed the negative environmental externalities within the prices of existing markets.[145] The market pressure is specifically strong for the corporations in the palm oil industry given that, in 2014, Indonesia accounted for approximately half of the world's production of palm oil by volume.[146]

[140] S. Ismail, *South Sumatra Residents to File Class Action Suit against Firms Causing Haze,* Channel NewsAsia, Oct. 6, 2015, *available at* http://www.channelnewsasia.com/news/asiapacific/south-sumatra-residents/2173634.html (last visited on Apr. 26, 2017).

[141] Such damages are for negative health effects, lost income and land that had been destroyed. *See id*.

[142] *Supra* note 88.

[143] Ismail, *supra* note 140.

[144] *Id*.

[145] D. Hunter et al., International Environmental Law and Policy 105-6 (5th ed. 2015).

[146] The 2014 World Bank statistics shows that Indonesia and Malaysia accounted for 85 percent of the world's revenue in palm oil production, with Indonesia and Malaysia accounting for USD13.2 billion and USD8.6 billion of the world's exports respectively. *See* J. Vasagar, *Banks Press Palm Oil Growers over Environmental Standards*, Fin. Times, Mar. 29, 2016, *available at* https://www.ft.com/content/5a6ffebe-f15e-11e5-9f20-c3a047354386 (last visited on Apr. 26, 2017).

A movement that has been gaining momentum is the increasing awareness of palm oil that has been certified by the Roundtable on Sustainable Palm Oil ("RSPO").[147] The RSPO is a voluntary initiative that developed a set of criteria for sustainable palm oil with which entities must comply in order to receive certification. Entities whose subsidiaries or suppliers are involved in causing forest fires would not receive the RSPO certification. One of Singapore's main supermarkets, NTUC FairPrice mandated that its house brand edible oils must be sourced from RSPO-certified palm oil sources.[148]

Several large global multi-national enterprises, Nestle, Unilever, Mars and Kellog took steps to suspend business with Malaysian-based IOI Group after its certification had been suspended by the RSPO in April 2016.[149] Another sector that is particularly active in promoting sustainable environmental practices is banking. International banks whose Asian headquarters are in Singapore have increasingly refused loans or terminated existing loans to palm oil companies that are not RSPO certified.[150] However, the crippling effect to the business of such companies remains to be seen. Only one Asian-based bank has signed up to the RSPO initiative and companies may therefore turn to local or regional financial institutions which might not be as strict on RSPO certification for alternative sources of finance.[151]

Given the vastness of third party actions to solve the haze pollution, this paper is only able to scrape the tip of the iceberg by setting out key examples of the variety of such initiatives. With increasing awareness of the haze pollution, the author is confident that these third party initiatives which target errant companies' financial profits would only become more effective over time.

V. Conclusion

This paper has analyzed three forms of international legal solutions to the problem of transboundary haze pollution in Southeast Asia: customary international law, the ASEAN Agreement, and the extraterritorial Singapore Act.

147 *See* 3 Simple Ways You Can Help Stop Haze, *available at* http://pmhaze.org/take-action/3-simple-ways-you-can-help-stop-haze (last visited on Apr. 26, 2017).

148 Zulkifli, *supra* note 102.

149 *Id.*

150 Vasagar, *supra* note 146.

151 *Id.*

Despite the seeming simplicity of these instruments on the surface, "untangling the complex web" of their interconnectedness is a more difficult exercise. Such complexity is further exacerbated by the dynamics of market forces, as third parties are in a position to exert financial and reputational pressure on such errant entities to internalize the negative externalities of the haze.

As aforementioned, the ethos of the 'ASEAN way' of consent-based diplomacy, regarding national sovereignty and non-interference in other State's domestic affairs is so deeply embedded within all State-to-State actions in the ASEAN that any meaningful discussion on the successes of legal solutions ultimately depends on the political will of the relevant States where forest fires occur.

The greatest weakness of the ASEAN Agreement - being its failure to compel behavior by not having a binding dispute resolution mechanism - is concurrently its greatest success as it is viewed by all State parties as a neutral, non-confrontational forum to address the haze pollution. While the Singapore Act appears more aggressive than the ASEAN Agreement in compelling action to solve the transboundary haze, it is nevertheless ultimately reined in by having to work within the ethos of the 'ASEAN way.' Therein lies the rub. If the Singapore Act were not invoked, it would be seen as ineffective. Yet, there is a risk that over-invocation of the Singapore Act may strain the relations between Singapore and Indonesia, which may in turn be counterproductive in solving the root of the haze pollution.

In this regard, the primacy of Indonesia's political will cannot be understated. Even if such political will had been spearheaded by Singapore and other ASEAN States, this paper commends the shift in Indonesia's attitude to address the haze solution since 2015. Without Indonesia's efforts, any discussion on the effectiveness of customary law, the ASEAN Agreement or the Singapore Act will be ultimately proven futile. Viewed through this filter, the three forms of international law serve as a normative and facilitative source, rather than a positive source, in nudging Indonesia to enforce its domestic laws more stringently.