Singapore Government Securitization Measures against Transboundary Haze Pollution as a Non-Traditional Security Threat

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ABSTRACT

Transboundary haze pollution (PALB) has developed into a critical concern for Southeast Asian countries in terms of transboundary issues and national security. This study aims to provide an understanding of the non-traditional threats that have become significant in front of countries, to demonstrate that the PALB issue is worthy of being included in the Non-Traditional Security (KNT) study, to provide an in-depth analysis of how the securitization transformation process has affected PALB issues in Singapore, to correlate the involvement of various actors in the ongoing securitization process, and to evaluate. This research use a qualitative methodology to connect one variable to another in a direct and constructive manner, drawing on a broad theoretical foundation, most notably constructivism. It can be inferred that the government possesses complete authority to secure the smog issue. The community's response is critical in determining the success of haze securitization. Additionally, the mass media and social media play a critical role in channeling popular opinion.

Keywords*: existential threat; securitization policy; constructivism approach; transboundary haze pollution; speech act*

ABSTRAK

Isu polusi asap lintas batas (PALB) (*Transboundary haze pollution*) merupakan persoalan esensial bagi negara-negara Asia Tenggara sebab menjadi tantangan keamanan nasional sekaligus menjadi persoalan lintas batas negara. Untuk itu, penelitian ini bertujuan mengeksplorasi kehadiran ancaman non-tradisional seperti isu PALB. Tulisan ini menganalisa bagaimana proses transformasi sekuritisasi pada isu PALB di Singapura, mengkorelasikan bagaimana hubungan keterlibatan berbagai aktor dalam proses sekuritisasi yang berlangsung, dan mengevaluasi kebijakan sekuritisasi yang dilakukan oleh Singapura sebagai kerawanan eksistensial. Penelitian ini merupakan penelitian kualitatif studi pustaka dengan menggunakan pendekatan konstruktivisme. Berdasarkan hasil analisa penulis disimpulkan bahwa pemerintah Singapura memiliki kewenangan penuh dalam melakukan sekuritisasi terhadap isu kabut asap. Adapun respon masyarakat merupakan faktor penting dalam mempengaruhi keberhasilan sekuritisasi isu tersebut. Selain itu, peran media massa dan sosial juga sangat penting dalam menyalurkan opini masyarakat mengenai urgensi dari isu PALB.

Kata Kunci: ancaman eksistensial; kebijakan sekuritisasi; pendekatan konstruktivisme; polusi asap lintas batas; *speech act*

Introduction

The issue of transboundary haze pollution (PALB) arose as a result of forest fires on dry peatlands in Indonesia. The consequences of the fires have affected millions of people both in Indonesia itself, as well as in surrounding countries such as Singapore, Malaysia, as well as several regions or provinces in the Philippines and Thailand. Meanwhile, Singapore, as a small country experiencing the most powerful economic growth in the region, must be overshadowed by deep concerns about the PALB.

Companies and corporations in the palm oil sector have set their sights on numerous forest areas in Sumatra and Kalimantan in order to maximize their profits. These actors produce oil palm fields by the slash and burn method.[1] The burning byproduct produces smog, which spreads to blanket the sky and becomes pollution. As a result, the local community, particularly in Singapore, has become a victim of these industrial activities.

According to available statistics, major forest fire destruction occurred in 1997-1998, prompting various scholars and international organizations to evaluate the economic and environmental costs incurred by PALB recipient countries. The Asian Development Bank believes that the total economic expenditure of this lawsuit will exceed US$ 9 billion, with Singapore bearing around 43% of the cost.[2] Meanwhile, Euston Quah estimates Singapore's total loss to reach US$ 286 million.[3] In lowland forest areas, forest fires burned up to ten million hectares. Worse yet, it resulted in a large number of casualties, including approximately 15,600 additional small children.[4]

Singapore's government has two key strategies for addressing security instability. To begin, a political act was taken in response to the PALB issue in July 2013, when a protest note was sent to the Indonesian government.[5] That mindset appears to have a concrete form. Because the debate over PALB is getting increasingly contentious in establishing Singapore's relationship with Indonesia. In other words, the plume of smoke that surrounds Singapore's territory contributes to the vital impact that imposes a significant cost both economically and socially and politically. Second, one of Singapore's parliamentary factions introduced a package of measures in the Transboundary Haze Pollution Bill to penalize entities deemed to be responsible for or contributing to the problem. Then, on August 5, 2014, this bill won unanimous approval from Singaporean Members of Parliament. After the Transboundary Haze Pollution Act (THPA) became law, this is one of the government's securitization initiatives. Singapore, through resolving issues through a variety of interdisciplinary approaches that encompass tools, values, politics, knowledge, and ability.[6]

In the author's observation, the PALB securitization can result in the violators being punished to criminal or civil sanctions. Nonetheless, each defendant has the right to contest the wrongdoing prior to the court's decision being final. In actuality, this case is not played by a single actor, but by a cast of numerous actors. Thus, the existence of this statute implies that PALB offenses are generally perpetrated by corporations, rather than being the appropriate weapon for prosecuting farmers or smallholders. They jointly contribute to the possibility of PALB. Even Singapore's Minister of the Environment, Vivian

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[1] The Straits Times, "South-east Asia's haze: What's behind the annual outbreaks? 2015," The Straits Times, https://www.straitstimes.com/asia/east-asia/south-east-asias-haze-whats-behind-the-annual-outbreaks (accessed April 18, 2021).

[2] Irawan, S., Tacconi, L., & Ring, I. Stakeholders' incentives for land-use change and REDD+: The case of Indonesia. *Ecological Economics*, 87, 75-83. 2013. doi: 10.1016/j.ecolecon.2012.12.018.

[3] Quah, E. Transboundary pollution in Southeast Asia: the Indonesian fires. *World Development*, 30(3), 429-441. 2002. doi: 10.1016/S0305-750X(01)00122-X.

[4] Jayachandran, S. Air quality and early-life mortality evidence from Indonesia's wildfires. *Journal of Human Resources*, 44(4), 916-954, 2009. doi: 10.3368/jhr.44.4.916.

[5] Gultom, K., Utomo, T. C., Farabi, N. 4. Sekuritisasi kabut asap di Singapura tahun 1997-2014. *Journal of International Relations*, 2(2), 33-43, 2016.

[6] Bassano, M., & Tan, D. *Dissecting the transboundary haze pollution bill of Singapore*. (pp. 1-21). Columbia: School of International and Public Affairs. 2014.

Balakrishnan, acknowledges that the PALB Law does not address all of these critical issues.[7] Raman Letchumanan also made pointed criticisms, claiming that the PALB Act or this securitization action was confined to apprehending the culprits of PALB's emergence but did not treat the case's core cause. In other words, the securitization process should be expanded to include coordinated and sustained responses among governments and other entities to address the numerous haze-related difficulties that can cross multiple sectors.[8]

The authors assumed that the problems or security vulnerabilities in PALB cannot be viewed as a straightforward danger to Singapore. From the 1997/1998 event to 2015, the issue has persisted and become a burden and a blight on the state's efforts to resolve existing problems. Numerous perspectives have been expressed, ranging from political action to securitization. However, as this issue has developed into an existential threat to the state, Singapore's securitization process has encountered a number of roadblocks, including the capacity of securitization to close vulnerabilities at the source of the problem. The purpose of this research is to attempt to assess the PALB securitization process by concentrating on the area of securitization evaluation.

Literature Review

The authors will analyze the evaluation of the environmental issue securitization policy (PALB), conducted by the Singapore government. This issue has developed into a critical component in resolving security concerns. Although this is a non-military task, the impact on the community and government is significant, particularly in terms of casualties and economic disruption.

Securitization theory is designed to widen the scope of security beyond the established political and military sectors, delineating five areas of security: military, environmental, economic, societal, and political security. It also introduces a constructivist operational methodology that aids in the understanding and analysis of how and when particular issues are recognized as security threats[9].

The concept of securitization involves the designation of an issue as a 'security' matter by an influential actor, which transitions the issue from the standard political arena to the security domain. This labeling as a 'security' issue influences policy decisions, illustrating that 'security' operates as a 'speech act'[10].

The thesis is that smog has impacted numerous facets of life and the state's stability to the point where this issue could become a threat to the state. The process of transforming the transboundary haze issue into a state threat may be traced back to the securitization hypothesis. There are two limitations to the Copenhagen School's securitization theory, according to this school. First, the theory focuses only on two issues: who the securitizing actor is and how securitization occurs. A more fundamental question about securitization is why it occurs in the first place. This inquiry is intended to elicit information about the motivation or goal of the security actor in bringing a threat problem into the security conversation. Thus, the fundamental question in examining securitization is why securitize an issue in the first place. Each act

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[7] The Straits Times, "Parliament: New law passed to combat haze," The Straits Times, https://www.straitstimes.com/singapore/environment/parliament-new-law-passed-to-combat-haze (accessed 18 April, 2021).

[8] Letchumanan, R. *Singapore's transboundary haze pollution act: silver bullet or silver lining*?. (pp. 1-4). Singapore: Nanyang Technological University. 2015.

[9] Laura J. Shepherd, *Critical Approaches to Security: An Introduction to Theories and Methods*, *Critical Approaches to Security: An Introduction to Theories and Methods*, 2013, https://doi.org/10.4324/9780203076873.

[10] Shepherd.

of securitization is the result of a political choice. Securitization demonstrates the problem's urgency, which results in the mobilization of political support. There is a mobilization of resources for the purpose of resolving challenges that develop. Political elites and the military can utilize securitization measures to restrict civil rights, curtail the dominance of particular political institutions, and enhance the military budget. Thus, even though non-traditional dangers are viewed as threats to human security, securitization theory does not abolish the military's duties and tasks or the political elite's power in a non-traditional security perspective. The essential point here is that the advent of non-traditional security concerns broadens the scope of state involvement in defending against both traditional and non-traditional threats.

Second, the Copenhagen School's securitization theory is frequently insufficient for actual study. The intellectuals connected with this school have concentrated only on establishing a comprehensive theoretical framework for security studies, avoiding empirical work. As a result, the empirical dynamics of securitization are poorly understood. This shortcoming, the author believes, is related to the absence of obvious evidence showing the existence of securitization measures. Even this hypothesis has not provided a satisfactory explanation for why a securitization issue occurs exclusively through a single mechanism, namely the 'speech act.' Thus, each securitization analysis must demonstrate the theory's application in the context of reality through the use of precise indicators. This does not imply that securitization occurs solely as a result of the presence of speech acts.

This study investigates the securitization process through which environmental security threats can spread to other security threats, such as those faced by Singapore. However, investigations into the securitization process cannot be as simplistic as the introduction of other forms of securitization policies. What is striking is how this issue, which was earlier dismissed as trivial, has evolved into an existential threat to national security. From existential threat to genuine and immediate action (emergency action), the inquiry process can be categorized as a series of episodes or years of PALB occurrence, which virtually routinely occurs each year.

The authors attempt to classify the securitization process in the years following the creation of PALB based on the most catastrophic losses. The author believes that the most compelling moments of PALB's presence in Singapore occurred in 1997, 2006, 2013, and 2015. It resulted in actual efforts to alleviate the problem from 1997 to 2015, however justifying the location of securitization becomes critical for discussion in this research. More precisely, it is examining the process of securitization policy formulation. The Singapore government's assessment of PALB securitization policymaking as an existential danger following 1997 became the focal point of this investigation.

Methodology

This research departs with qualitative methodology to connect one variable to another in a direct and constructive manner, based on a broad theoretical foundation, most notably the constructivist approach. This research, in turn, employs a case study methodology. This approach is pertinent for examining a certain step or process in Singapore's PALB securitization from 1997 to 2016.

Further examination reveals three models for the case study approach: descriptive, theoretical illustration, and interpretation. The model chosen for this study exemplifies the theory that characterizes the context of securitization and serves as a vehicle for in-depth analysis of the setting, as the purpose of this research is to correct the existing securitization policy.

The case study approach used in this study incorporates data items gleaned through literature reviews. These sources include official documents or reports, indexed and peer-reviewed scientific articles,

books and monographs, as well as a variety of other respectable scientific sources. That is, this research utilizes secondary data from the literature.

The stages and strategies of the secondary data collection process are as follows: first, preparing the data for use; second, reading the entire collection of data; third, processing data to be classified into parts that will be described and elaborated in detail using theoretical guidance; fourth, connecting all of the division's results to be described and explained in detail; fifth, presenting the analysis as a qualitative report; and finally, classifying the meaning of the data.

Analysis

a. **Transboundary Haze Securitization Process in Singapore**

Transboundary haze's rise in Southeast Asia is a severe threat. This is suspected by the existence of forest and land fires (karhutla) in Indonesia and several parts of Malaysia. Smog is a concern to human health because it generates smoke pollutants that contaminate the air and damage air quality. Smog caused by forest fires has been documented throughout human history.

Forest and land fires are a menace to human security, and the state is entirely dependent on commercial actors and the government.[11,12] Forest and land-burning are motivated by opportunistic goals, particularly economic rent.[13] Economic rent is a term that refers to a big benefit obtained at the expense of other parties, specifically the community and the environment. According to Purnomo (2016),[14] in Indonesia, forest claims are followed by removal and cutting of vegetation. After then, the lands were sold on the illegal market for IDR 8.7 million per hectare. When this area is destroyed, the price of the land increases to IDR 11.2 million per hectare. If the area has been burned and then planted with palm oil for three years, it has an incredible value of IDR 40 million per hectare.[15]

The Singapore government realizes that the issue of forest and land fires is not merely a natural phenomenon. Instead, this issue arose due to a deliberate factor known as anthropogenic. Many actors are organized in creating it. Departing from the political-economic analysis, this paper shows that the involvement of these actors plays a pattern of organized crime to achieve pragmatic interests and benefits but victimizes the general public and natural ecosystems. Additionally, the impact was felt by the people of Singapore.

The topic in this chapter focuses on discussing how Singapore responds, acts, and policies in response to the impact of Indonesia's transboundary haze pollution. Securitization analysis is an excellent technique for addressing non-traditional security concerns. Transboundary smoke is a non-traditional issue. Occasionally, the proportion of non-traditional dangers is balanced against conventional state threats.

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[11] Ardhian, D., Adiwibowo, S., & Wahyuni, E. S. Peran dan strategi organisasi non pemerintah dalam arena politik lingkungan hidup. *Sodality: Jurnal Sosiologi Pedesaan*, 4(3), 210-216, 2016. doi: 10.22500/sodality.v4i3.14429.

[12] Subiyanto, A. Analisis kebakaran hutan dan lahan dari sisi faktor pemicu dan ekologi politik. *Jurnal Manajemen Bencana (JMB)*, 6(2), 1-24, 2020. doi: 10.33172/jmb.v6i2.620.

[13] Sibarani, R. Tantangan tata kelola kebijakan perubahan iklim di Indonesia (Studi kasus: komparasi antara penerapan desentralisasi dan multi-level governance). *Jurnal Hukum Lingkungan Indonesia*, 4(1), 61-86, 2017. doi: 10.38011/jhli.v4i1.50.

[14] Purnomo, H. *The political economy of fire and haze in Indonesia*. (pp. 1-4). Bogor: Center for International Forestry Research (CIFOR). 2016. doi: 10.17528/cifor/006432.

[15] Purnomo, H., Ilham, Q. P., & Achdiawan, R. *Riset aksi untuk perbaikan tata kelola dan nilai tambah hutan dan lingkungan.* (pp. 1-176). Bogor: IPB Press. 2018.

This study proposes a modification of Caballero-Anthony and Emmers' securitization theory as a fundamental theory to explain why securitization is a transboundary smog in Singapore based on numerous indicators.[16] The indicators are (1) issue areas, (2) securitization actors, (3) securitization concept, (4) securitization process, (5) securitization results based on the degree of securitization and implications for threats, and (6) conditions affecting securitization.

b. Issue Area

Each issue that occurs has an impact on the community; not all of them can be classified as a threat to the state. The transition from routine to extraordinary issues occurs as a result of a hasty and emergency political choice. Securitization politicizes an issue. Existential threat comes when the securitization actor convinces the audience/public that it is a reference object. It warrants substantial response, given the severity of the threat. The reference point is centered on an issue that is no longer merely a threat to society, but to the state. Thus, securitization is any policy activity that is unusual. It describes how securitization is defined as the process of dramatizing the mundane into a security problem.

The explanation pinpoints the location of a transboundary haze problem that exceeds social risks in 1997/1998. That year saw the largest fire and forest fire explosions in recent memory. Singapore has been exposed to smog exported by Indonesia since the 1970s, according to the literature. In October 1972, the first instance of fog was discovered. Around 9 p.m. on October 13, certain cities were engulfed in smog.[17,18] Because visibility is deteriorating, drivers must exercise caution while driving. The smoke originates in Palembang, Indonesia, from forest and land fires. On February 20, 1975, the pollution returned, turning the sunlight orange. During fog, normal airport visibility ranges from 20-30 kilometers to 10 kilometers. However, the smoke is not from forest fires in Indonesia, but rather from Johor Baru, Malaysia. On October 27, 1977, haze enveloped Singapore to a height of 366 meters. Sumatra is the source of the smoke. People began to express their dissatisfaction with the billowing smoke in the sky. Visibility deteriorates throughout a three- to four-day periods.[19] The 1980s marked a new era in the history of Singapore's growing pollution plumes. During this time period, fog is typically created by forest and land fires caused by natural forces, most notably the prolonged El Nino drought. On the morning of April 25, 1983, visibility is less than 1 km. Smog is caused by two factors: forest and land fires in Kalimantan and

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[16] Caballero-Anthony, M., & Emmers. R. *Understanding the dynamics of securitizing non-traditional security*. In Non-Traditional Security in Asia. (pp. 13-24). Oxfordshire: Routledge. 2006.

[17] The Straits Times, "Haze in Singapore: A problem dating back 40 years," The Straits Times, https://www.straitstimes.com/singapore/environment/haze-in-singapore-a-problem-dating-back-40-years (accessed 21 December, 2021).

[18] Azman, A. "A history of the haze," The Straits Times, https://tnp.straitstimes.com/news/singapore/history-haze (accessed 21 December, 2021).

[19] The Straits Times. "The Straits Times, 19 September 1997, Haze hits pollution index record of 226," National Library Board, http://eresources.nlb.gov.sg/newspapers/digitised/printpreview. (accessed 30 December, 2021).

Sumatra.[20] On 19 September 1987, forest fires in Kalimantan caused pollution to return to Singapore. Visibility was decreased to 2-3 kilometers, down from the normal 10-15 kilometers.[21]

Smog persisted for up to two months. This has developed into a national crisis, drawing widespread condemnation from numerous political parties, government officials, business leaders, and the general public. This country has suffered a significant loss. For example, during the haze season (August-October), the PSI index indicated that Singapore was in the "unhealthy" air range for 14 days. According to the Singapore Ministry of Health, PSI levels are directly related to the number of patients exposed to respiratory infections. The PSI rate has increased in lockstep with the increase in the number of patients treated. The elderly and children are the age groups most frequently exposed to respiratory diseases. They suffer from asthma, skin allergies, and chronic obstructive pulmonary disease. Meanwhile, the tourism industry was also distracted, resulting in a substantial decline in economic output. This industry is particularly susceptible to diversions from within and without. Additionally, Singapore is renowned as a small country that earns a sizable amount of foreign currency through foreign visitor visits.[22] Singapore's National Tourism Board estimated a fall in the tourism sector of 8-10 percent. This industry is becoming increasingly slow as a result of the impact of a new wave of dangers, chief among which is the Asian financial crisis. Experts believe that the smog caused an economic loss of between S\$ 97.5 million and S\$ 110.5 million.[23] The Singapore government began to view this issue as a major one that needed to be rectified, as well as Indonesia's attitude, which was deemed less than optimal in terms of disaster response and mitigation. Singapore's government report significant losses in a variety of areas, most notably tourism.

Tabel 1. Total Economic Loss in Singapore During the 1997 Haze.[24]

Affected sectors	S\$ Million	US\$ Million	Percentage
Health	6.00	4.00	6.20
Tourist	81.80	58.40	83.90
Flight	9.70	6.90	9.90
Total Damage Cost	97.50	69.30	100.00

Source: Varkkey, 2020

Table 1 indicates implicitly why Singapore's government must take emergency steps. Not only in response to the 1997 disaster, but also in the object of reference selected by securitization actors. Singapore's officials are well aware that the transboundary haze debate would carry on for the next few years. The management model places a premium not just on disaster diplomacy with Indonesia, but also on domestic law-based political action.

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[20] The Straits Times. "Singapore Monitor - Afternoon Edition, 25 April 1983, Worst haze in 30 years," National Library Board, http://eresources.nlb.gov.sg/newspapers/digitised/printpreview. (accessed 30 December, 2021).

[21] The Straits Times. "The Straits Times, 21 September 1987, Blaze partly responsible for the haze in Singapore," National Library Board, https://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes19870921-1.2.9. (accessed 30 December, 2021).

[22] Meng, X., Siriwardana, M., & Pham, T. A. CGE assessment of Singapore's tourism policies. *Tourism Management,* 34, 25-36, 2013. doi: 10.1016/j.tourman.2012.03.006.

[23] Glover, D., & Jessup. T. "Indonesia's fires and haze." The cost of catastrophe. (p. 167). Singapore: Institute of Southeast Asian Studies (ISEAS) Pub. 1999.

[24] Varkkey, H. M. Addressing transboundary haze through Asean: Singapore's normative constraints. *Journal of International Studies*, 7, 83-101, 2020.

In July - September 2006, Singapore was again hit by acute haze.[25] As was the case in 1997, the haze was produced by major forest fires in Indonesia as a result of enormous deforestation for plantation development combined with the El Nino phenomena. The PSI index peaked at 128 on October 7th. It revealed that Singapore's air was tainted with smog, classifying it as a pollutant.[26] According to Quah & Varkkey studies, economic losses were US$ 79 million in September as a result of Changi airport's forced closure.[27] Up to 20% of people are exposed to respiratory diseases. In 2015, a severe haze occurrence occurred, and the haze has a tendency to stay longer than in the past. This coincided for three months, from late June to early October, with the El Nino climate phenomena, which was wreaking havoc on the region, particularly Indonesia, by generating a severe drought. Singapore's Ministry of Environment and Water Resources has estimated the cost of the 2015 haze incident at US$ 700 million.[28]

At the time, Singapore's authorities regarded the matter as critical to state security. Foreign policy initiatives aimed at establishing policy agreements are the first moves taken by the administration. Frequently, Singapore's activities have provoked disagreement with Indonesia. Singapore's Ministry of the Environment and Water Resources announced on 7 June 2015 that it was planning to sue Indonesian firms found to be burning forests in violation of the 2014 PALB Law. Meanwhile, the Indonesian government, through the Ministry of Environment and Forestry, is assessing what occurred when the Singapore government disregarded Indonesia's authority. Singapore's PALB is contentious and will continue to be debated. PALB is a rule that has evolved into an agreement between several ASEAN countries, allowing governments to punish domestic and international enterprises that are responsible for forest fires and air pollution in their country.[29]

c. Securitization Actors and Security Concepts

According to securitization theory, the topic of securitization is the actors who declare an existential danger.[30] The securitization actor's role is to persuade the public/audience that an object of reference is under threat that could be deadly if not addressed promptly and effectively.[31] In other words, the action refers to the use of extraordinary measures. Additionally, this action must be based on the notion of complete and correct data in order to ensure that action is swift and precise and that legal compliance and actual indications are used to test each decision. Securitization players can be drawn from the government

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[25] Suryani, A.S. Penanganan asap kabut akibat kebakaran hutan di wilayah perbatasan Indonesia. *Aspirasi: Jurnal Masalah-masalah Sosial*, 3(1), 59-75, 2012. doi: 10.46807/aspirasi.v3i1.256.

[26] Koh, J. "Haze pollution," National Library Board, https://eresources.nlb.gov.sg/infopedia/articles/SIP_2013-08-30_185150.html. (accessed 1 January, 2022).

[27] Quah, E., & Varkkey, H. The political economy of transboundary pollution: mitigation of forest fires and haze in Southeast Asia. *The Asian Community: Its Concepts and Prospects,* 323, 1-37, 2013.

[28] Lin, Y., Wijedasa, L.S., & Chisholm, R.A. Singapore's willingness to pay for mitigation of transboundary forest-fire haze from Indonesia. *Environmental Research Letters*, 12(2), 1-9, 2017. doi: 10.1088/1748-9326/aa5cf6.

[29] Varkkey, H. Regional cooperation, patronage and the ASEAN Agreement on transboundary haze pollution. *International Environmental Agreements: Politics, Law and Economics*, 14(1), 65-81, 2014. doi: 10.1007/s10784-013-9217-2.

[30] Floyd, R. Can securitization theory be used in normative analysis? Towards a just securitization theory. *Security Dialogue*, 42(4-5), 427-439. doi: 10.1177%2F0967010611418712.

[31] Sjöstedt, R. *Assessing securitization theory: Theoretical discussions and empirical developments*. In Securitization Revisited (pp. 28-46). Oxfordshire: Routledge. 2019

as the major agent of the state, civil society, the epistemic community, and international institutions, according to securitization theory.[32] It must be acknowledged that the government is the actor responsible for determining the ultimate act of securitization, while non-state actors are responsible for addressing the issue. Initially classified as a threat to human security, the issue might transform into an existential threat if it is apprehended by the state and becomes the object of reference for threats, transforming the issue into a state threat. As a result, the explanation in this section is more specific about non-state actors in order to contextualize the three players. This article discusses how fog issues are addressed in various security ideas. Non-state players, primarily non-governmental organizations (NGOs) in Singapore, specifically the Singapore Institute of International Affairs (SIIA), and regional actors, notably ASEAN, are concerned with two issues.

d. SIIA Engagements

First, civil society organizations. The discussion here is more focused on the role of epistemic groups and their status as NGOs. NGOs are described as groups created voluntarily in accordance with applicable laws and operated independently of the government, with the primary objective of advancing social causes rather than economic gain.[33] Singapore offers a diverse range of NGO models, one of which is devoted to environmental advocacy and sustainability.[34] Few of them are Nature Society Singapore, Singapore Environment Council, and Kampung Senang Charity and Education Foundation[35].

Environmental advocacy aims to integrate the environment and the economy into the state's public decision-making process. Economic profit maximization must be adjusted to avoid environmental degradation. In 2002, NGOs began advocating for a green strategy through the creation of the 'Green Plan' for environmental sustainability. Government agencies recognized the advocacy that Singapore is a country that emphasizes green policy issues, as seen by the policy blueprint for the country's development pillars from 2012 to 2030. Singapore's environmental strategic plan focuses on several primary objectives, including waste and water management, climate change, and air quality. Along with an individual discourse on environmental consciousness, this subject is vigorously promoted at the regional and international levels. The 3 Ps (People, Private, and Public) represent efforts to accomplish this through the involvement of diverse stakeholders.[36]

All three must act as cognizant representatives of society's elements and collaborate to consistently promote environmental ownership. Indeed, environmental concerns can only be resolved when everyone from policymakers to the broader society understands the critical nature of viewing nature as the

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[32] Jerdén, B. Security expertise and international hierarchy: the case of 'The Asia-Pacific Epistemic Community'. *Review of International Studies*, 43(3), 494-515, 2017. doi: 10.1017/S0260210516000437.

[33] Mursitama, T. N. *Pengkajian hukum tentang peran dan tanggungjawab organisasi kemasyarakatan dalam pemberdayaan masyarakat*. (pp. 1-93). Jakarta: Pusat Penelitian dan Pengembangan Sistem Hukum Nasional Badan Pembinaan Hukum Nasional Kementerian Hukum dan Hak Asasi Manusia RI. 2011.

[34] Ortmann, S. Political change and civil society coalitions in Singapore. *Government and Opposition*, 50(1), 119-139, 2015. doi: 10.1017/gov.2013.41.

[35] NGO Base, "Environment and Climate NGOs and Charities in Singapore," 2023, https://ngobase.org/cwa/SG/ENC/environment-and-climate-ngos-charities-singapore.

[36] Liao, K. H. The socio-ecological practice of building blue-green infrastructure in high-density cities: what does the ABC Waters Program in Singapore tell us?. *Socio-Ecological Practice Research*, 1(1), 67-81, 2019. doi: 10.1007/s42532-019-00009-3.

fundamental subject of life and developing initiatives that benefit both humans and the natural environment. SIIA is one of the NGOs concerned with environmental issues and actively involved in reacting to the threat of haze. SIIA is described as a non-state actor that has been involved in responding to haze since 1997, when the transboundary haze was classified as a human threat. In broad terms, their advocacy for haze as a human hazard is not only the responsibility of one party, but also the obligation of all parties. Make it a joint agenda involving the government, business entities, and the general public. The author summarizes it in Table 2.

SIIA's initiatives must be framed as non-state actors resisting the issue of pollution and demonstrating a political position that this is a major threat confronting many parties. Their actions go beyond responding to and criticizing a variety of issues and policies; they also act as hosts for numerous international, regional, and bilateral gatherings addressing these concerns. Additionally, the authors believe that this activity is more critical when it results in policy proposals that serve as a catalyst for talks among stakeholders at various levels.

On the other hand, this organization's capacity is critical because it acts as a diplomatic actor through public diplomacy programs. Additionally, public diplomacy has long been seen as the most effective method of resolving conflicts involving multiple parties. SIIA emerged as a mediator during the haze-related crisis in Indonesia's relations with Singapore. SIIA's position is not as a mediator, but as an actor who shapes a narrative around environmental challenges as a non-traditional security concern that must be collectively addressed.

Table 2. SIIA's involvement in responding to the Transboundary Haze Issue.

Year	Activities
2012	In June, SIIA initiated an important forum by inviting several government officials from Singapore, Brunei, Indonesia and Malaysia to respond to the emergence of haze due to forest and land fires in Indonesia.
2013	1. In September 2013, SIIA pushed the issue of haze as the main theme in the 6th ASEAN-Asia forum meeting.
	2. In October 2013, SIIA held a panel discussion involving experts and the public in responding to the issue of haze. This meeting is an attempt to produce a policy response based on Singapore's perspective.
	3. In November 2013, SIAA held a meeting inviting several NGOs focusing on environmental issues, sustainable development and climate change issues
2014	1. In May 2014, SIIA held a discussion entitled The Singapore Dialogue on Sustainable World Resources (SWR).
	2. For one year, holding a collaborative project with the Singapore government to make the issue of haze a major discourse for Singaporeans. Their campaign slogan is Haze: Know It!
	3. This year, SIIA published a special report on the impacts of the 2013 haze on Singapore freely. The aim is to educate the public about the latent dangers of the problem
	4. SIIA initiated a routine environmental dialogue in Singapore entitled World Resources (SWR) activity.
2015	1. In May 2015, SIIA held the second SWR dialogue with the topic 'Sustainability: A New Profit Driver?'
	2. SIIA also initiated a closed meeting between policymakers with the theme 'Eye in the Sky: Has Satellite Monitoring been effective?'

> 3. SIIA then collaborated with WWF Singapore in developing a public narrative with the slogan 'We Breathe What We Buy' as a form of the campaign in criticizing the issue of smog perpetrated by perpetrators of organized crime.

Source: Secondary data, 2022

e. ASEAN Engagement

At the regional level, it is actively promoted that smog is both a domestic and regional threat to Southeast Asia. ASEAN's efforts to elevate forest fires and haze to regional dangers are affected, at the very least, by the attitude of many nations, like Malaysia, Brunei, Thailand, and Singapore, which insist on resolving the issue as a collective matter involving all ASEAN member countries. Since the 1970s, when the economic, social, and environmental costs of forest and land fires were discovered, ASEAN has begun to elevate this issue to the regional level for discussion.

ASEAN has demonstrated its concern for smog as a regional issue by adopting a Convention on the Conservation of Nature and Natural Resources. This regulation refers to the transboundary haze threat definition. This agreement was eventually expanded to include the 1992 Kuala Lumpur Accord on Environment and Development, which was established in response to a resolution on Development and the Environment proposed by Singapore. The first ASEAN conversation on this subject occurred in Balikpapan in 2002 during a workshop on the subject. This session addressed explicitly the issue of forest fires and haze. Meanwhile, the ASEAN member countries' ministerial level debate began in 1994. The discussion centered on policy alternatives for resolving the pollution problem caused by smog.

Singapore's government has been the most vocal in promoting this problem as a regional one, recognizing that every country will struggle to prevent disasters and their consequences. In 1995, all ASEAN nations decided to adopt the Transboundary Pollution Cooperation Plan. As a result of the agreement, a special organization named the Technical Task Force (HTTF) was established to address issues and devise ways of technical collaboration. As a result, talk on haze securitization at the regional level began only in 1995.

Meanwhile, 1997 was the initial stage of the securitization process when the ASEAN Ministerial Meeting on Haze was established. Thus, the issue of transboundary haze is in a special and important status in regional organizations.[37] The reason for placing this issue as a regional problem was when the haze harmed almost many countries in 1997. The meeting also resulted in the formulation of the Regional Haze Action Plan (RHAP) under the HTTF. The aim is to commit to cooperation in all ASEAN member countries. The objectives of RHAP are (1) to prevent forest and land fires through better management policies and enforcement; (2) to establish operational mechanisms to monitor forest and land fires; (3) to strengthen regional capacity to combat forest and land fires.

Behind these three goals, RHAP requests that ASEAN member countries adopt national strategic plans to reduce catastrophes while also preventing the possibility of forest and land fires. This endeavor will undoubtedly demand a large budget allocation. The Asian Development Bank then responded swiftly to ASEAN's requests for regional technical aid, approving regional technical assistance proposals. One year later, the ASEAN Summit adopted the Hanoi Plan of Action, which emphasized the importance of

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[37] Varkkey, H. Patronage politics as a driver of economic regionalisation: The Indonesian oil palm sector and transboundary haze. *Asia Pacific Viewpoint,* 53(3), 314-329, 2012. doi: 10.1111/j.1467-8373.2012.01493.x

completing the RHAP by 2001 and establishing protocols for regional mechanisms to address forest and land fires.[38]

In April 1999, ASEAN announced a policy of 'Zero-Burning' and tasked all ASEAN member countries with enforcing strong penalties against arsonists who violated existing systems and legislation. ASEAN also convened regional gatherings of corporate representatives and managers of plantations and wood concessions. This seminar will underline that the threat of fire and haze is a ticking time bomb that threatens to destroy all facets of life.

Numerous regional meetings were held in the aftermath of the 1997 forest fire catastrophe. However, the measures that resulted, most notably the ASEAN Cooperation Plan on Transboundary Pollution and the Regional Haze Action Plan, were not legally obligatory on member states. This legislation is a soft law because it was meant to serve as a framework for countries to build their own disaster prevention and mitigation plans, guidelines, and activities autonomously.[39] As a result, the Singapore government believes the need for a much more 'concrete' regional accord, as the RHAP mechanism is less successful at addressing the complex challenges of forest fires and haze.

Figure 1. ASEAN Actions to Respond to Transboundary Haze Issues as a Regional Security Issue (*Source: Secondary data, 2022*).
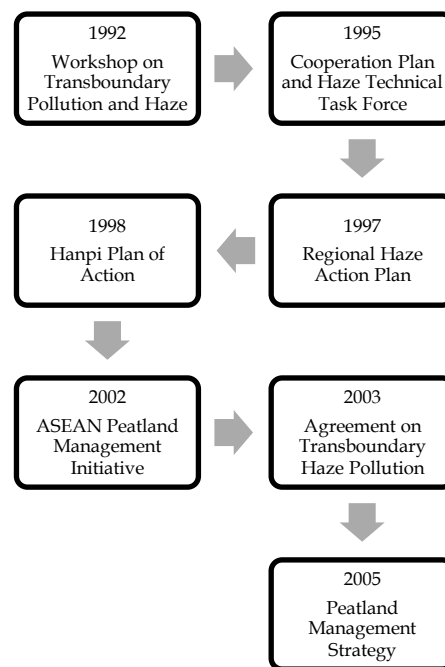
The Singapore government believes that RHAP lacks coercive capacity due to the absence of consequences or punishments against forest and land fire actors. This means that if the haze problem is addressed solely through downstream enforcement, it will not be resolved and will continue to be a scourge year after year. As a result, in 2001, the mechanism of transboundary haze legislation was reintroduced,

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[38] Ibid, p. 14.

[39] Tan, A.K.J. *The'Haze'Crisis in Southeast Asia: Assessing Singapore's Transboundary Haze Pollution Act 2014*. NUS Law Working Paper No. 2015/002, NUS - Centre for Asian Legal Studies Working Paper No. 15/02. (pp. 1-44). 2015. doi: 10.2139/ssrn.2547379 2015.

this time strengthened from soft to hard law. As a result, the system should develop into a regional regime. At least two phases contributed to the development of a regional framework, including the ASEAN Peatland Management Initiative in 2002, the Transboundary Haze Pollution Agreement in 2003, and the ASEAN Peatland Management Strategy in 2005 (Figure 1).

The specific mechanism for the regime is contained in the 2002 THPA (effectively running in 2003, referred to as the Agreement on Transboundary Haze Pollution). Regional environmental standards and the establishment of collaboration and monitoring mechanisms are among the regulatory elements. The THPA was signed in June 2002 in Kuala Lumpur and entered into force on November 25, 2003. On January 13, 2003, Singapore became the second country to ratify the rule. Singapore demonstrated its seriousness by depositing a deposit of US$ 50,000 to the Haze Fund for the instrument of ratification. This agreement therefore contains 32 articles and one annex that govern the allocation of responsibility for and resolution of haze pollution in the ASEAN region.

Since 1997, the debate about ASEAN's role as a securitization actor demonstrates that this issue has evolved from being an existential threat to a country to a regional threat. The critical element to grasp is that the involvement of regional institutions in a threat issue demonstrates that the threat does exist on a transnational scale, implying that policy responses must be coordinated. While this should be appreciated in light of ASEAN's importance to the region's people, several criticisms demonstrate how weak the regulations are continually being produced.

The transition of a rule to a regional regime is a lengthy process. The most serious critique is that regional law enforcement institutions are underdeveloped as a result of ASEAN's primary tenet of the ASEAN Way. This principle refers to a set of behavioral and procedural standards for obtaining agreement that do not compromise the state sovereignty and non-intervention principles. As a result, regional law enforcement rules are procedurally non-legalistic and adaptable.[40,41] As a result, regional concerns such as transboundary haze have taken an inordinate amount of time to resolve.

That is what Alan Tan discovered regarding the status of the haze security conflict. The emergence of THPA imposes only modest duties for collecting and receiving aid, reporting, exchanging information, and undertaking a number of research endeavors. Indeed, such accords lack enforcement measures and frequently avoid enforcing legal sanctions against violators.[42] Paruedee Nguitragool expressed a similar concern, claiming that the resolution process was returned to each member country, while ASEAN appeared to be little more than a forum for dialogue. Each country also selects action programs that are compatible with their own regimes' political stances and national interests.[43] It is not surprising that this issue keeps popping up every year.

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[40] Sefriani S. ASEAN way dalam perspektif hukum internasional. *Yustisia*, 3(1), 1-8, 2014.

[41] Yukawa, T. The ASEAN Way as a symbol: an analysis of discourses on the ASEAN Norms. *The Pacific Review*, 31(3), 298-314, 2018. doi: 10.1080/09512748.2017.1371211.

[42] Tan, A. K. J. The ASEAN agreement on transboundary haze pollution: Prospects for compliance and effectiveness in post - Suharto Indonesia. *New York University Environmental Law Journal*, 13(3), 647-722, 2005.

[43] Nguitragool, P. Negotiating the haze treaty: rationality and institutions in the negotiations for the ASEAN Agreement on Transboundary Haze Pollution (2002). *Asian Survey*, 51(2), 356-378, 2011. doi: 10.1525/AS.2011.51.2.356.

f. Securitization Process

The explanation of the securitization process is intended to explain why the securitization actors or other actors take extreme measures to eliminate the threat. The securitization process is centered on determining the form and pattern of speech acts. A statement is a determination that something is a security issue based on the statement of a person with significant power or agency, such as the parties involved.

The statement must persuade the public that a certain reference object is under attack. In this situation, it becomes critical for securitization actors to use acceptable political vocabulary and terminology. Each message must be repeated beyond the threshold via the media, press releases, articles, seminars, conferences, and other gatherings. The rationale for this is that the issue is an emergency threat.

Government agencies took emergency action for the first time since 1997. The first action was the establishment of a draft regulation on a haze action plan, which was followed by a meeting between Singaporean ministries such as the Minister of Environment and the Minister of Health, as well as the Ministers of Foreign Affairs and Home Affairs, the Information and Communications Agency, and the Meteorological Agency, to discuss how to address pollution problems caused by haze smoke.[44] This decision is that public activity centers such as schools and sports facilities must temporarily close. Restrictions on individual activities outside the home must be minimized, considering the smoke pollution rate reaches 200 PSI.

The second period started in 2002. Singapore's government, which has been vocal about haze as a regional danger, has achieved a tipping point, namely formulating the ASEAN Agreement on Transboundary Haze Pollution in collaboration with ASEAN member countries. Singapore is also on the list of countries that have ratified the regulation. Singapore initiated bilateral action in 2006 by establishing a partnership between ministries and provincial governments to combat forest and land fires. The meeting was dubbed the Jambi Collaboration Master Plan. However, forest fires occurred once more in 2009. Singapore is once again enveloped in thick smoke from the fire. In August, pollution levels increased from 53 to 64 PSI. The Environment Minister then opposed the Indonesian government. A political tone was added to the demonstration, urging the Indonesian government to take prompt action to extinguish the fires. There is no longer any fog surrounding Singapore. In Indonesia, the intensity of forest and field fires increased between 2012 and 2015. Singapore is once again confronted with a serious issue. Economic, socio-health, and environmental consequences are unavoidable.

On June 21, 2013, the Singapore government attempted to securitize the haze issue by convening a news conference. On that occasion, Singapore's Prime Minister Lee Hsien Loong delivered a speech on a number of themes relating to the haze problem. Three critical points were made throughout the conference. To begin, Prime Minister Lee discussed the current haze crisis and its economic and health implications. The government declares that smog-related air pollution has reached a "very unhealthy" level, as measured by ISPU indicators, posing a risk to public health, particularly children and the elderly. Second, Lee added that the government has made and will continue to make different measures to resolve the haze issue, including hosting a bilateral meeting between Indonesia and Singapore to give foreign aid and bilateral cooperation on forest and land fire control. The meeting took place on June 21, 2013 in Jakarta. Ronnie Tay, Head of the National Environment Agency (NEA) of Singapore, attended as a representative of Singapore, as did Arief Yuwono, Indonesia's Deputy Minister of the Environment for Environmental Damage and Climate Change. Prime Minister Lee also wrote to President Susilo Bambang Yudhoyono

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[44] The Straits Times, Op.cit., p. 8.

urging him to take decisive action against Indonesia's forest and land fires and to consider Singapore's offer of help. Thirdly, the Singapore government will actively disseminate information on the haze issue via electronic media. The entire community will have access to information about the haze via a special website developed by the Ministry of Environment and Water Resources (MEWR) and NEA. The website can be accessed at http://www.haze.gov.sg/.

The Singapore government's speech act, delivered via a news conference, aimed to elicit public support for the government's authority to implement public policies necessary for the country's existence. Additionally, the speech act was designed to galvanize popular pressure on the Indonesian government. The speech performance was successful in eliciting an affirmative response from the community. Disruption of communal activities induced by haze, acute respiratory infections (ARI) diseases caused by unhealthy air quality, and a variety of other factors have conditioned Singaporeans to see pollution unfavorably. The public's negative reaction to Indonesia's haze is channeled through a variety of media outlets, both traditional and social. This has resulted in significant coverage of the haze by Singapore's mass media.

Throughout the transnational haze, the role of the mass media was essential in gathering public opinion and indirectly influencing the government's position on haze-related policy issues. Meanwhile, many Singaporeans and even members of the foreign community are commenting and discussing the haze on social media platforms such as Facebook, Twitter, Instagram, and Youtube. According to Tim Forsyth's study (2014),[45] the Straits Times, as an independent mass media outlet in Singapore, is more aggressive in reporting public opinion on the haze than the Indonesian mainstream media. The following Table 3 compares mass media activity:

Table 3. Comparison of Number of Newspaper Articles Regarding Haze in Singapore and Indonesia.

Mass media	Number of articles about issues	Period July-December 1997	Period August 1997	Period June 2013
Jakarta Post (Indonesia)	901	213	17	34
Straits Times (Singapura)	2082	491	25	271

Source: Forsyth, 2014.

Figure 2. Haze Securitization Scheme in Singapore (*Source: Secondary data, 2022*).
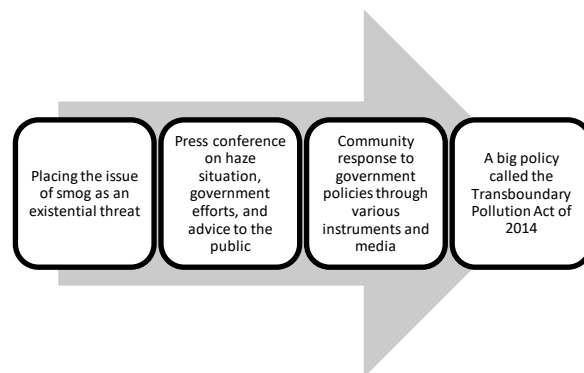
[45] Forsyth, T. Public concerns about transboundary haze: A comparison of Indonesia, Singapore, and Malaysia. *Global Environmental Change*, 25, pp.76-86, 2014. doi: 10.1016/j.gloenvcha.2014.01.013.

According to Table 3, the Straits Times is significantly more active than the Jakarta Post in posting public articles about haze. However, the Straits Times' efforts cannot be divorced from Singaporeans' concerns about the recent haze crisis.

The public response to the haze problem motivates the government to take more decisive action and make real measures to address transboundary haze concerns in order to ensure the community's survival. The administration characterizes haze as a threat to national security on this basis. In this instance, public policy and resource allocation are required to minimize or mitigate the haze hazard.

As a result, in early 2014, the Singapore parliament began drafting the draft Transboundary Haze Pollution Bill. MEWR also makes public space available to participate to the Act's content development. Between 19 February and 19 March 2014, the public sphere was open for one month. Then, in August 2014, the Singaporean government announced the establishment of THPA as a public policy to combat transboundary haze issues, which took effect on 25 September 2014. As already stated Previously, THPA explored law enforcement measures to combat transnational crimes committed by forest and land burning enterprises that contribute to cross-border smog. This policy is founded on the Stockholm Declaration, which was incorporated into the 2014 Transboundary Haze Pollution Bill.

The progression of smoke haze securitization in Singapore from 2013 to 2014 is depicted in Figure 2. The Singapore government's securitization of the smog issue proved successful. In this scenario, Prime Minister Lee's speech act at the press conference on 21 June 2013 succeeded in persuading the public as the speech act's intended audience to carry out the speech act's aim. Thus, the government possesses complete jurisdiction to secure the pollution issue. The community response is critical to the effectiveness of haze securitization in Singapore. Additionally, the mass media and social media play a critical role in channeling popular opinion.

Conclusion

This article analyzes the Singapore Government's review of their environmental issue securitization policy, notably PALB. Through this research, the 19-year-long discourse on PALB in Singapore can be investigated in greater detail than through argumentation or scientific investigation of the PALB effect itself. In other words, this study attempts to demonstrate that this issue is a manifestation of the study of Non-Traditional Security. On the other hand, this research aims to fill a gap in the Non-Traditional Security study by elucidating the securitization process's outputs through an examination of policies that have been implemented. This is critical since securitization studies can touch on a variety of topics, including public and government policy.

Acknowledgment

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