

SOUTHEAST ASIA’S TRANSBOUNDARY HAZE POLLUTION: MALAYSIAN YOUTH AWARENESS TOWARDS INDONESIA’S COMMITMENT IN THE POST-RATIFICATION OF AATHP

Mohammad Zulhafiy^{1*}, Hino Samuel Jose², Nur Farhana Md Abas³, & Nor Suhaiza Md Khalid⁴

^{1,3,4}Faculty of Administrative Science and Policy Studies, Universiti Teknologi MARA (UiTM), Seremban, Malaysia

²Department of International Relations, Universitas Pembangunan Nasional Veteran Jakarta, Indonesia

*E-mail: zulhafiy.afiy@gmail.com

1. INTRODUCTION

Transboundary pollution can be defined as a condition where the originated pollution that happens in one country disperses and spreads until it crosses the border of a country, whether through air or water as the pathways of the dispersed, which will cause damage to the environment of another neighbour country (OECD, 2013). In Southeast Asia, the annual series of transboundary haze pollution has become worse after the delay of the Indonesian government's ratification of the ASEAN Agreement on Transboundary Haze Pollution (AATHP). Indonesian lawmakers authorised the AATHP on September 16, 2014, making it the last ASEAN member state to adopt the agreement on January 20, 2015. Environmental issues such as transboundary haze pollution occur when a state adopts the UN's concept of environmental law which is the principle of state sovereignty whereby Hamid & Sein (2007, p.524-525) has described it as the ability of states to set and achieve economic goals that appear to be a substantial barrier to environmental conservation. The ASEAN practice of “quiet diplomacy” has also provided boundaries for the member states to have bilateral and multilateral cooperation to address this issue. Since some countries do not rely on state-owned legislation to hold Indonesia accountable, ASEAN faces difficulty in putting out fires once it has erupted (Tay, 1998). Indonesia's post-AATHP capacity to endure more robust regional initiatives was decreased (Hurley & Lee, 2020). This is because it even exempts Indonesia from accepting foreign firefighting assistance during transboundary haze problems (Greenpeace Southeast Asia, 2019). Indonesia has laws against illegal burning; however, they are ineffective due to poor enforcement and misaligned incentives (Hielmann, 2015). Since early 2019, the Indonesian Ministry of Environment and Forestry reported 68,400 acres of fires (Jong, 2019). It also clarified that the self-interests of both small Indonesian farmers and major plantation firms conflicting with steps to be taken to preserve the constitution (Hielmann, 2015). Almost every year, the haze has a destructive effect on Sumatra and Indonesia's part of Borneo, where smog from Indonesia blooms over the Southeast Asia region and spreads through the air into neighbouring Singapore and Malaysia (Amelia, 2017). In Malaysia, approximately 2,500 schools, including nearly 300 in the smog-hit capital of Kuala Lumpur, were forced to close due to rising health risks from uncontrollable blazing danger on the islands of Sumatra and Borneo (Al Jazeera, 2019). Meanwhile in Indonesia, at least two people, including a child, are dead from the deepening haze pollution in South Sumatra and five NGOs accused the Indonesian government of severe violations of human rights for their failure to monitor the Sumatra and Kalimantan fires (Soeriaatmadja, 2019).

1.1 Knowledge about Regional Haze Agreement

Firstly, this study will assess Malaysians' youth knowledge towards Indonesia's commitment to ratify AATHP. Generally, knowledge can be described when people do not understand something, it is because they cannot properly analyse or describe it (Skreekanth, 2006). Prior study has demonstrated that AATHP necessitates coordination of actions to prevent and regulate transboundary haze emissions from land sources, early warning systems and assessments, knowledge and technology exchanges, and mutual support (Amelia, 2017). It also needs quick action to mitigate the impact of transboundary haze pollution, gather information from affected states, and enforce the parties' commitments legislatively and administratively (ASEAN Haze Action Online, 2015).

1.2 Attitude towards Indonesian Legislation

Next, the attitudes of Malaysian youth towards Indonesian legislation in addressing transboundary haze pollution can also be seen in this study. In general, attitude can be described as the mind's tendency to pessimistic perceptions and opinions on certain issues (Ajzen & Fishbein, 2005). Prior studies have illustrated that Indonesian law prohibits deforestation, peatland fires, and other environmental risks that can cause any pollution. Willful environmental contamination is a crime under the Indonesian Environmental Protection Law (No. 23 of 1997), punishable by up to ten years in prison or an IDR 500 million fine (USD 37,000). Those who oppose Indonesia's first environmental law risk severe penalties. Deforestation in Indonesia is inevitable despite the legalisation of this rule. The Malaysian case of Goby, the President of PT. Adei Plantation and Industry was sentenced to eight months in prison and fined IDR 100 million (USD 10,000) (Ng, 2017). Unfortunately, the poor prosecution could not persuade the *men's rea*, or facts of intention, for the offenses. This indicates that cheating was part of such a clear conviction (Ng, 2017). Moreover, in 2009, Indonesia passed another law that preserves the national environment, the Environmental Protection and Management Act (No. 32 of 2009) which is a comprehensive set of provisions encompassing practically every aspect of modern environmental law (Ng, 2017). This law emphasises secondary responsibility for those who organise or oversee illegal activity, as well as minimum sentences and penalties for air pollution (Sumarlan, 2018). Article 98 stipulates that polluting the environment to avoid harm or death carries a maximum penalty of 15 years in prison and a fine of IDR 5 billion (Salim, 2015). This law has caused many acts that can cause environmental disasters. For instance, Jatim Jaya received two years in prison and an IDR 1 billion (USD 75,000) fine, while Kallista Alam received a 366 billion (\$256 million) fine (Ng, 2017).

1.3 Perception towards Indonesian Commitment

Furthermore, this study will be further seen the perception of Malaysian youth towards other commitments made by the Indonesian government through the establishment of Indonesia's Peatland Restoration Agency (BRG). Generally, perception has been derived from the Latin terms *perceptio* and *percipio* which is the mechanism of consciousness or understanding sensory input in referring to philosophy, psychology, and cognitive science (OU, 2017). Prior study has revealed that many agribusiness sectors in Indonesia, particularly palm oil, rely on peatland as a primary source of land. With that, the Indonesian government has developed a national body, BRG, that was founded in 2016 to prevent peat fires in Indonesia

with the main purpose to determine whether Indonesia can restore its peatland or not. BRG has taken serious action to eliminate forest fires by instructing Bumi Mekar Hijau to regenerate 95,000 hectares of degraded peatland and barred PT Andalan Pulp and Paper from inspecting a wood concession (Ng, 2017, 233). Thus, this study has formulated the following hypotheses:

H1: There is a significant relationship between the knowledge about regional haze agreement and the level of Malaysian youth awareness in responding to transboundary haze pollution.

H2: There is a significant relationship between the attitudes towards Indonesian legislation and the level of awareness among Malaysian youth in responding to transboundary haze pollution.

H3: There is a significant relationship between the perception towards Indonesian commitment and the level of awareness among Malaysian youth in responding to transboundary haze pollution.

In this study, the primary objective is to identify the Malaysian youth awareness regarding the annual transboundary haze pollution in Southeast Asia, guided by Indonesia's commitment. Three research questions to be discussed are as follows: (1) What is the level of awareness among Malaysian youth towards Indonesia's commitment in responding to haze pollution; (2) What is the relationship between the knowledge, attitudes, and perceptions among Malaysian youth towards the commitments by the Indonesian government in responding to haze pollution; and (3) What are the main factors that contribute to the level of awareness among Malaysian youth towards the commitments by the Indonesian government in responding to haze pollution.

2. METHODOLOGY

This study employed a cross-sectional and quantitative research design. The population of this study comprising of Malaysian youth who are students majoring in International Relations (IR) at the University of Malaya (UM), Universiti Malaysia Sabah (UMS), Universiti Malaysia Sarawak (UNIMAS), Universiti Sultan Zainal Abidin (UniSZA), and Universiti Utara Malaysia (UUM) since these students have a specialised understanding of international environmental law which are useful for the study findings. In this research, the survey was distributed through a simple random sampling which included 20 questions from 5 proposed sections (i.e., Section A-E) and all responses were rated on a 5-points Likert scale. Using the table developed by Krejcie and Morgan Table of 1970, the researchers selected 270 students (n = 270), since the population of Malaysian youth studying in IR is 785 students (N = 785). As a result, valid questionnaires from 270 respondents were obtained for final analyses. To collect the data from the respective respondents, a set of questionnaires was developed based on the variables used in this study. For demographic profile, male respondents were 127 (47.0%) and female respondents were 143 (53.0%). In terms of age bracket, most of the respondents were at 18-22 years of age (n=143, 53.0%). Additionally, this study discovered that most of Malaysian youth are IR students at UM (n=108, 40.0%), which followed by UMS (n=47, 17.4%), UUM (n=46, 17.0%), UniSZA (n=42, 15.6%), and UNIMAS (n=27, 10.0%). In terms of race, most of the respondents were Bumiputra (n=244, 90.4%) and the remaining were Chinese (n=19, 7.0%) and Indian (n=7, 2.6%). Finally, most of the respondents lived in the urban areas (n=143, 53.0%) while the rest of them lived in semi-urban (n=104, 38.5%) and rural areas (n=29, 14.4%).

3. FINDINGS AND DISCUSSION

Table 1: Summary of Findings

Objectives	Analyses	Results	Hypotheses
1. To study the level of awareness among Malaysian youth on the commitment by the Indonesian government in responding to haze pollution	Mean Descriptive	DV= 4.2358	N/A
2. To examine the relationship between the knowledge, attitudes, and perceptions among Malaysian youth towards the commitments by the Indonesian government in responding to haze pollution	Pearson Correlation	$r= 0.485^{**}$ $p= 0.000$ $r= 0.312^{**}$ $p= 0.000$ $r= 0.645^{**}$ $p= 0.000$	Hypothesis accepted. There is a positive relationship between the independent variables and the dependent variables.
3. To identify the main factors that contribute to the level of awareness among Malaysian youth towards the commitments by the Indonesian government in responding to haze pollution.	Multiple Regression	IV1= .100 IV2= .131 IV3= .551	Based on the Beta value, the independent variable of perception on Malaysian youth is the main contributing factor towards Indonesia's commitment to responding to transboundary haze pollution.

Table 1 summarises the proposed study's findings. Statistical analysis was performed with IBM SPSS version 27.0 to measure the three research objectives using Mean Descriptive, Pearson Correlation, and Multiple Regression testing. The mean score of 4.2358 indicates that Malaysian youth are aware of Indonesia's commitment to tackling transboundary haze pollution. Moreover, for the Pearson Correlation, the p-value of all independent variables is 0.000, indicating a positive relationship between Malaysian youth awareness and Indonesian commitments. There is a moderate, weak, and strong relationship between knowledge (0.485), attitude (0.312), and perception (0.645). Lastly, in the Multiple Regression testing with a Beta value of 0.551, the perception of Malaysian youth towards Indonesia's response to transboundary haze pollution is the highest predictor among other independent variables.

4. CONCLUSION AND WAY FORWARD

In conclusion, the study's findings support the study's objectives, which assert that knowledge about regional haze agreement, attitudes towards Indonesian legislation, and perception towards Indonesia's commitment in responding to transboundary haze pollution are associated with the level of Malaysian youth awareness. However, there were certain limitations in the study, such as the lack of variables. Determining the suitable independent variables must be improved as they only influenced 44% of the dependent variable in this study. Other scholars like Chin YSJ (2019) have also emphasised the lack of previous research, which makes the study of perception, knowledge, and attitude towards haze very rare in Malaysia. Consequently, more research studies on transboundary haze pollution are needed which requires the regional environmental organization, research institutes, or think tanks to play a substantial role to publish more articles or studies that provide relevant policy suggestions as a guideline to assist the public understanding. Many factors can be attributed to the difficulties

in combating Southeast Asia's transboundary haze pollution. Nonetheless, the following key measures can demand state and non-state actors to tackle the issue promptly:

4.1 Ensure Proportionate Public Diplomacy

Indonesia needs to ensure that proportionate public diplomacy of their efforts needs to be increased, the transboundary haze will be an encroachment for Malaysian public safety, public diplomacy is all about representing well-crafted statements to the media. Reducing fire sources is not enough as there is no timely shortcut that could bridge the corporational interests and local government's authority (Aggarwal & Chow, 2010). AATHP is all about international standards to have complied, hence interoperability of the central government channels related to the anti-haze regime should accommodate the positive relationship between Indonesia's attitude, knowledge, and perceptions. Accommodative measures recommended for the Indonesian government are: (1) consolidating Jakarta's political entrepreneurship to increase countervailing solutions against the negative foreign backlash that undermines the commitment's reality; and (2) reinforcing a more associated pattern of information that is expected by the Malaysian people that can circumvent the barriers posed by cognitive, psychological, and perception differences.

4.2 Facilitate Sub-Sectoral Working Mechanisms

As a regional organisation, ASEAN should facilitate sub-sectoral working mechanisms relevant to transboundary haze handlement and revisit the regional norm-setting that is not merely focusing on early prevention, but also in synergizing response pace to member states. One issue that exists would be a different national coordination scheme, however, ASEAN can resolve through a direct omnichannel link with national actors, to allow the preemptive warnings to be sounded to immediate foreign countries. Media holds the role to shape initial public thoughts, hence information-sharing should go beyond disaster management, but also provide much bigger room for states' discretion that can be played based on ASEAN agreed to policy prescription. ASEAN should also consider enforcement that refrains from substantial economic impediment for any AMS related to the forest industry (Heilmann, 2015). Regarding the public reception of information, ASEAN needs to establish a well-crafted anti-misinformation regime and to interpret a better single-window information sourcing from national verified field actors to prevent unnecessary opinion clashes that are baseless or slander.

4.3 Enact a Strong Malaysian Domestic Law Urgently

To minimize future transboundary haze pollution along the Malaysian border, a political will is necessary to enact a strong domestic law that can neutralise the blame game between Malaysia and Indonesia. The previous Pakatan Harapan (PH) government's attempt to propose the Transboundary Haze Pollution Act in 2019 can be resumed by the current Ministry of Environment and Water of Malaysia (MEWA). This law can be used to penalise Malaysian palm oil and plantation firms that deforest or burn peatlands in Indonesia. Not only that but it could also help Malaysia to punish the firms' irresponsible practices that contribute to the annual transboundary haze pollution. In this way, the government can gain public trust while assisting the green group's efforts to make Malaysia a haze-free state.

5. REFERENCES

- Aggarwal, V., & Chow, J. (2010). The perils of consensus: How ASEAN's meta-regime undermines economic and environmental cooperation. *Review of International Political Economy*, 17, 262-290.
- Ajzen, I., & Fishbein, M. (2005). *The influence of attitudes on behaviour*.
- Al Jazeera. (2019, September 19). *Malaysia, Indonesia shut thousands of schools as haze worsens*. Al Jazeera. Retrieved from <https://www.aljazeera.com/news/2019/9/19/malaysia-indonesia-shut-thousands-of-schools-as-haze-worsens>
- Amelia, F. (2017). *The ineffectiveness of the ASEAN agreement on transboundary haze pollution (AATHP) in tackling Southeast Asia haze in Indonesia (2015)* (Bachelor's thesis). President University, Cikarang, Indonesia. Retrieved from http://repository.president.ac.id/xmlui/bitstream/handle/123456789/1082/0162013000_56.pdf
- ASEAN Haze Action Online. (2015). *Information on fire and haze*. ASEAN Haze Action Online. Retrieved from <http://haze.asean.org/about-us/information-on-fire-and-haze/>
- Chin, Y. S. J., De Pretto, L., Thuppil, V., & Ashfold, M. J. (2019). Public awareness and support for environmental protection—A focus on air pollution in Peninsular Malaysia. *PLOS ONE*, 14(3), e0212206.
- Greenpeace Southeast Asia. (2019). ASEAN Haze 2019: The battle of liability. Retrieved from <https://www.greenpeace.org/southeastasia/press/3221/asean-haze-2019-the-battle-of-liability/>
- Hamid, A. G., & Sein, K. M. (2007). *Public international law* (2nd ed.). Pearson Malaysia Sdn. Bhd.
- Heilmann, D. (2015). After Indonesia's ratification: The ASEAN agreement on transboundary haze pollution and its effectiveness as a regional environmental governance tool. *Journal of Current Southeast Asian Affairs*, 34(3), 95–121.
- Hurley, A., & Lee, T. (2020). Delayed ratification in environmental regimes: Indonesia's ratification of the ASEAN Agreement on transboundary haze pollution. *The Pacific Review*, 1–30.
- Jong, H. N. (2019, August 6). Haze from fires, Indonesia's national 'embarrassment,' is back. Retrieved from <https://news.mongabay.com/2019/08/haze-from-fires-indonesias-national-embarrassment-are-back/>
- Ng, K. (2017). Transboundary haze pollution in Southeast Asia: The effectiveness of three forms of international legal solutions. *Journal of East Asia and International Law*, 1, 221-245.
- OECD. (2003). Transboundary pollution. *Glossary of environment statistics, studies in methods, series f*, No. 67, United Nations, New York, 1997.
- OU, Q. (2017). A brief introduction to perception. *Studies in Literature and Language*, 15(4), 18-28.
- Salim, T. (2015, November 7). *Ago to scrutinize prosecution in haze cases*. The Jakarta Post. Retrieved from <https://www.thejakartapost.com/news/2015/11/07/ago-scrutinize-prosecution-haze-cases.html>
- Soeriaatmadja, W. (2019, September 17). *A baby girl and an elderly man reported having died because of haze in Sumatra*. Retrieved from <https://www.straitstimes.com/asia/se-asia/baby-girl-and-elderly-man-reported-to-have-died-because-of-haze-in-sumatra>
- Sreekanth, Y. (2006). *University news, A weekly journal of higher education, New Delhi*. 44(08), 10-16.

- Sumarlan, Y. (2018, October 29). *ASEAN smoke haze and hidden solutions*. Heinrich Böll Foundation. Retrieved from <https://th.boell.org/en/2018/10/29/asean-smoke-haze-and-hidden-solutions>
- Tay, S. S. C. (1998). Southeast Asian forest fires: Haze over ASEAN and International Environmental Law. *Review of European Community and International Environmental Law*, 7(2), 202–208.