ASEAN Agreement on Transboundary Haze Pollution Management in Mainland Southeast Asia

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Abstract

The study discusses the ASEAN Agreement on Transboundary Haze Pollution management in Mainland Southeast Asia by analyzing haze pollution management among ASEAN members using regime theories and ASEAN Principles. The data analysis was taken from articles, research papers, and ASEAN strategic plans on transboundary haze pollution management in Mainland Southeast Asia based on the regime theories and ASEAN principles. The findings revealed that the outcomes of ATHP led to a decrease in the haze level in Mainland Southeast Asia because of the Haze Free ASEAN 2020 roadmap and action plans. Consequently, the initial plans did not result in widespread success practically in meeting the Haze Free vision in 2020. The efforts and processes were hindered because of the respect for the sovereignty of nations which is part of the ASEAN working culture known as the "ASEAN Way". As a result, the process for alleviating of the regional haze problem management is to focus on cross-border cooperation and the mutual establishment of regional standards among the ASEAN members. Therefore, it is necessary to have an agreement protocol and law enforcement to solve border disputes concerning the haze problem for all countries to follow. This will make possible a haze-free zone in the region.

Keywords: ASEAN agreement, Transboundary haze pollution, ASEAN's haze-free roadmap 2020, ASEAN way

Introduction

The haze problem has repeatedly affected the Southeast Asia region since 1985. It remains a crucial regional crisis (Varkkey, 2015, p. 18), from 2003 to 2004. At the time, there was a haze problem from massive forest burning in Indonesia's Sumatra and Kalimantan areas. Consequently, this caused massive amounts of haze to be released into the air affecting the neighboring countries, including Singapore, Malaysia, and Brunei. This seriously affected the

economy and led to an environmental crisis (Jones, 2004, p. 60). The effect of burning is considered a disaster for the world (Tay, 2000, p. 59; Jones, 2006, p. 432) which relates to the unsustainability of commerce development caused by the pressures of industrialization and urbanization expansion and by the continuous growth of the population of the region. Moreover, there is a demand factor for plywood products and palm oil, and the growth of the pulp industry in the world's markets affects the mainland of ASEAN. In addition, poverty and governmental financial problems caused by the economic crisis in 1997 increased illegal deforestation because of poor enforcement of environmental protection laws, especially in Indonesia (Nguitragool, 2011a, p. 106).

Due to the environmental crisis, ASEAN enhanced the cooperation on haze alleviation in the region through initiatives and plans from ASEAN conference agendas for the Agreement on Transboundary Haze Pollution (ATHP) in 2003 (Varkkey, 2019, p. 18). The ASEAN country members support this agreement relating to the agreement of ASEAN (Heilmann, 2015, p. 103).

However, ATHP has not been successful because of the ASEAN working culture, which prefers to use the slow process for developing mutual trust among the ten member countries and strives to keep the status quo and avoid conflict (Nguitragool, 2011b, pp. 356-357; Litta, 2010, p. 76).

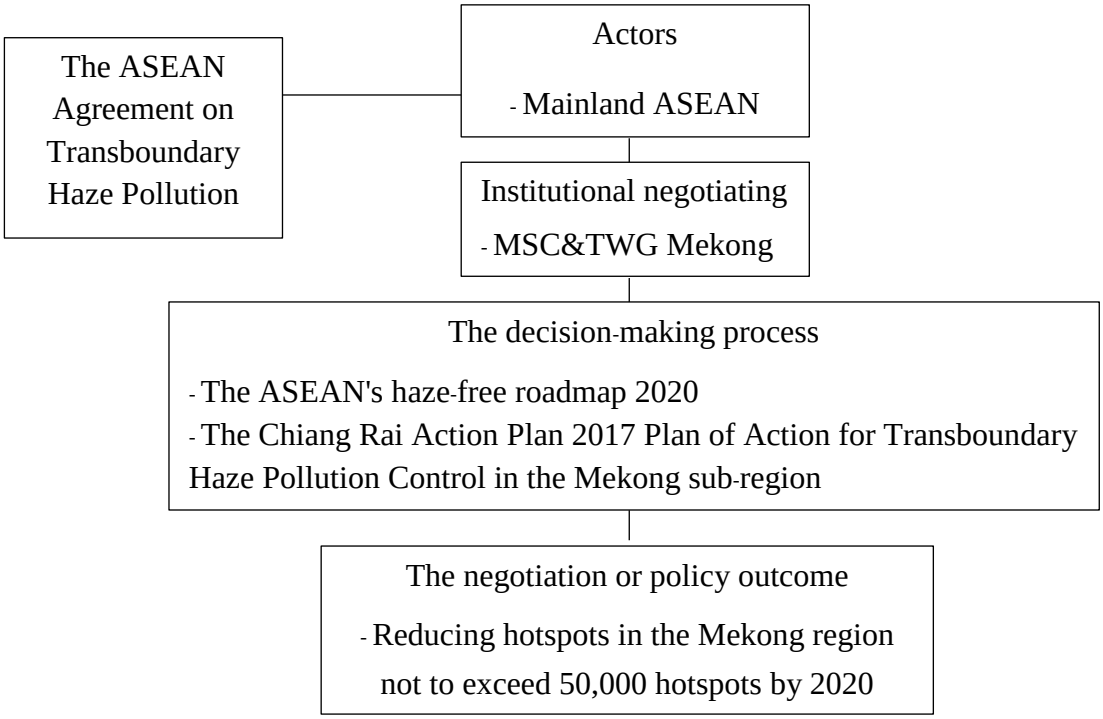
Therefore, ASEAN members compromise by being more flexible because the state parties cannot follow the agreement and apply problem-solving strategies (Kraiwattanaphong & Mahatthanobol, 2012, p. 58). This crucial problem is created because of the "ASEAN Way", which is the working culture of the ASEAN members. When members follow the "ASEAN Way", it is difficult to make agreements and follow law enforcement protocols (Heilmann, 2015, p.102). They are reluctant to practice the ASEAN's strategies and plans. This leads to the failure of ATHP in the ASEAN region (Kraiwattanaphong & Mahatthanobol, 2012, p. 58).

Besides the transboundary haze problems in the southern part of ASEAN, the problems have expanded to the Mekong Sub-Region, a part of Mainland Southeast Asia. The problems of the Mekong Sub-Region are related to the growth of corn cultivation used for the livestock industry (Borras Jr & Franco, 2018, p. 5), causing hotspot issues for 30% of the corn cultivation areas in 3 countries of the Mekong Sub-Region including the upper part of the North of Thailand, Shan state of Myanmar, and the upper part of Lao PDR (Jaroenpanyanet, 2020, p. 1). These problems are parts of the transboundary haze issues at the regional level which cannot be solved by reducing burning activities in only one country for reducing haze pollution. Therefore, the ASEAN members should consider more serious approaches to solving these problems effectively (Kraiwattanaphong & Mahatthanobol, 2012, p. 37).

Consequently, the ASEAN Ministry of Natural Resources and Environment initiated and pushed forward the environmental initiative to solve the problem of the transboundary haze at the regional level for sustainability. It includes (1) the ASEAN Haze Free Roadmap in 2020 and (2) The Chiang Rai 2017Action Plan, to the burning activities in the Mekong Sub-Region to not more than 50,000 reported hotspots by 2020. This plan aims to achieve the Haze Free vision of the ASEAN Haze Free Roadmap of 2020 (ASEAN information center, 2021).

Therefore, this study aims to discuss the ASEAN Agreement on Transboundary Haze Pollution (ATHP) management in Mainland Southeast Asia through articles, research papers, and ASEAN strategic plans on transboundary haze pollution management in Mainland Southeast Asia, and data were analyzed based on the regime theory. Furthermore, this study argues that the initiatives by ATHP have not helped fulfill the Transboundary Haze Free ASEAN by 2020, specifically in alleviating haze pollution in Mainland ASEAN. This is mainly because of informality and avoiding conflict at the national level. This has hampered attempts to implement successful environmental initiatives.

Conceptual framework



Regime theory

The haze pollution crisis in Mainland Southeast Asia has a cross-border feature. As a result, it is a necessity to get involved with international organizations to recognize the common need and establish cooperation in solving problems through Regime theory.

This theory consists of principles, norms, rules, decision-making process, direct effects of practice, and the importance of reputation affecting state behavior (Haus, 1991, p. 167). Furthermore, as defined by Krasner (1982 cited in Bovcon, 2013, p. 7), regimes are sets of implicit or explicit principles, norms, rules, and decision-making procedures around which actors expectations converge in each area of international relations. An example is The World Trade Organization (WTO), which succeeded the General Agreement on Tariffs and Trade (GATT). Although its true responsibilities are to facilitate the negotiation and implementation of new agreements, and ensure compliance by all new member countries, it dominates the international trade discourse. The World Trade Organization (WTO) is thus a part of the global

trade regime based on the basic premise of trade liberalization, as well as norms, rules, and decision-making procedures enshrined in multiple treaties. It shows that states are frequently related to other states through multiple regime networks simultaneously (Nguitragool, 2011a, p. 5; Bovcon, 2013, p. 7).

The process above has become the norm for defining behavior between states and building international relations under the principle of reciprocity through norms and principles, which define regimes and are separated from different rules and processes under four elements (Krasner, 1983);

1. The change of norms and principles resulted in the change of the regime.
2. The change of rules and procedures becomes the change within the regime itself.
3. The regime's weakness occurs when the connection between norms, principles, and rules is disconnected.
4. Processes herein occur when members of the regime ignore the above processes.

The researcher will examine the regimes in 3 areas: 1) how the regime is formed; 2) how the actors of the institution act; and 3) how, in the long term will, the regime be changed or abandoned.

In conclusion, the regime theory is a concept based on the analysis of regimes developed from the findings to answer why state potential is a tendency towards cooperation rather than a conflict in the sovereign state system by expressing ideas on a relatively permanent framework under a certain degree of cooperation (Yoshimatsu, 1988, p. 6). It is commonly assumed that regime theory refers to cooperation among advanced nations or interdependence between equal states, as proved by Strange's (1982) further analysis of the direct investment between the United States and Canada or Latin America, which reveal that this is not generally the situation. Many international regimes were created by a hegemonic power to serve its interests. (Krasner, 1981 cited in Bovcon, 2013, pp. 7-8) Therefore, the regime theory is used to argue that the ASEAN environmental regime's objectives are ineffectual in reducing regional haze pollution because the ASEAN haze regime was designed to prevent conflict, follow organizational customs, and be swayed by internal politics.

The efforts to reduce haze according to the Agreement on Transboundary Haze Pollution (ATHP)

ASEAN accepts that transboundary haze pollution has been a regional problem since 1985. After that, they have attempted to promote cooperation to alleviate the haze problem in the region through important environmental initiatives, which include the Workshop on Transboundary Pollution and Haze in ASEAN Countries in 1992, Cooperation Plan of Haze Technical Task Force 1995, Regional Haze Action Plan 1997, Hanoi Plan of Action 1998, ASEAN Peatland Management Initiative 2002, and Agreement on Transboundary Haze Pollution (ATHP) in 2002 (Heilmann, 2015, p. 101; Varkkey, 2019, p. 4). As shown in the Figure1.

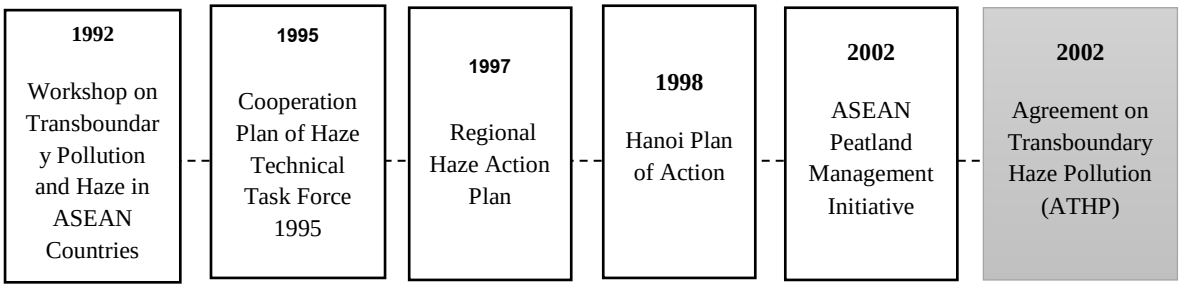


Figure1 Initiatives of the ASEAN to fight haze.
Source: Varkkey (2012, p. 84)

The ATHP expands environmental management standards from previous initiatives and empowers international laws (Jones, 2006, p. 438), which relate to the state parties to solve transboundary haze pollution caused by wildfire in land and wild areas. It is regarded as the first environmental agreement related to the laws of the United Nations Environment Programme. The UNEP mentions that this agreement is the world model for solving transboundary problems and is an important step in regional cooperation (Ghani, Redzuan, Nasir & Salamat, 2017, p. 155).

Under this ATHP agreement, the main content is to reduce haze pollution in Southeast Asia, build cooperation in implementing measures and inspections, and control the forest fires and open-air tribes by adding channels to help each other if the country of origin is asked for information or consulted from countries' members. The country where the hotspot is identified will be responsible for providing an immediate response to minimize the impact (Phekasut, 2017, p. 498). At the same time, the ATHP agreement has also set the establishment of a cross-border haze pollution control coordination center to facilitate cooperation and coordination in the effects of such hotspots, with a function similar to a regional center for the conservation of the biodiversity in ASEAN which serves to collect and analyze data. Networking and capacity building established an ASEAN haze fund with an initial amount of US$ 50,000 (Nguitragool, 2011a, p.71; Varkkey, 2012, p. 86; Weatherbee, 2013, p. 459). Overall, the ATHP Agreement has become a statutory commitment.

However, the content of ATHP cause conflicts with the Principle of Non-interference of ASEAN (Timwat, 2015, p. 87). This is because ATHP firmly includes limitations in dispute resolution strategy, the working-process control strategy of government officers to follow ATHP, and international obligations. In case of misinterpretation, ATHP and other protocols are conducted under consultation and negotiation without considering the International Courts or Permanent Court of Arbitration. For this reason, the lack of strict enforcement of ATHP is considered a disadvantage for controlling state parties (Nguitragool, 2011a, p. 71).

The above limitations reflect Indonesia's desire not to ratify but question the strictness in solving regional problems. Even though some countries such as Singapore and Malaysia called for Indonesia to sign the ratification. Moreover, ATHP is used for extending results in the matter of politics. Accordingly, Indonesia tends to defend itself and is sensitive to the issue

of haze pollution and legal commitments. These issues cause the parliament of Indonesia to be concerned about ATHP (Robertua & Sigalingging, 2019, p. 7).

ATHP leads to other transboundary haze pollution initiatives of ASEAN, including working processes on following up, evaluations and models for solving international emergency issues, and agricultural demonstrations for small- scale farmers and shifting-cultivator farmers. These initiatives motivate political pressure from the public sector to the government sector. Especially in 2006 was the year of serious haze pollution affecting the population and economy of the countries affected by the haze pollution. The governments of Singapore and Malaysia had changed the way of performance to Indonesia from the pressure to assistance and they helped Indonesia to manage the wildfire. At the same time, the population sector was moving national, regional, and international levels for transboundary haze pollution. They were constructing awareness of the sources and dangers of scattering haze pollution (Varkkey, 2012, p. 86) and pressuring Indonesia. Eventually, it was successful in 2014, which took 12 years to process, and Indonesia was the last country of ASEAN to sign the ratification (Robertua & Sigalingging, 2019, p. 7).

In addition, the capabilities and limitations of the central government and local organizations of Indonesia affect the failure to reduce combustion in Indonesia. This is due to the lack of sufficient anti- burn laws and directives that can be applied to ASEAN's environmental management initiatives, However, there were laws and decrees on forest management and protection in 1985, 1997, and 1999. However, these laws and decrees cannot be properly enforced. This failure leads to the constant burning problems, the redundant duties of domestic organizations in forest fire care, and the lack of adequate personnel involved in forest fire management. Regarding the national and local governance issues, the judiciary in Indonesia lacks an understanding of the laws and regulations involved in dealing with fire offenders and the suitability of Indonesian law enforcement officials to implement appropriate safeguards against those who break through the plot (Jones, 2004, p. 68, 72) has resulted in weak coordination between domestic enforcement institutions and the lack of monitoring capabilities. This is due to the deep-rooted patronage network in the Indonesian social context and one of the conditions for the continued expansion of the haze (Varkkey, 2015, p. 117-118). As a result, since 2014, the climate of haze pollution across ASEAN borders was carried out under the ASEAN way or the art of ASEAN dialogue; this has become the standard diplomatic way of doing business to protect economic interests. This approach seems to help in avoiding disputes against each other and results in building better relations among the country members. Therefore, the ASEAN WAY approach is used for building relations and follows a less formal protocol. It has become an acceptable approach for being flexible and maintaining informality (Thepchatree, 2011, p. 26).

This approach can work very well in the negotiations between member states but is relatively weak in terms of the enforcement of the agreement based on the principle of the non- punishment, member states for violations of the agreement until some measures cannot be implemented, such as the ASEAN Coordinating Center on Haze. Although the agreement was accepted, the coordination center has not yet been established, and this is an

important issue of the lack of a central regulator. While many member countries are reluctant to share information about the hot spots, sovereignty issues on non-intervention in internal affairs and haze problems are tied to wildfires' conflicts (Varkkey, 2021).

For example, Singapore launched its act which was the Transboundary Haze Pollution Act 2014, to penalize private companies in the country, which might have caused the transboundary haze pollution in Indonesia, which was affecting Singapore. This was because Singapore had had similar problems of haze pollution every year. This led to many disadvantages in terms of health and economy. However, private companies have not been penalized because Indonesia has not cooperated. Additionally, there was a negative response to the act as it is not part of the ASEAN Way and interferes with diplomacy (Ghani, Redzuan, Nasir & Salamat, 2017, p. 158; Varkkey, 2019, p. 5).

Therefore, all the subtleties in connection with the ATHP agreement is presented above bring about a dilemma that results in the conflict with the management system in the ASEAN and the established. As a result, adherence to these guidelines can destroy relations with member states (Amer, 1999, p. 1036), as in the example above.

Regarding the problem of the forest fires and the cross-border haze pollution, it is not only limited to the lower ASEAN region but as a problem in the form of unsustainable development policy. It also occurs in the upper ASEAN region or the Mekong Sub-region. The problem is related to corn growth for the animal industry (Borras Jr & Franco, 2018, p. 5) which causes hotspots with 30% of the corn planting areas in the three Mekong Sub-region, comprising the upper northern part of Thailand, the Shan State of Myanmar and the Upper Lao PDR (Jaroenpanyanet, 2020, p. 1). The hotspots in the southern ASEAN mainland area are also related to the policy of forest land concessions for foreign private companies to enter into a commercial planting concession. Since the late 1990s, palm oil crops, acacia; and sugar cane have resulted in the intensive deforestation from Cambodia's exposure to foreign investment which focuses on driving economic activities to improve people's quality of life and reduce poverty in Cambodia (Fair, 2021).

The problem, as mentioned above, is part of the uncontrolled burning, It correlates with the behavior of farmers whose fire-burning lifestyle has become a long-established practice in weed control (Jim, 1999, p.251) with a situation that can worsen when high concentrations of open-air burning during dry weather conditions or related to the El Niño phenomenon (Jones, 2004, p.59), resulting in cross-border haze pollution problems in the upper ASEAN region. It is rooted in economic factors and the expansion of oil palm crops, corn, and sugarcane. This problem originates from the global haze problem in the upper ASEAN regions. They have to face cross-border haze and become an annual problem in the past 10 years (Nguitragool, 2016), as detailed in Figures 2 and, 3 which show the occurrence of heat points in the opening spaces through VIIRS (Suomi NPP) satellite data reporting by comparing the heat point data between February and April. It is regarded as a critical period for burning to eliminate weeds. It is also associated with the open burning behavior, a deeply rooted behavior in many Southeast Asian cultures (Heilmann, 2015, p. 98). This is traditional behavior for preparing the land for planting during the rainy season in May.

The historical data comparing 2020 and 2021 shows that the hotspot situation in the Mekong Sub-region had high levels especially in Myanmar, Laos, Cambodia, and Thailand.

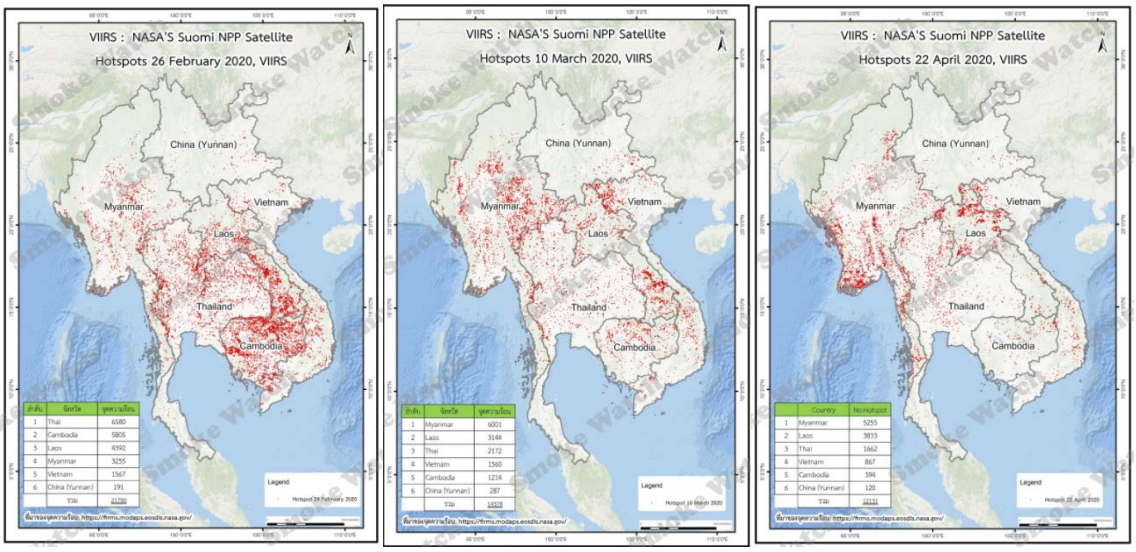


Figure 2 The hotspots summary results for the mouth February, March and April in the years of 2020
Source: Smoke watch (2020)

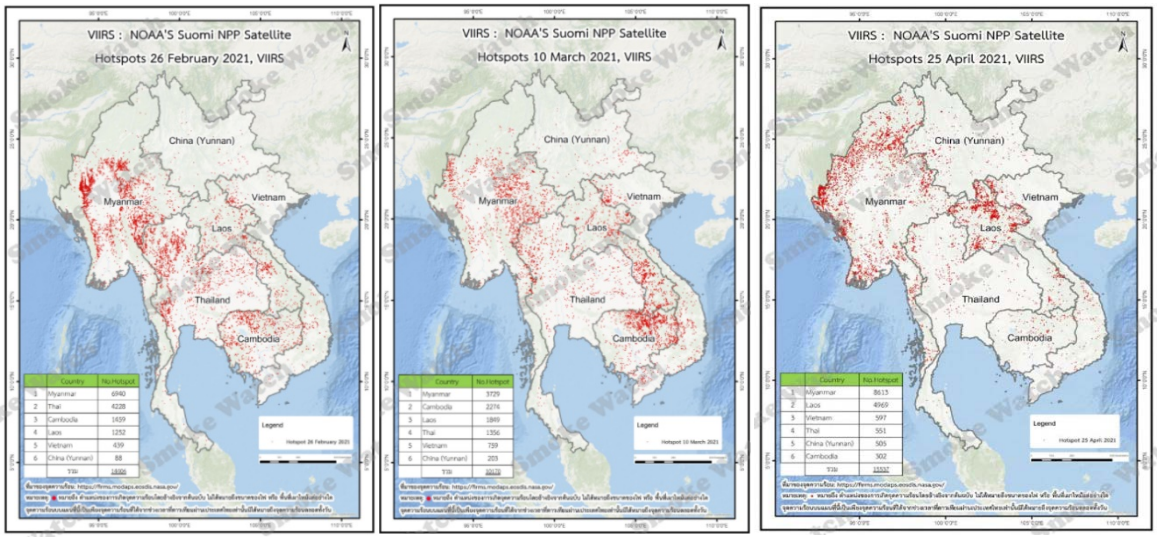


Figure 3 The hotspots summary results for the mouth February, March and April in the years 2021
Source: Smoke watch (2021)

Regarding resolving the Mekong Sub-region, the ASEAN community has an agreement on Transboundary Haze Pollution (ATHP), which was signed in 2002 and officially used in 2003. However, the problems cannot be solved permanently due to the political differences and the unsustainable development policy regarding the precipitation of industrial growth and cities and regions with weak environmental laws (Nguitragool, 2011a, p. 106). The problems also include the obstacles under the framework of cooperation in the ASEAN way, which is carried out under a decision-making process that emphasizes the consultative guidelines, consensus, and non-interference in the internal affairs. To elaborate, there are no fixed rules and always be flexible, loose, and informal (Cockerham, 2010, p. 167; Thepchatree, 2011, p. 26). It focuses on a compromise, familiarity, and understanding of each other on various issues through an unofficial system and formal meetings between member state leaders, ministerial and senior forum levels of ASEAN to have a consensus in agreement (Amer, 1999, p. 1036).

Regarding the Conference of the Parties (COP) on Transboundary Haze Pollution in ASEAN, it is the conference at the ministerial level relating to transboundary haze pollution which is responsible for conducting ATHP. The COP set up the senior committee members (Director Generals and Permanent Secretaries) from ASEAN. They oversee collecting information about transboundary haze pollution together with the Technical Working Group on Transboundary Haze Pollution in the Mekong Sub-Region (TWG Mekong) and the Technical Working Group on Transboundary Haze Pollution in Southern Part of ASEAN (TWG Southern) in order to help the state parties, implement ATHP. Besides, this conference is a space for COM and COP to meet at least once a year and approve protocols from the meeting agendas of the year (Sirivunnabood, 2017, p. 68).

Under the implementation frameworks, the management of transboundary haze pollution is divided into two areas that directly depend on COP. This is because these two areas face different problems of transboundary haze pollution as follows:

1. **The Sub-Regional Ministerial Steering Committee on Transboundary Haze Pollution in the Mekong Sub-Region:MSC&TWG Mekong,** under the ASEAN Ministerial Meeting on the Environment of 5 countries in the Mekong Sub-Region including Myanmar, Lao People's Democratic Republic, Vietnam, Cambodia, and Thailand (ASEAN Secretariat, 2016, p. 25) is assisted by Technical Working Group on Transboundary Haze Pollution in the Mekong Region (TWG Mekong) to gather information for the Mekong Sub-Regional Steering Ministerial Committee (Sirivunnabood, 2017, p. 69).

2. **The Sub-Regional Ministerial Steering Committee on Transboundary Haze Pollution: MSC&TWG Southern** includes Brunei, Indonesia, Malaysia, Singapore, and Thailand and is assisted by the Technical Working Group on Transboundary Haze Pollution in the southern part of ASEAN (TWG MSC-Southern). They gather information for the Mekong Sub-Regional Steering Ministerial Committee in the southern part of ASEAN (Sirivunnabood, 2017,
p. 69).

These two areas set up the committees for implementing transboundary haze pollution processes to solve the problems and conduct annual meetings for senior committee level and

ministerial level of 5 countries of both MSC & TWG Mekong and TWG Southern. Additionally, they exchange and are supported by the Technical Working Group on Transboundary Haze Pollution (ASEAN Secretariat, 2016, p. 25). Also, Thailand is the only country which that attends the meetings in both areas because Thailand is affected by transboundary haze pollution from both the southern part of ASEAN and Mainland Southeast Asia.

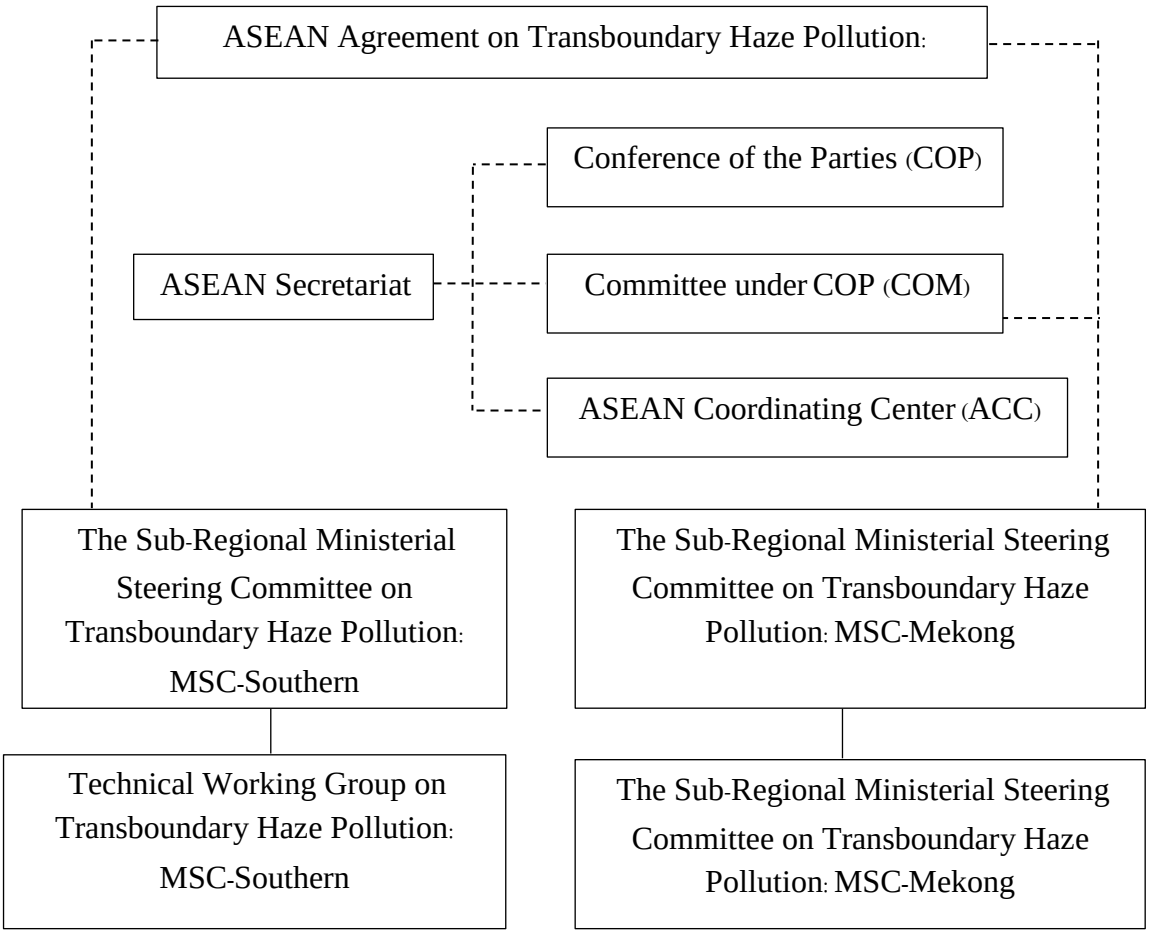


Figure 4 The institutional framework of the ASEAN Agreement on Transboundary Haze Pollution (ATHP)
Source: Pollution control department (Ministry of Natural Resources and Environment, 2020)

From the ATHP agreement, an ASEAN-style format was created to avoid conflicts because it was weakly designed and lacked legal strength to avoid favoritism toward more powerful states (Cockerham, 2010, p. 183), which failed to alleviate the haze pollution. Furthermore, at the regional level, there was no enforcement strategy nor will follow strict protocol because of the standards being enforced at the national level. Thus, during emergencies, the member countries acted independently on their view of the situation. (Nguitragool, 2011a, p. 98; Varkkey, 2012, p. 88). Hence, understanding this way of administrating is only the beginning of solving the regional problems. Individual countries

prefer to rely on their national interests and use the "ASEAN WAY" as an excuse to prevent any interference in the affairs of other member states (Phekasut, 2017, p. 499). This attitude hinders success in solving the cross-border haze problem and falls short of effectiveness compared to other regional groups such as the European Union.

An initiative from the Agreement on Transboundary Haze Pollution (ATHP) to transboundary haze-free ASEAN by 2020

All member states, including Indonesia, originally signed their commitment to a haze-free zone in ASEAN especially after the 2015 haze crisis (Ghani et al., 2017, p. 158). This was documented at the ASEAN Ministerial Meeting on 28 October 2015.

Therefore, the roadmap for Transboundary Haze-Free ASEAN by 2020 was established with the following key elements: (1) commit and work towards making ASEAN a transboundary haze-free region by 2020; (2) implement fully the ASEAN Program on Sustainable Management of Peatland Ecosystems 2014-2020 (Peatland Ecosystems: ASMPE); (3) operationalize immediately the ASEAN Coordinating Centre for Transboundary Haze Pollution Control as the main operational entity of the Haze Agreement; (4) undertake concerted national efforts based on the Haze Agreement for the mutual benefit of each AMS and the region; (5) enhance and implement an effective work program for the Haze Agreement consisting of both regional and corresponding national activities; (6) prioritize appropriate national legislative instruments for better enforcement, compliance and necessary appropriate punitive actions; (7) enhance the monitoring and surveillance systems emphasizing on early warning and better forecast modelling; (8) shift from emergency response towards better prevention and preparedness in mitigating fires; (9) effectively involve all stakeholders - plantation companies, financial/ development institutions, private sector, consumers, communities and NGOs; (10) implement obligations of ASEAN Member States (AMS) to related global accords, such as climate change and conservation of biodiversity, through leveraging complementary efforts under the Haze Agreement (Letchumanan, 2015, pp. 3-4).

In addition, ASEAN was also trying to determine indicators to make the action to solve the haze problem more concrete through the initiatives pushed by Thailand. Thailand was the host of the ASEAN Haze-Free Roadmap Committee Meeting in 2016 in Chiang Mai to consider the roadmap draft. The roadmap was considered to set the indicators, measures, and implementation frameworks of the ASEAN Haze-Free Roadmap to change ASEAN to be haze-free region by 2020; the solution was categorized into two groups which are as follows: (Wiriyakuakul, 2016)

1. The group of 5 countries in the Mekong Sub-Region, including Thailand, Lao People's Democratic Republic, Myanmar, Cambodia, and Vietnam: This group was committed to limiting the number of hotspots to 50,000 hotspots.

2. The group of countries in the southern part of ASEAN, including Thailand, Malaysia, Singapore, Indonesia, and Brunei; This group set up the haze-pollution standard measurement of each country. For example, Singapore and Malaysia set the standard at not more than 150 microgram/ cubic meters, and Thailand set the standard at 120 microgram/ cubic meters.

In addition, there was a Chiang Rai 2017 Plan of Action for Transboundary Haze Pollution Control in the Mekong Sub-Region.

This action plan is an emergency plan to reduce hotspots in the Mekong region not to exceed 50,000 hotspots by 2020 and to achieve a haze-free zone according to ASEAN Haze-Free Roadmap 2016. Also, it implemented 4 strategies, including 1) Managing wildfires and burning in agricultural areas, 2) Developing and utilizing information technology, 3) Promoting cooperation of every section, and 4) Reducing effects on health and risk to the environment. Additionally, there was a discussion to set up The Establishment Agreement and Host Country Agreement of the ASEAN Coordinating Centre for Transboundary Haze Pollution Control: ACC THPC in Indonesia (ASEAN Secretariat News, 2021).

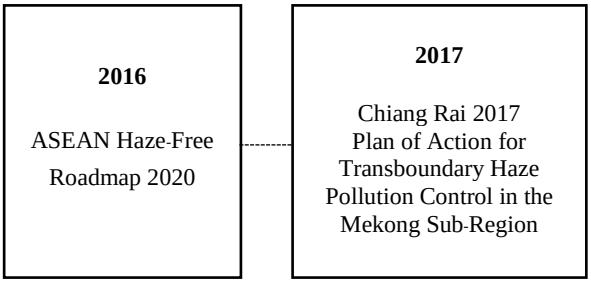


Figure 5 Initiatives to fight haze at the regional level

The strategies of transboundary haze management included the Workshop on Transboundary Pollution and Haze in ASEAN Countries organized in 1992, the Cooperation Plan of Haze Technical Task Force in 1995, the Regional Haze Action Plan of 1997, the Hanoi Plan of Action of 1998, the ASEAN Peatland Management Initiative of 2002, the Agreement on Transboundary Haze Pollution (ATHP) in 2003, and other initiatives from ATHP including the ASEAN Haze-Free Roadmap 2016 and the Chiang Rai 2017 Plan of Action. They all set up regional haze-free guidelines of standards to manage the ASEAN environment according to their own particular needs.

Accordingly, they outlined ways to manage, prevent, and control burning to meet the standard measurements to avoid causing haze problems in o neighboring countries. Despite these efforts, ASEAN still abides by the "ASEAN Way" approach in their working culture. For instance, the draft did not mention penalties and intervention procedures of the roadmap does not mention about penalty and intervention of international laws.

Visions of ASEAN haze-free by 2020 towards Alleviating Haze Pollution in Mainland Southeast Asia (Mekong Sub-Region, MSC&TWG Mekong)

The implementations of regional haze-free frameworks have not achieved the target of reducing the hotspots in the areas. Table 1 shows the numbers of the hotspots found in the Mekong Sub-Region the numbers of standard measurements have been more than 50,000 hotspots from 2017-2020.

Table 1 Numbers of hotspots in Mainland Southeast Asia or Mekong Sub-Region

Year	Target Numbers of Hotspots	Real Numbers of Hotspots
2017	50,000	79,307
2018	50,000	76,041
2019	50,000	176,044
2020	50,000	131,498

Source: Greenpeace Thailand and Geo-Informatics and Space Technology Centre (Northern Region) (Faculty of Social Sciences, Chiang Mai University ,2020; Greenpeace Thailand, 2021)

The limitation of ASEAN Haze-Free Roadmap 2020 and the Chiang Rai Plan of Action is the working culture defined as the "ASEAN Way". It respects each country's individuality and accepts its final decisions (Weatherbee, 2013). This is because ASEAN members prefer good cooperation and joint academic support instead of strife (Wiriyakuakul, 2016; Chuoykua, 2016). Therefore, it is necessary to have a protocol, especially in dispute resolution strategies for transboundary haze pollution, to ensure a law for management. When ASEAN members refuse or neglect the obligations of the initiatives from ATHP (Primadianti, 2020, p. 1928), they will have a better opportunity to achieve the ASEAN haze-free vision by 2020.

Nevertheless, both haze-free frameworks, initiated and promoted by Thailand, shed light on the limitations of ATHP (Ren & Bao, 2016, p. 1569) and the "ASEAN Way". Importantly, management guidelines and indicators are necessary. This includes stating the increased number of days of qualified air, decreasing the number of hotspots, and decreasing areas affected by haze pollution. These are the efforts member countries need to take to increase cooperation and solve the transboundary haze pollution problem (Chomchuen, 2019, p. 3). These implementations follow and correspond with the ASEAN Strategic Plan on Environment 2016- 2025, which consists of C. 1 Conservation and Sustainable Management of Biodiversity and Natural Resources and C. 2 Environmentally Sustainable Cities (Ministry of Foreign Affairs, Kingdom of Thailand, 2019, p. 9).

Discussion and conclusion

The haze problem in Southeast Asia was started in 1985 and has become a long and repetitive problem (Varkkey, 2012; Varkkey, 2015, p. 18). The haze originates mainly from Indonesia's peat forests. Most of these fires are artificial by smallholder groups and foreign commercial oil palm plantation operators. The problems not only affect the air quality in the country but also seriously affect neighboring countries. For example, Malaysia and Singapore suffer from the haze problem (Varkkey, 2015, p. 18; Jones, 2004, p. 59). Meanwhile, the problem of forest fires and cross-border haze pollution is not only limited to the lower ASEAN region but also occurs in the upper ASEAN region or the Mekong Sub-region, which depends

on the expansion of oil palm crops, and corn and sugarcane to survive. This is the source of the transnational haze problem and affects the upper ASEAN regions annually, especially in the past 10 years (Borras Jr & Franco, 2018, p. 5; Nguitragool, 2016). The situation may even worsen when the open-air incineration activity is frequent during the dry season or the El Niño phenomenon (Jones, 2004, p. 59). This open-air incineration activity is deeply rooted in the culture of Southeast Asia (Jim, 1999, p.250; Heilmann, 2015, p. 98).

From the above information, the haze problem in Southeast Asia is a complex regional problem in both the upper ASEAN and lower ASEAN regions. Both regions have common problems because of their development policies, conflict with their economic growth priorities and weak environmental laws (Nguitragool, 2011a, p. 106). When the intensity of the haze increases, attempts are made to deal with this problem within the region's local meetings.

After many workshops, regional plans and initiatives to upgrade cooperation in solving the haze problems (Heilmann, 2015, p. 101; Varkkey, 2019, p. 4) and expressing determination to reduce haze pollution by implementing safeguarding measures, inspections, and controls upon forest fires, especially in times of crisis, their efforts are still unsuccessful (Phekasut, 2017, p. 498; Nguitragool, 2011b, p. 376).

This conclusion is supported by Krasner's Theory of Regime (1983), which found that a regime that arises weakly will result in weakness. As a result of changes in norms during decision-making during negotiations, there continue to be inadequate responses to tackle the haze pollution problem, which contributes to the outcomes of policy as mentioned in the studies of Bovcon (2013, p. 13) and Nguitragool (2011b, p. 360). As a corollary, the effective haze mitigation initiatives have failed and not met their original purposes. This is because the cooperation of the member states is hampered by normative constraints and corporate the political customs within member states (Nguitragool, 2011b). This can be seen from the non-cooperation of ASEAN member states such as Indonesia. It was this haze-source country that took 12 years to join the ATHP in 2014 (Robertua & Sigalingging, 2019, p. 7), and their unwillingness to share the data on the heat points due to sovereignty issues and the non-interference in internal affairs and haze problems tied to conflicts of interest linked to wildfires (Varkkey, 2021).

Although ASEAN has a process to maintain the regime in the long term by issuing protocol to coordinate cooperation among member states to mitigate regional haze in 2016, by focusing on solving haze problems at the root cause and adding a framework of indicators to work on solving the haze problem to be more concrete and by dividing the indicators, there is the area of the Mekong Sub-region with 50,000 common heat points. Because the indicators from the heat point are not defined, they become problematic. (Wiriyakuakul, 2016; Phekasut, 2017, p. 499). These practices were set up to support their vision of a haze-free ASEAN region by 2020 (Wiriyakuakul, 2016). In 2017, it became the Chiang Rai Action Plan 2017 Plan of Action for Transboundary Haze Pollution Control in the Mekong sub-region, which calls reducing hotspots within the Mekong region, specifically not to 50,000 points. This is supposed to happen under the cooperation and assistance of member countries in monitoring and measuring air quality and to help create awareness and cooperation in solving the haze problem.

However, reducing heat points in the area to less than 50,000 by 2020 has not yet been achieved because the approaches are still based on the "ASEAN Way". There are no penalties and no involvement with international law.

Therefore, new initiatives have the status of "business as usual" following the working culture of the "ASEAN Way" Nguitragool (2011b, p. 378). It is the unique identity of ASEAN. Or put another way, there are no fixed rules, and they are always flexible. (Thepchatree, 2011, p. 26). The working culture of ASEAN focuses on a compromise approach, showing various issues through informal systems and formal meetings between member state leaders Ministerial and Senior Forum Levels of ASEAN to achieve interactions under consensus (Amer,1999, p. 1036). Moreover, the previous Thai Foreign Minister and ASEAN Secretary-General, Surin Pitsuwan, proposed a flexible or constructive engagement with the ASEAN. Unlike the Western boycott of the SLORC government, this engagement is to support a friendship between Thai and Myanmar through trade and investment. It became ASEAN's non-interference policy during the Human Rights Crisis in Myanmar in the late 1990s. (Buszynski, 1998, p. 300; Collins, 2013, p. 39; Chainam, 2007, p. 37)

The weaknesses in handling the above problems reflect the dependence on the ineffective internal mechanisms of ASEAN countries, which have no effective environmental governance and keep pace with the complexity of regionalization and economic globalization. (Nguitragool, 2016). Therefore, an additional protocol must exist for the ATHP Agreement on the mechanism of settlement of the cross-border haze pollution disputes to create rules and agreements that are certain to deal with problems, especially when ASEAN members refuse or ignore the obligations under the initiatives of the ATHP (Primadianti, 2020, p. 1928). This advice will contribute to realizing the vision of an ASEAN that is truly haze-free and should create effective environmental governance within ASEAN member countries. It may be based on an effective organization and mechanism as well as creating policies and maintaining environmental governance as in the European Union.

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