

## **EXTENDED ABSTRACT**

### **NATIONAL RESPONSES IN THE CONTEXT OF ASEAN DEVELOPMENTS OVER PEATFIRES AND HAZE**

**Helena binti Muhamad Varkkey**

**Department of International and Strategic Studies, University of Malaya, Malaysia**

#### **SUMMARY**

The recent haze episodes of 2013 and 2015 have been especially severe, with serious consequences on the day-to-day lives of Indonesians living closest to the fires and in neighbouring countries. With satellite imagery and news reports pinpointing sustained peatfires as a major source of the haze, national and regional responses have, more than ever, focused on peatlands. At the ASEAN level, ongoing efforts to address peat and haze issues focus around two documents, namely the ASEAN Agreement on Transboundary Haze Pollution (ATHP) 2002 and the ASEAN Peatland Management Strategy (APMS) 2006-2020. This paper analyses the latest national responses within the context of these documents, particularly on the 2013 Haze Monitoring System (HMS) and the soon-to-be-established ASEAN Coordinating Centre for Haze (ACCH). Two responses are of particular interest, namely Singapore's Transboundary Haze Pollution Bill (THPB) 2014, and Indonesia's recent ratification of the ATHP. Singapore's THPB ties in closely to ASEAN's HMS as it needs accurate land maps so that Singaporean prosecutors can correctly assign blame. The HMS is however constrained as concession maps are available on a case-by-case basis only, which is augmented by Indonesia's repeatedly delayed One Map Initiative. Indonesia for its part has finally ratified the ATHP and this has renewed regional interest in the establishment of the ACCH in Riau, which, due to its location close to some of the most severe peatfires, is hoped to encourage more local ownership of the issue. However, Indonesia has announced that it needs at least another three years before a marked reduction of haze episodes. Indonesia's three-year timeline does still fall within the timeframe of the APMS, so the document should be a useful tool to inform developments of Indonesia's fire and peat policy in the years to come.

**KEY WORDS:** ASEAN, transboundary haze, peatland management, fire monitoring, Haze Monitoring System

#### **INTRODUCTION**

The recent transboundary haze episodes of 2013 and 2015 have been especially severe, with serious consequences on the day-to-day lives of Indonesians living closest to the fires and in neighbouring countries, especially Malaysia and Singapore. Singapore experienced its worst haze ever on record in June 2013, with its Pollution Standards Index (PSI) reaching 401, ranked as extremely hazardous. In September 2015, an emergency was declared in Riau, Sumatra, the worst-hit Indonesian province that was close to the epicentre of the fires. And during the same period in Malaysia, schools were closed in three states and the federal territories for several days as air quality worsened.

Satellite imagery captured during these two haze episodes detected hundreds of hotspots in Kalimantan, Sumatra, and to a lesser extent Peninsular Malaysia and Sarawak. The majority of these hotspots were on peatland areas, and plumes of smoke rising out of these areas were clearly visible (NASA, 2015). Peatfires are notoriously hard to put out, as these fires often spread over vast distances underground. These smouldering fires emit thick, sooty smoke that is heavy enough to travel far distances in the atmosphere. One study has indicated that about 80% of the regional haze consists of smoke from peatfires (Reddington et al., 2014). With satellite imagery and news reports pinpointing sustained peatfires as a major source of the haze, national and regional responses have, more than ever, focused on peatlands. Hence, the purpose of this paper thus is to analyse the latest national responses within the context of regional peat and haze initiatives.

#### **METHODS**

This research is qualitative in nature. Media and archival research was the main methods of data collection used for this paper. Triangulation of data from these two sources was essential in better understanding the circumstances surrounding particular pieces of information, and also to verify the accuracy of the information obtained. Media (mainly newspaper) research was a very important primary resource for this study, as the publicity from haze events meant that there was extensive coverage of the matter in the media. Therefore, there was a substantial amount of newspaper articles written around the time of haze events that were useful as primary sources for this research. Archival research proved important for obtaining official Indonesian, Malaysian and Singaporean government documents, ASEAN documents and documents published by relevant organizations. Especially useful also were non-governmental publications and company annual reports.

## RESULTS

At the ASEAN level, ongoing efforts to address peat and haze issues focus around two documents, namely the ASEAN Agreement on Transboundary Haze Pollution (ATHP) 2002 and the ASEAN Peatland Management Strategy (APMS) 2006-2020. This paper analyses the latest national responses within the context of these documents, particularly on the 2013 Haze Monitoring System (HMS) and the soon-to-be-established ASEAN Coordinating Centre for Haze (ACCH). Two responses are of particular interest, namely Singapore's Transboundary Haze Pollution Bill (THPB) 2014, and Indonesia's recent ratification of the ATHP.

### Regional initiatives

The ATHP, which was adopted by all ASEAN member countries in 2002 and brought into force in 2003, was meant to provide legally binding support to an earlier ASEAN document, the Regional Haze Action Plan (Florano, 2003). Hence, the ATHP is notable for being one of the few legally binding ASEAN environmental agreements to be entered into force (ASEAN Secretariat, 2004). The Agreement's stated objective, under Article 2, is 'to prevent and monitor transboundary haze pollution as a result of land and/or forest fires which should be mitigated, through concerted national efforts and intensified regional and international cooperation' (ASEAN Secretariat, 2002).

However, up till late 2014, the ATHP remained ratified by only nine ASEAN states, with the Philippines being the ninth country to ratify in early 2010. Indonesia held off ratification till 16 September 2014. During this time, the effectiveness of the ATHP was severely crippled, in the following ways:

1. ASEAN-level initiatives have not been able to address sensitive issues like influencing Indonesian land and forest policy and the implementation of laws. Article 9 of the Agreement does call for the development of appropriate policies to curb activities that may lead to land and/or forest fires (ASEAN Secretariat, 2002), however this is only applicable to ratified states.
2. As part of the ATHP mechanism, if a serious forest fire was spotted by the ASMC, neighbouring states could activate fire-fighting services and move in, without having to write in to the receiving government to get diplomatic clearance for aircrafts and permission from local fire services for each new case (Khalik, 2006). However, this clause was only applicable if both countries have ratified the treaty.
3. Non-ratification has also delayed the establishment of the ACCH and its dedicated Secretariat, which was supposed to be for the purposes of facilitating cooperation and coordination among the parties in managing the impact of land and/or forest fires in particular haze pollution arising from such fires (ASEAN Secretariat, 2002). Currently, the ASEAN Secretariat in Jakarta, which acts as an interim coordination centre, is crippled by its limited staff and location far away from the fires.

The APMS was also designed to provide support to an earlier ASEAN project, the ASEAN Peatland Management Initiative 2002 (Ramirez, 2013). It was developed to provide a common framework for peatland management in the region in the period 2006–2020. There are four main objectives to the strategy, namely:

1. To enhance understanding and build capacity on peatland management issues in the region
2. To reduce the incidence of peatland fires and associated haze
3. To support national and local level implementation activities on peatland management and fire prevention
4. To develop a regional strategy and cooperation mechanisms to promote sustainable peatland management (ASEANpeat, 2016)

As part of the APMS, ASEAN Member Countries with significant peatlands are to develop complementary National Action Plans (NAPs) on Peatlands. The NAPs are to provide the respective countries with their national focus, and identify agencies involved, funds and requirements for implementing activities towards the sustainable management of peatlands (ASEANpeat, 2016). Currently, two projects are being implemented to support the implementation of regional and national strategies for sustainable management of peatlands in Southeast Asia and the incorporation of peatland management into policies and plans related to forest and land-related resources. These two complementing projects are the Rehabilitation and Sustainable Use of Peatland Forests in Southeast Asia (APFP Project) and the Sustainable Management of Peatland Forest in Southeast Asia (SEApeat Project) ([www.peat-portal.net](http://www.peat-portal.net)) (Ramirez, 2013).

### National responses

#### *Indonesia*

The guidelines provided by the APMS proved useful to Indonesia when it was able to submit its Nationally

Appropriate Mitigation Action (NAMA) plan on Sustainable Peatland Management to the United National Framework Convention on Climate Change (UNFCCC) in January 2010 (Thamrin, 2011). Thanks in part to this effort, Indonesia has managed to secure substantial international funding for national peatland management efforts, namely from the Global Environment Facility (GEF) Trust Fund (GEF Trust Fund, 2014) and from the Ministry of Environment, Japan in collaboration with the Global Environmental Centre (GEC). A feasibility study carried out after one year of the Japan-GEC collaborative project showed positive results, with a projection of 227,500t-CO<sub>2</sub>/yr GHG reduction estimation at the 10,000 hectare project site area (Motoda, 2010).

In terms of the ATHP, it was mentioned above that Indonesia delayed ratification of the ATHP for over a decade. Finally in September 2014, the outgoing President Susilo Bambang Yudhoyono announced Indonesia's ratification of the instrument as one of his final acts in office. Indonesia's ratification of this treaty was received with much fanfare by the other ASEAN countries, and marked renewed goodwill over collective action to mitigate haze.

### *Singapore*

Singapore on the other hand had a quite different set of responses to the ASEAN initiatives as compared to Indonesia. Singapore proposed to ASEAN the establishment of a HMS in 2013 to further operationalize the ATHP, especially in terms of the implementation of land and forest policies and laws. The HMS was conceptualised as a platform for open-access digitized land-use maps and concession maps of fire-prone areas that cause haze, to act as a deterrent to errant companies (National Environment Agency, 2014).

This was meant to complement another Singaporean initiative that was put into force the following year, which was the THP, which provides for criminal and civil liability for any Singaporean or non-Singaporean entity causing or contributing to transboundary haze pollution in Singapore (Parliament of Singapore, 2014). The THPB makes it a criminal offence when an entity engages in conduct, or authorizes any conduct which causes or contributes to haze in Singapore. A penalty of up to SGD300,000 can be imposed, and this may be increased up to SGD450,000 if the entity has deliberately ignored requests by authorities to take appropriate action to prevent, reduce, or control the pollution. Affected parties may also bring civil suits against errant entities (Parliament of Singapore, 2014). The Bill is unique for its application of extra-territoriality; it covers the operations of all Singapore and non-Singapore entities whose activities outside of Singapore contribute to haze pollution in the city-state. Since proving what happens abroad is difficult, evidential presumptions relating to causation (linking open burning elsewhere and wind direction with the presence of haze in Singapore) and culpability (based on ownership and occupation of land) help to give teeth to this Bill.

## **DISCUSSION**

### *Indonesia*

In terms of peatland management in particular, it was hoped that the ratification of the ATHP would mean that there could be more candid and open discussion and consultation at the ASEAN level over the previously deemed 'too sensitive' issues of land policy, peatland in particular. However, ratification does not mean that the earlier three limitations mentioned in the previous section will automatically be resolved. Out of the three points, the one with the most positive outlook is the final one, on the ACCH. Hope for the first two, including that pertaining to peatland policy, may be overstated. This is because, in the nature of other ASEAN agreements, the ATHP was also vague and lacking in various hard-law instruments such as strong dispute-resolution or enforcement mechanisms (Nguitragool, 2011, p. 357), or any provisions for dispute settlements through international courts or other arbitration tribunals (Tan, 2005, p. 664). This means that Indonesia still cannot be called to task if they should refuse to cooperate on these two points, despite ratification. Indeed, none of the ASEAN countries did so during the recent 2015 haze episode.

However, there is much hope for the third point on the ACCH. Shortly after Indonesia's ratification, ASEAN Environmental Ministers renewed discussions for the establishment of the ACCH in Riau (ASEAN Secretariat, 2015). The centre's new location in Riau is hoped to fuel more awareness and ownership of the fire problem in the Riau administration, in addition to coordinating information and cooperation efforts around the region (ASEAN Secretariat, 2002). This dedicated ACCH in Riau should be better able to:

1. Establish and maintain regular contact with the respective National Monitoring Centres regarding the data, including those derived from satellite imagery and meteorological observation, relating to land and/or forest fire, environmental conditions conducive to such fires; and air quality and levels of pollution, in particular haze arising from such fires;

2. Facilitate co-operation and co-ordination among the Parties to increase their preparedness for and to respond to land and/or forest fires or haze pollution arising from such fires;
3. Facilitate co-ordination among the Parties, other States and relevant organizations in taking effective measures to mitigate the impact of land and/or forest fires or haze pollution arising from such fires; and
4. Respond to a request for or offer of assistance in the event of land and/or forest fires or haze pollution resulting from such fires by transmitting promptly the request for assistance to other States and organizations; and co-ordinating such assistance, if so requested by the requesting Party or offered by the assisting Party (ASEAN Secretariat, 2002).

### *Singapore*

Even though ASEAN formally adopted Singapore's HMS idea at the 14<sup>th</sup> Sub-Regional Ministerial Steering Committee on Haze (National Environment Agency, 2014), this was not without significant watering-down, as is the fate of many ASEAN agreements. Indonesia (and Malaysia as well) cited privacy and legal concerns of making maps publicly accessible. Indonesia also argued that its own One Map Initiative was underway, so there was no need for this additional platform which would essentially serve the same purpose. With these reservations, ASEAN adopted the HMS with maps to be shared on an ad-hoc, government-to-government basis only, much to Singapore's disappointment.

Singapore, as well as other ASEAN observers, expressed concern that this lack of transparency severely damaged the credibility of this system, and other actors not privy to the maps will continue to view the HMS, and by extension the governments with suspicion. And while it is exemplary that Indonesia is taking unilateral effort with the One Map Initiative, problems related to its decentralization process (Austrin, Alisjahbana, & Darusman, 2014), where local governments can now apply to change forest classification areas every five years, has meant that forest classifications are changing at a much more rapid rate, often faster than maps can be updated. This has drastically slowed down the One Map Initiative.

The TPHPB importantly allows for reliance on satellite imagery, meteorological information, and maps as evidence (Chua & Ee, 2014). This was why Singapore placed high hopes on the HMS to provide accurate land maps, so that Singaporean prosecutors can correctly assign blame. Furthermore, such maps can also be used by companies to defend itself by proving the fires were caused by natural disaster or by parties not under its direction. However, the watering down of the HMS and the repeated delay of Indonesia's One Map Initiative makes identifying errant companies problematic. Because of this, Singapore's National Environment Agency (NEA) would need to work closely with their counterparts in Indonesia to build a case against these companies (Tay & Chua, 2014). However, Indonesia has thus far shown a weak track record; clearing land through burning is prohibited in Indonesia but authorities have so far only successfully prosecuted a handful of companies for starting such fires. Hence, the effectiveness of the TPHPB as a plausible tool to mitigate peatfires and haze remains to be seen.

Following the haze episode in 2015, Singapore's NEA requested information from the Indonesian government to provide details of companies it suspects of causing haze pollution. Following this, the NEA has sent Preventive Measure Notices to four Indonesian companies pursuant to Section 9 of the TPHPB, requesting them to:

1. deploy fire-fighting personnel to extinguish or prevent the spread of any fire on land owned or occupied by them
2. discontinue, or not commence, any burning activities on such land
3. submit to NEA any plan of action to extinguish any fire on such land or to prevent its recurrence (MEWR, 2015)

The information provided by these companies are hoped to assist the NEA in its investigations under the TPHPB. However, it is obvious that the effectiveness of the Bill is reliant on the cooperation of the alleged perpetrator, as a result from the watering down of the HMS mechanism.

## **CONCLUSION**

In 2014, the author attended a NGO Roundtable on Environment, Sustainability and Climate Change, where discussants pointed out that a common weakness in a lot of the ASEAN initiatives on peatfires and haze is that while many initiatives like the AHP and HMS is useful to be applied when the fires occur, they were not preventive in nature. The discussants noted that it was important for the haze to be framed as not merely a fire problem, but more broadly as a land use issue, and specifically as a peatland management issue. When peatland disturbances occur, fires, whether accidental or intentional, will become more likely.

While initiatives like the APMS can be considered more preventive, usually these types of initiatives are not given as much attention or importance, either from the government or even the media, as compared to the more reactive ones as discussed above. A good example is the fanfare involved around Indonesia's long-awaited ratification of the ATHP, while the peatland management projects ongoing under the APMS remain relatively unknown in ASEAN circles. Furthermore, for such preventive measures, participating countries often rely on external assistance as seen above, and are often not proactively involved in the preventive action. This becomes a problem when fire and haze events actually do occur, where governments are suddenly thrust into action in unfamiliar (peat)soil.

Indonesia has announced that it needs at least another three years before a marked reduction of haze episodes. Indonesia's three-year timeline does still fall within the timeframe of the APMS, which ends in 2020. Herein lies an opportunity for Indonesia, under the fresh leadership of Joko Widodo, to change the country's hitherto reactive approach to peatfire and haze management to a more preventive approach, as outlined in the APMS. The APMS should be a useful tool to inform developments of Indonesia's fire and peatland management policy in the years to come, not only for Indonesia, but for the region as a whole.

## ACKNOWLEDGEMENT

The author would like to acknowledge the Singapore Institute of International Affairs, the Habibie Centre in Jakarta and ISEAS-Yusof Ishak Institute in Singapore for hosting various dialogue sessions that enabled me to engage with other scholars in the field to gain a better understanding of current issues, and also as a platform for feedback and critique of my ideas for this article

## REFERENCES

- ASEAN Secretariat. (2002). *ASEAN Agreement on Transboundary Haze Pollution* Kuala Lumpur.
- ASEAN Secretariat. (2004). *4: Transnational Issues*. Paper presented at the ASEAN Annual Report.
- ASEAN Secretariat. (2015). *Declaration on ASEAN Post-2015 Environmental Sustainability and Climate Change Agenda*. Kuala Lumpur.
- ASEANpeat. (2016). Regional Policy Framework. *Peatlands in Southeast Asia*. Retrieved from <http://www.aseanpeat.net/index.cfm?&menuid=42>
- Austrin, K., Alisjahbana, A., & Darusman, T. (2014). *Indonesia's Forst Moratorium: Impacts and Next Steps*. Retrieved from
- Chua, G., & Ee, D. (2014, 21 February). Govt seeks feedback on law on haze. *The Straits Times*.
- Florano, E. R. (2003). Assesment of the "Strengths" of the New ASEAN Agreement on Transboundary Haze Pollution. *International Review for Environmental Strategies*, 4(1), 127-147.
- GEF Trust Fund. (2014). *Project Identification Form (PIF)*.
- Khalik, A. (2006, 14 October 2006). ASEAN ups pressure on haze as lawmakers bicker. *Jakarta Post*.
- MEWR. (2015). Singapore send notices to four Indonesian companies and seeks information from Singapore-Listed APP [Press release]
- Motoda, T. (2010). *MOEJ/GEC Feasibility Study (FS) Programme for New Mechanisms*. Retrieved from Japan:
- NASA. (2015). Smoke Blankets Indonesia. *Image of the Day*. Retrieved from <http://earthobservatory.nasa.gov/IOTD/view.php?id=86681>
- National Environment Agency. (2014). *Factsheet on Transboundary Haze Pollution*. Singapore.
- Nguitragool, P. (2011). Negotiating the Haze Treaty. *Asian Survey*, 51(2), 356-378.
- Parliament of Singapore. (2014). *Transboundary Haze Pollution Bill No. 18/2014*.
- Ramirez, N. E. (2013). ASEAN Peatlands Management Strategy 2006-2020: Promoting sustainable management of peatlands in Southeast Asia. *ASEAN Biodiversity*(January-April), 14-16.
- Reddington, C. L., Yoshioka, M., Balasubramanian, R., Ridley, D., Toh, Y. Y., Arnold, S. R., & Spracklen, D. V. (2014). Contribution of vegetation and peat fires to particulate air pollution in Southeast Asia. *Environmental Research Letters*, 9(9), 094006. Retrieved from <http://stacks.iop.org/1748-9326/9/i=9/a=094006>
- Tan, A. K. (2005). The ASEAN Agreement on Transboundary Haze Pollution: Prospects for Compliance and Effectiveness in Post-Suharto Indonesia. *N.Y.U. Environmental Law Journal*, 13, 647-722.
- Tay, S., & Chua, C. W. (2014, 21 February). To end the haze problem, both penalties and cooperation are needed. *TODAY*.
- Thamrin, S. (2011). *Indonesia's National Mitigation Actions: Paving the Way towards NAMAs*. Paper presented at the CCXG/Global Forum on Environment Seminar on MRV and Carbon Markets, Paris.