

Complaint to SUHAKAM

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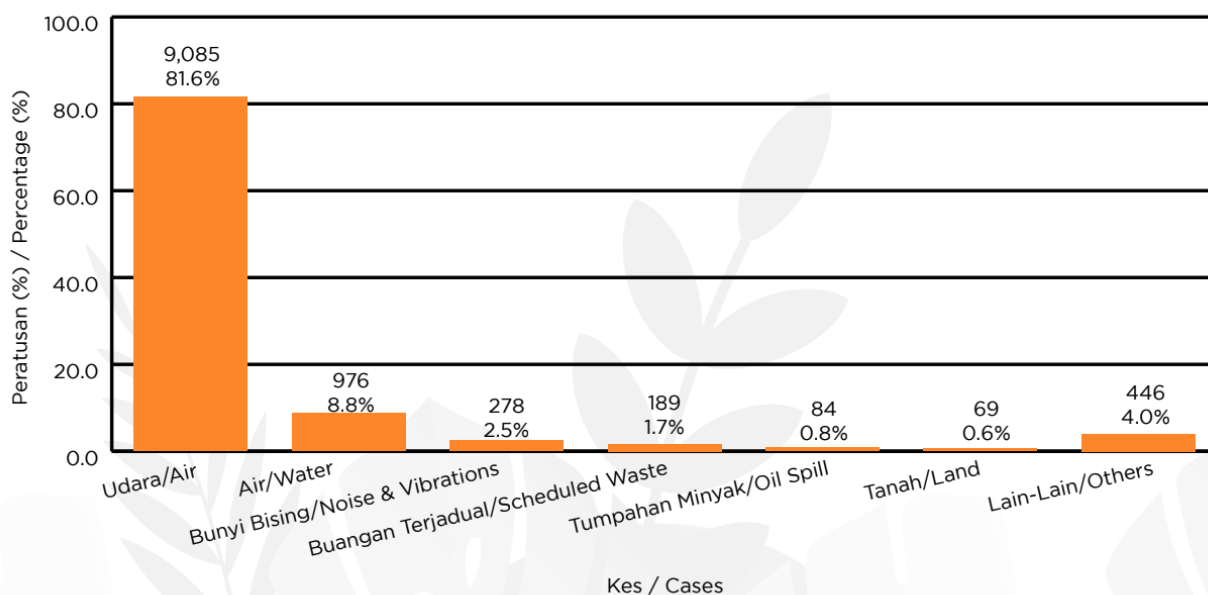
1. Who we are

This Complaint is brought by CERAH, Greenpeace Malaysia and a coalition of CSOs and NGOs listed in **Appendix A**.

CERAH is a civil society organisation that was formed in 2015 when a group of individuals came together in response to the chronic and persistent haze pollution. Our numbers have grown with each “haze episode”. We speak up on behalf of members of the public in Malaysia and call for systemic solutions to overcome haze pollution and protect our right to clean air. We are in the midst of registering our group as a society with the Registrar of Societies.¹

2. Executive Summary

Of all the types of complaints regarding environmental pollution received by the Department of Environment, the single most dominant type is air pollution, making up more than 81% of the total complaints received in 2019.² Indeed, the average ambient (outdoor) air quality in Malaysia has consistently fallen below the air quality standard prescribed by the World Health Organisation.³



Rajah 4.21: Bilangan Kes Aduan Mengikut Jenis, 2019
Figure 4.21: Number of Complaint Cases by Types, 2019

(Source: Department of Environment Annual Report, 2019)

¹ Our pro-tem committee members are: Dennis Chan Fong Hoong (President), Dr. Helena Varkkey (Vice-President), Tang Kok Keng (Treasurer), Kiu Jia Yaw (Secretary), Chloe Yiin Ker Li (Assistant Secretary), Azira Binti Aziz and Heng Kiah Chun.

² Department of Environment Annual Report 2019, figure 4.21.

³ [UNICEF Report on the Impacts of Climate Change on Children: A Malaysian Perspective](#), p. 10. Major emission loads of air pollutants come from power stations and motor vehicles.

Among the various causes of air pollution, haze pollution is a major issue that affects air quality in Malaysia.⁴ Haze pollution is primarily a man-made problem, coming from domestic as well as transboundary sources, involving state and non-state actors.⁵

Haze pollution has plagued us for decades, with the most recent severe haze episode taking place in 2019. In **Section 3**, we will identify the main causes of haze pollution and the factors that allow for this stubborn problem to persist.

We must consider the harm that the next episodes of haze pollution will bring when we are still grappling with the Covid-19 pandemic and the economic devastation it has brought. The pandemic has massively depleted our government's resources⁶ and will continue to place immense pressure on our healthcare system in the foreseeable future.⁷ Researchers have identified links between the emissions from forest and peatland fires (particulate matter PM2.5, carbon monoxide and ozone) with increases in Covid-19 infections and deaths.⁸ In **Section 4**, we will set out the far-reaching impacts of haze pollution.

Haze pollution is largely the outcome of unsustainable approaches to development and agricultural activities. Research has shown that this man-made, regional-scale pollution can play out yearly with impunity largely because of vested interests of government elites in companies that contribute to haze pollution.⁹ In **Section 5**, we identify the gaps in the domestic and regional legal framework to protect environmental rights and fight haze pollution.

Experts have long expressed concern that our general laws and regulations and systems of governance are profoundly inadequate to address the threats of environmental degradation and the urgency of the climate crisis, among others.

It is in this context that we respectfully ask SUHAKAM to examine existing Malaysian (and, if appropriate, regional) legislation, regulations and rules of civil and/or criminal procedure, and to advise and make recommendations on ways to strengthen and protect people's human rights to a safe, clean, healthy and sustainable environment. We must reform our systems and institutions to better uphold the Polluter Pays Principle, No-Harm Principle and Precautionary Principle.

We set out some of our suggestions for findings and recommendations in **Section 6**.

We must ensure that our government and businesses build back better, embracing a rights-based approach for a sustainable and resilient recovery from the pandemic. Business as usual can lead to our healthcare system and economy buckling under the dangerous combination of haze pollution and Covid-19 and its variants, with unimaginable consequences to human lives, quality of life and the sustainability of the ecosystem on which we depend.

⁴ Academy of Sciences Malaysia, 'ASM Local & Transboundary Haze Study' (2018), p. 90.

⁵ Ibid. (n 4), pp. 24 and 90.

⁶ Kamarul Azhar et. al., The Edge Malaysia, '[Cover Story: Budgeting for economic recovery, building resilience and enacting reforms](#)' (4 November 2021).

⁷ Radzi Razak, Malay Mail, '[Budget 2022 to set Malaysia on path to post-pandemic recovery, biggest allocation for education and health](#)' (29 October 2021).

⁸ Meo S. A., Abukhalaf A. A., Alomar A. A., et al., '[Effect of environmental pollutants PM-2.5, carbon monoxide, and ozone on the incidence and mortality of SARS-COV-2 infection in ten wildfire affected counties in California](#)', Science of the Total Environment (2021) 757, 143948. This will be discussed further in Section 4.2.

⁹ Varkkey H., '[Malaysian investors in the Indonesian oil palm plantation sector: home state facilitation and transboundary haze](#)', *Asia Pacific Business Review* 19:3, (2013) (<https://doi.org/10.1080/13602381.2012.748262>).

3. Causes of Haze Pollution

In this section, we will refer to the main causes of haze pollution in order to provide some context on the roles of state and private sector actors in this problem.

While we are concerned about all types of pollution that affect air quality, for the purposes of this Complaint, our focus is on haze pollution. Haze pollution is something that the Department of Environment refers to as the prevalence of fine particulate matter that is suspended in the atmosphere in unhealthy concentrations.¹⁰

Due to the fluid movement of air and air pollutants, our assessment of the sources of haze pollution and the human activities that cause them cannot be confined by territorial limits.

It must be noted that the usage of the word “haze” to describe pollution by particulate matter is unique to the Southeast Asian region. The leaders of ASEAN (Association of Southeast Asian Nations) have consciously chosen this innocuous word to give the (wrong) impression that it is a natural phenomenon and downplay its serious harm.¹¹

3.1 Sources

The sources of haze pollution in Southeast Asia can be broadly categorised into two:¹²

- (a) land use change, particularly the use of fires to clear land for agricultural purposes, and
- (b) non-agricultural sources.

Non-agricultural sources of haze include transportation, industrial and biomass burning.¹³

Of particular concern is the shocking discovery of large quantities of illegally imported plastic waste finding its way into various towns in Malaysia and being disposed of through open burning and illegal dumping, as reported by the Center to Combat Corruption and Cronyism (C4 Center).¹⁴

The anatomy of the scandal reveals, among many other things, deep weaknesses in our air quality governance framework as local residents have had to endure polluted air without access to remedy, without access to information into the causes of the pollution, and face criminal intimidation when they sought to find out on their own.

We have compiled some testimonies about air pollution from imported plastic waste from local residents in Kuala Langat, Selangor in **Appendix B**, and testimonies from local residents in Sungai Petani, Kedah in **Appendix C**.

¹⁰ To paraphrase from an [information pamphlet](#) produced by the Department of Environment.

¹¹ Academy of Sciences Malaysia (n 4), pp. 24 and 90.

¹² Ibid. (n.4), p. 28.

¹³ Ibid. (n.4), p. 29.

¹⁴ Center to Combat Corruption and Cronyism’s [imported plastic waste project page](#), and the [C4 Centre Special Report, Wong Pui Yi, “Malaysia is not a Garbage Dump: Citizens against corruption, complacency, crime and climate crisis” \(2021\)](#)

3.2 Agriculture and Peatlands

Turning to land use and agricultural sources, research shows that, historically, both smallholders and large-scale plantations use fire as a way for clearing land.¹⁵ This applies to vegetable farmers, palm oil and pulp plantations in both Malaysia and Indonesia.¹⁶

An example of local farmers engaging in open burning, causing residents living kilometers away to suffer greatly, can be seen in Dr. Lim Teckwyn (PhD)'s testimony about the persistent peat fires in Johan Setia, Klang, in **Appendix D**.

The Academy of Sciences Malaysia observed that the “rapid expansion of oil palm plantations in Indonesia and Malaysia increase[d] demand for large land areas which include not only natural tropical forests but also peatland forests. Research has shown that fires in the peat swamp forest zone produce a disproportionately large amount of smoke and haze per hectare burnt.”¹⁷

Peatlands are natural wetland ecosystems where organic matter accumulates to form thick layers up to 20m thick. In their natural condition they rarely burn, but after drainage they are highly prone to fires. Most agriculture and other use of peatlands require drainage. However, deep drainage canals increase flammability up to many kilometres away.¹⁸ See Figure 1 for a map of peatlands in Southeast Asia.

An Aidenvironment study in June 2014 commissioned by Sahabat Alam Malaysia identified 50 separate Malaysian company groups that acquired over 200 plantation estate companies holding some form of legal rights over a total overseas oil palm plantation land bank of almost 3.5 million hectares in total (figures for 2013). The dominant recipient of Malaysian foreign direct investment (“FDI”) in oil palm land bank was Indonesia (with 52% of all Malaysian overseas FDI), representing 1,802,000 hectares.¹⁹ It estimated that approximately 60% of Malaysian land bank in Indonesia was planted up.²⁰ The study looked at the sustainability concerns and social and environmental injustices associated with Malaysian overseas FDI. It concluded with the emphasis that in order to address the negative impacts of overseas

¹⁵ Applegate, G.B., Chokkalingam, U., et. al., ‘The underlying causes and impacts of fires in Southeast Asia’ Final Report (2001) Center for International Forestry Research, International Centre for Research in Agroforestry, United States Forest Service, Bogor, Indonesia, p. 58 (<https://www.cifor.org/knowledge/publication/4626/>); Suyanto, S., Applegate, G., et. al., ‘[Community-based fire management, land tenure and conflict: insights from Sumatra, Indonesia](#)’ in Moore, P., et al. (Eds.), *Communities in Flames*, Proceedings of an International Conference on Community Involvement in Fire Management. Food and Agriculture Organization of the United Nations, Regional Office for Asia and the Pacific, Bangkok, Thailand (L2002), pp. 27–32; Varkkey, H. ‘ASEAN as a ‘Thin’ Community: The case against adopting the EU Acid Rain Framework for transboundary haze management in Southeast Asia’ . *Jebat: Malaysian Journal of History, Politics & Strategic Studies* (2011) Vol. 38 (2), 1-26 ([ASEAN AS A 'THIN' COMMUNITY](#)); Varkkey, H. ‘[Plantation Land Management, Fires and Haze in Southeast Asia](#)’ *Malaysian Journal of Environmental Management* (2011) 12(2): 33-41; and Varkkey, H. ‘[Patronage politics, plantation fires and transboundary haze](#)’ *Environmental Hazards* (2013) 12

¹⁶ Gaveau, D. L. A., Sloan, et. al., ‘[Four Decades of Forest Persistence, Clearance and Logging on Borneo](#)’, *PLoS ONE* (2014a) Vol. 9, No.7, e101654

¹⁷ Academy of Sciences Malaysia (n 4), p. 29.

¹⁸ K. Konecny et al., ‘Variable carbon losses from recurrent fires in drained tropical peatlands’, *Glob. Chan. Biol.*, 22(4), 1469-1480 (2016)

¹⁹ Aidenvironment (commissioned by Sahabat Alam Malaysia), ‘[Malaysian Overseas Foreign Direct Investment in oil palm land bank](#)’, (June 2014), pp. 9-10.

²⁰ *Ibid.* (n 20), p. 11

investment, stakeholders must first have access to reliable information about the companies operating overseas.²¹

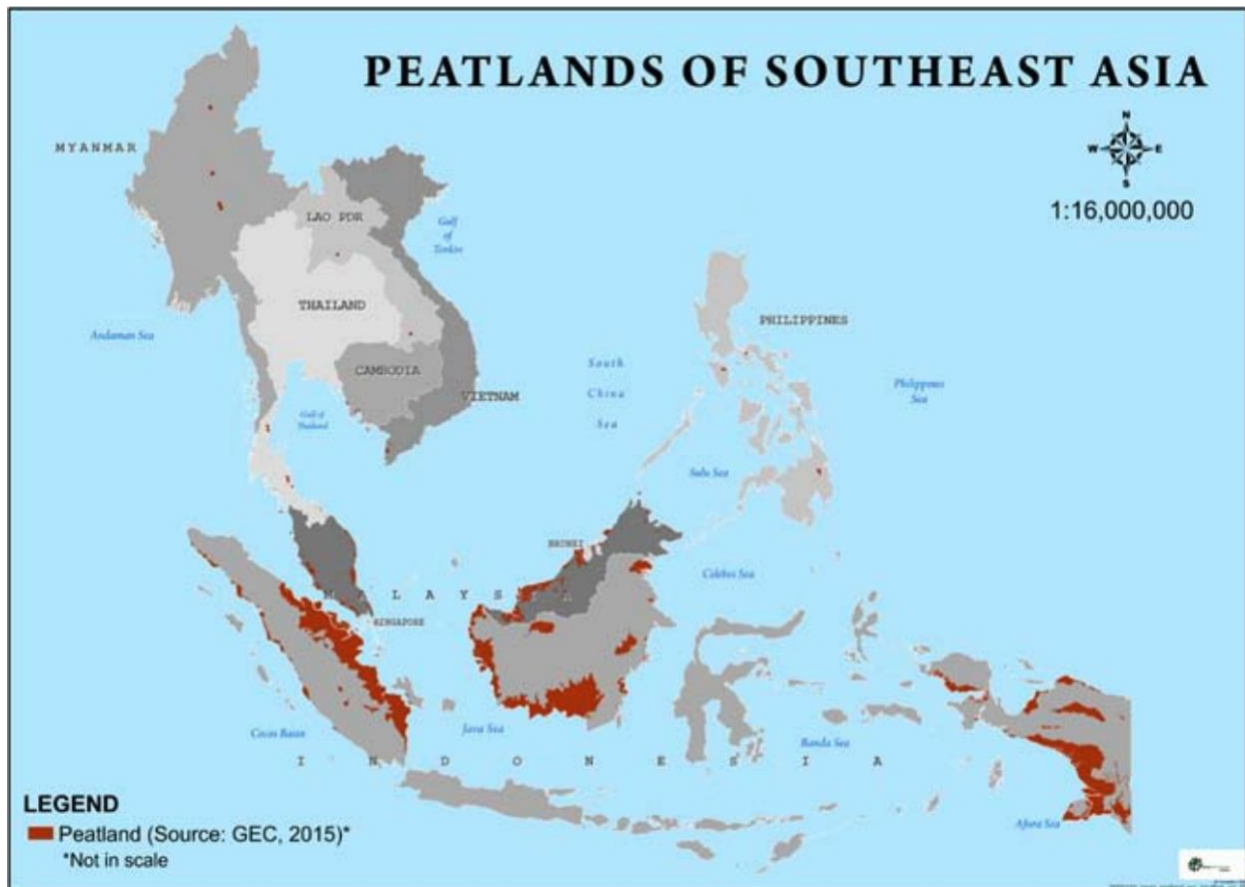


Figure 1: Map of peatlands in Southeast Asia. (Source: Global Environment Centre, 2015²²)

Globally, many large agroindustrial companies have now pledged to rid their palm oil and pulpwood supply chains from deforestation and fire. In Southeast Asia, despite these private sector commitments and national laws restricting the use of fire, peatlands and natural forests burn every year.²³

An example of ‘subsidiaries’ of Malaysian companies operating in Indonesia being accused of having fires on their plantations surfaced on 12 September 2019.²⁴ The Environment Minister of Indonesia identified the subsidiaries as Sime Indo Agro, a unit of Sime Darby Plantation; Sukses Karya Sawit, a unit of IOI Corporation; Rafi Kamajaya Abadi, a unit of TDM Berhad; and PT Adei Plantation and Industry, a unit of Kuala Lumpur Kepong Group.²⁵

²¹ Ibid. (n 20), p. 3. The study does commend Bursa Malaysia and the Roundtable on Sustainable Palm Oil for ensuring that their members provide some information.

²² [‘Executive Summary of the Final Review of the ASEAN Peatland Management Strategy 2006-2020’](#), The ASEAN Secretariat (2021).

²³ Gaveau D.L.A., et. al., [‘Overlapping land claims limit the use of satellites to monitor No-Deforestation Commitments and No-Burning compliance’](#), Conservation Letters, May 2016, 0(0), 1-8, p. 1.

²⁴ Reuters, [‘Indonesia says some forest fires started on Malaysian-controlled land’](#), (13 September 2019).

²⁵ Out of the four companies, only PT Adei Plantation and Industry has been [convicted and fined](#) (12 November 2020). We are unaware of the outcomes of the accusations against the other three.

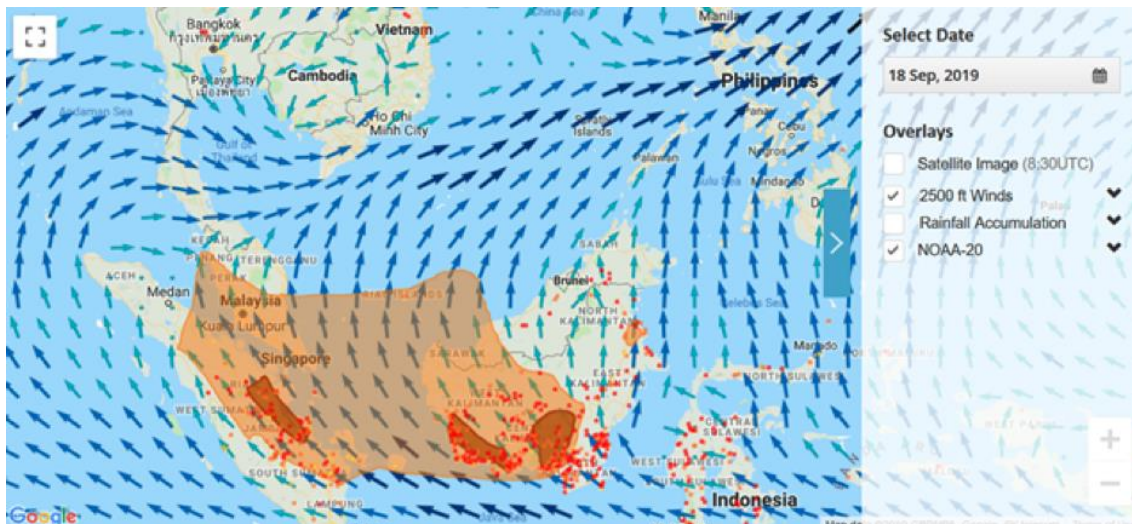


Figure 2: Map of hotspots in the Southeast Asia region on 18 September 2019, overlaid with wind conditions (Source: ASEAN Specialised Meteorological Centre)

3.3 Meteorological Factors

The Academy of Sciences Malaysia, in its 2018 study on haze pollution, explained how weather patterns, including the El Nino phenomenon can create very suitable conditions for large-scale fire outbreaks in various parts of Indonesia and Malaysia.²⁶

*“However, these conditions do not start the fires; they merely provide a suitable environment for the fires to flourish, once lit. It also provides a suitable environment to facilitate the transboundary transmission of the smoke.”*²⁷ It is clear that fires are primarily associated with human-related activities in the agriculture, forestry and plantation sectors.²⁸

3.4 Factors that Allow Haze Pollution to Persist

Various factors, all relating to the lack of transparency, make it extremely challenging to identify the contribution of the relevant parties to forest and plantation fires.

Researchers have identified many causes and motivations behind the use of fires in Indonesian peatland concessions.²⁹ They observe that unplanted peatlands are the target of fires, indicating that the common assumption that fires are used to clear unused land before planting appears to be confirmed.³⁰ They find a mismatch between *de jure* and *de facto* land occupancy inside and outside concessions. Migrant and local communities (referred to as independent farmers) who are not legally supposed to occupy concession lands are found in most concessions.³¹

²⁶ Academy of Sciences Malaysia (n 4), p. 30.

²⁷ Ibid. (n 4).

²⁸ Field, RD, van der Werf, GR & Shen SP, ‘Human amplification of drought-induced biomass burning in Indonesia since 1960s’, Nat Geosci (2009) Vol. 2, pp. 185-188.

²⁹ Gaveau D.L.A. et al., (n 23) p. 2.

³⁰ Ibid. (n 23), p. 3.

³¹ Ibid. (n 23), pp. 3-4.

On the other hand, while companies cannot legally operate outside their concessions, their presence has been significantly detected outside concession boundaries.³² “In Indonesia, land use and tenure in remote frontier areas are governed by a tangle of national, provincial, and customary laws that often compete and overlap with each other, resulting in confusion over who owns what, and in disputes over land control.”³³ Gaveau et al. conclude that “extensive field checks of millions of land parcels” identified from satellite imagery (where fires occur) are necessary to identify the *de facto* situation on the ground. But this will require enhanced cooperation of the businesses with public administrators and civil society.³⁴

Another obstacle to accountability is the difficulty in accessing maps and information regarding cultivation rights titles (known as “HGU”) in Indonesia. Civil society groups have long been trying to bring greater transparency to the country’s agricultural industry.³⁵ The Indonesian government has been resisting such calls on the grounds of national security even when ordered to release such information by the State Administration Court in March 2020, the last avenue of appeal.³⁶

It is also an uphill task to unmask corporate interest.³⁷ Against victims of haze pollution, legal responsibility for forest and plantation fires within one’s supply chain (usually in the law of torts) can be trounced by the independent contractor argument. Generally, “an employer who employs an independent contractor is not vicariously responsible for the negligence of that contractor. He is not able to control the way in which the independent contractor does the work, and the vicarious obligation of a master for the negligence of his servant does not arise under the relationship of employer and independent contractor.”³⁸

Against regulators and auditors, corporate ownership and control over ostensibly independent companies can easily be hidden through holding companies and nominees. This is explored in ‘Removing the Corporate Mask’, an assessment report of the ownership and management structures of Asia Pulp & Paper’s declared wood suppliers in Indonesia.³⁹ In respect of the palm oil industry, Chain Reaction Research, in a 2018 report, revealed how shadow companies present palm oil investor risks and undermine efforts to end deforestation, development on peatlands and exploitation of local communities.⁴⁰

Lastly, an often overlooked factor is the vested interests of government elites in the large Malaysian businesses that contribute to transboundary haze pollution.⁴¹ The Malaysian palm oil plantation sector consists mainly of government-linked companies or private companies with close association with the

³² Ibid. (n 23), p. 4.

³³ Ibid. (n 23), p. 5.

³⁴ Ibid. (n 23), pp. 5-6.

³⁵ B. Suwastoyo, [‘Indonesia’s One Map Policy and the palm oil business’](#), The Palm Scribe (28 September 2017).

³⁶ H. N. Jong, [‘Final court ruling orders Indonesian government to publish plantation data’](#), Mongabay (10 June 2021).

³⁷ The stakeholders who may be interested in identifying business links with forest fires include law enforcement officers, regulators, industry auditors, NGOs, civil society groups, haze pollution victims and human rights abuse victims.

³⁸ Per Widgery LJ in *Salsbury v. Woodland* [1970] 1 QB 324 (at pp. 336-337), cited with approval by the Court of Appeal in *MTD Prime Sdn. Bhd. v. See Hwee Keong & Ors* [2016] 8 CLJ 623.

³⁹ Koalisi Anti Mafia Hutan et al., [‘Removing The Corporate Mask’](#) (2018).

⁴⁰ Chain Reaction Research, [‘Shadow Companies Present Palm Oil Investor Risks and Undermine NDPE Efforts’](#), 21 June 2018.

⁴¹ Varkkey H., (n 9).

Government of Malaysia.⁴² Leadership in these companies have been awarded to politically well-connected elites.⁴³

Research has shown a pattern of the Government of Malaysia downplaying and even obscuring the role and complicity of Malaysian agricultural businesses in the haze crisis.⁴⁴ Likewise, the Government of Malaysia has also actively downplayed the health effects of the toxic haze and broader impacts of haze pollution, warning media agencies and academicians against discussing them.⁴⁵ This led to wide self-censorship,⁴⁶ which in turn led to a distorted and uncritical perception of the haze problem.

4. Impacts of Haze Pollution

The impacts set out below are by no means exhaustive as any study or research on the extent of haze pollution is always subject to technological limitations and varying degrees of scientific certainty. That said, and as will be seen below, we have sought to provide a snapshot of the available literature and evidence on the impacts of haze pollution.

Where there appears to be limited or lack of direct evidence, the Precautionary Principle should be applied - in that the insufficiency or unavailability of direct evidence, does not in any way mean that haze pollution does not impact life, the economy or the environment.⁴⁷ Importantly, the principle also states that in the case of serious or irreversible threats to human health or the ecosystem, acknowledged scientific uncertainty should not be used as a reason to postpone preventive measures.⁴⁸ The Precautionary Principle is a guiding principle in the implementation of the 2002 ASEAN Agreement on Transboundary Haze Pollution.⁴⁹

4.1 Public Health Impacts

Exposure to any air pollution (not just haze) impacts health, particularly the health of the elderly, children (see Sub-section 4.3 below) and individuals already suffering from some form of respiratory disease (e.g., asthma). The World Health Organisation (WHO) estimates that 7 million deaths worldwide every year can be attributed to air pollution. Of these, 4.2 million have been attributed to the effects of ambient (outdoor) air pollution, largely as a result of increased mortality from stroke, heart disease, chronic obstructive pulmonary disease, lung cancer and acute respiratory infections.⁵⁰ It is likely that such estimates are conservative figures as many diseases and air pollutants are not included in

⁴² Ibid. (n 9), pp. 386-387.

⁴³ Ibid. (n 9).

⁴⁴ Ibid. (n 9), pp. 390-391.

⁴⁵ Ibid. (n 9), pp. 391-392.

⁴⁶ Ibid. (n 9).

⁴⁷ Also, the dearth of published analysis and research into impacts may be due to the pressures exerted by the patronage systems discussed in Sub-section 3.4.

⁴⁸ Martuzzi M. and Tickner J. A. (editors), [‘The precautionary principle: protecting public health, the environment and the future of our children’](#) WHO (2004) (ISBN 92 890 1098 3), p. 1.

⁴⁹ Article 3.3 of the [ASEAN Agreement on Transboundary Haze Pollution](#) 2002.

⁵⁰ WHO [Air pollution](#) (accessed on 17 November 2021); See also [Haze deaths rise as air pollution increases](#), Malaysiakini, 23 June 2013.

assessments if there is not yet sufficient evidence to quantify their effects. Other assessments of the global burden of mortality related to ambient air pollution alone suggest between 4 million and 9 million deaths annually. Air pollution also increases the incidence of ill health and hundreds of millions of years of healthy life are lost as a consequence of air pollution each year.⁵¹

Specifically, studies conducted in countries affected by transboundary haze indicate “consistent links between haze exposure and acute psychological, respiratory, cardiovascular, and neurological morbidity and mortality.”⁵²

In Malaysia, diseases of the respiratory system were the 4th principal cause of hospitalisation in 2008 but rose to be the 2nd principal cause of hospitalisation and the 2nd principal cause of death in 2011.⁵³ In 2018, diseases of the respiratory system was again the 2nd principal cause of hospitalisation in government hospitals, and the top principal cause of hospitalisation in private hospitals.⁵⁴

A 2014 study of daily mortality data from the Klang Valley from 1st January 2000 to 31st December 2007 found that haze events were significantly associated with immediate and delayed effects on natural and respiratory mortality.⁵⁵ A 19.1% and 34% increase in respiratory mortality occurred for Klang Valley residents of all ages during haze events as opposed to non-haze days.

Of particular concern are the following:⁵⁶

- 41.4% increase in the natural mortality⁵⁷ of children after two days’ exposure to haze;
- 41% increase in risk of respiratory mortality⁵⁸ due to immediate haze exposure amongst males who were above 60 years old;
- 66% increase in mortality due to respiratory causes (5 days after exposure to haze) among adult females between 15 and 59 years old.

Particularly alarming is that the cumulative cases for asthma, conjunctivitis and URTI (upper respiratory tract infections) between July and September 2019 reported from 33 affected sentinel clinics in Malaysia were 126,082.⁵⁹

⁵¹ WHO [global air quality guidelines: particulate matter \(PM2.5 and PM10\), ozone, nitrogen dioxide, sulfur dioxide and carbon monoxide](https://apps.who.int/iris/bitstream/handle/10665/345329/9789240034228-eng.pdf) (<https://apps.who.int/iris/bitstream/handle/10665/345329/9789240034228-eng.pdf>); see also GBD 2019 Risk Factors Collaborators [Global burden of 87 risk factors in 204 countries and territories, 1990–2019: a systematic analysis for the Global Burden of Disease Study 2019](#) Lancet (2020); Burnett R, Chen H, Szyszkwicz M, Fann N, Hubbell B, Pope CA III et al., [Global estimates of mortality associated with long-term exposure to outdoor fine particulate matter](#) Proc Natl Acad Sci U S A (2018).

⁵² Kang H. C., et. al., [‘Acute Health Impacts of the Southeast Asian Transboundary Haze Problem—A Review’](#), Int. J. Environ. Res. Public Health (2019), 16, 3286.

⁵³ See Ministry of Health (MOH) Health Facts for the years 2008 and 2011 (published in 2012) [Portal Rasmi Kementerian Kesihatan Malaysia](#).

⁵⁴ Department of Statistics Malaysia, Health Statistics for 2018, see Tab 4 ([Department of Statistics Malaysia Official Portal](#)).

⁵⁵ Sahani M., et. al., [‘A case-crossover analysis of forest fire haze events and mortality in Malaysia’](#) Atmospheric Environment 96 (2014) 257.

⁵⁶ Ibid. (n 55), p. 261.

⁵⁷ ‘Natural mortality’ means mortalities from all natural causes, excluding those from accidental causes, acute and poisoning, homicide and suicide.

⁵⁸ ‘Respiratory mortality’ means mortalities resulting from respiratory diseases.

⁵⁹ MOH Annual Report 2019, p. 77.

Continuous exposure to haze pollution, which are made up of dust and smoke particles (fine and/or ultra-fine particulate matter) can increase incidents of skin irritations and cause other skin conditions like eczema. Haze pollution can also cause irritations of the eye, nose and throat.⁶⁰

A study⁶¹ on the impact of the 2015 haze episode in this region found that 69 million people (or 24% of the combined population of Indonesia, Malaysia and Singapore) were exposed to poor air quality and estimated there to have been 11,880 fatalities due to this short-term exposure to ‘extreme particulate matter concentrations’ (i.e. haze pollution). The same research posited that if there was a similar haze episode as that in 2015, the public health burden from air pollution would increase considerably and estimated ~75,600 excess premature deaths because of long-term exposure to pollutants. Such an episode of haze did repeat itself in 2019 and diseases of the respiratory system was the second principal cause of hospitalisation in government hospitals⁶² while the top causes of death in government hospitals were diseases of the circulatory system and respiratory system respectively.⁶³ Another study⁶⁴ conducted on the 2015 haze episode had more alarming findings. The research estimated that the extreme haze episode in 2015 resulted in 100,300 excess deaths across Indonesia, Malaysia and Singapore.⁶⁵

The burden of disease is a measure of the impact of disease and the burden of haze pollution may be more far-reaching than we know. Ultra-fine particles can provoke alveolar inflammation, with the release of mediators capable of causing aggravation of lung disease and increasing blood clots formation. This explains the increasing number of cardiovascular deaths associated with urban pollution and that cardiovascular diseases account for 60–80% of air pollution–related deaths.⁶⁶

For example, a research done on high school students in Johor Bahru found that air pollution was significantly associated with headache, and affected the students’ nasal and dermal system, rhinitis, and ocular function.⁶⁷ There is now also evidence linking air pollution to a variety of neurological diseases e.g. indicators of Alzheimer’s disease in children’s brains,⁶⁸ increased incidence of epilepsy, ischaemic stroke, migraine and hospital admissions for Alzheimer’s disease, amyotrophic lateral sclerosis, and dementia.⁶⁹

⁶⁰ Aditama, T. Y. ‘Impact of haze from forest fire to respiratory health: Indonesian experience’ *Respirology* (2000) 5: 169, 171 (see also Table 6 of article). DOI: [10.1046/j.1440-1843.2000.00246.x](https://doi.org/10.1046/j.1440-1843.2000.00246.x)

⁶¹ Crippa P., et al, ‘[Population exposure to hazardous air quality due to the 2015 fires in Equatorial Asia](#)’, *Scientific Reports* 6, Article number: 37074 (2016) (doi:10.1038/srep37074)

⁶² The first principal cause was ‘pregnancy, childbirth and puerperium’.

⁶³ MOH Annual Report 2019, pp. 6 – 7.

⁶⁴ Koplitz S. N., et. al., ‘[Public health impacts of the severe haze in Equatorial Asia in September–October 2015: demonstration of a new framework for informing fire management strategies to reduce downwind smoke exposure](#)’ 2016 *Environ. Res. Lett.* 11 094023, p. 7.

⁶⁵ Note that there are acknowledged limitations in the research conducted by Koplitz et. al. due to, among others, the difficulties in quantifying peatland emissions. This study also only focused on adult mortality and does not include child mortality which the researchers acknowledge to be significant.

⁶⁶ Usmani, R.S.A., Saeed, A., Abdullahi, A.M. et al., ‘Air pollution and its health impacts in Malaysia: A Review’ *Air Quality, Atmosphere and Health* (2020) 13, pp. 1093–1118 (<https://doi.org/10.1007/s11869-020-00867-x>)

⁶⁷ Norbäck D, et. al, ‘[Volatile organic compounds \(VOC\), formaldehyde and nitrogen dioxide \(NO2\) in schools in Johor Bahru, Malaysia: Associations with rhinitis, ocular, throat and dermal symptoms, headache and fatigue](#)’ *Science of the Total Environment* 592 (2017) 153–160

⁶⁸ L. Calder ‘on-Garcidueñas et al., ‘[Hallmarks of Alzheimer Disease are Evolving Relentlessly in Metropolitan Mexico City Infants, Children and Young Adults](#). APOE4 carriers have higher suicide risk and higher odds of reaching NFT stage V at ≤ 40 years of age’. *Environ. Res.* (2018) 164, 475–487

⁶⁹ Rocha I. I., et. al, ‘[Impact of Air Pollution and Seasonal Haze on Neurological Conditions](#)’ *Ann Acad Med Singapore* 2020;49:26–36

Therefore, air pollution, and more specifically haze pollution, is an environmental risk to quality of life.⁷⁰ Many of the serious consequent health repercussions of both short-term and long-term exposure to haze pollution, like strokes and Alzheimer's disease also come with long-term intangible financial and psychological burdens. For example, people suffering from acute respiratory system diseases, e.g. acute asthma, might find it difficult to travel or live unaccompanied for fear that they may suffer a sudden asthma attack. People suffering from Alzheimer's disease and strokes brought about / triggered by haze pollution could mean that an individual may not be able to continue working. There remain gaps in knowing and understanding the true extent of haze pollution to health in Malaysia. Therefore, a nationwide in-depth study needs to be carried out to ensure that the impact of haze can be monitored and mitigated sufficiently.⁷¹

While there appears to be very limited research into the economic costs of healthcare in Malaysia, a study on selected hospitals in Kuala Lumpur and Selangor for the years 2005, 2006, 2008 and 2009 found that the average annual economic loss due to the daily hospitalisation of 14 diseases related to haze pollution from those hospitals cost an estimated USD91,000 for each hospitalised patient.⁷² Taking into account inflation, this amount would be significantly higher today.

Additionally, a 2017 study⁷³ investigated the effects of air pollution on subjective well-being (life satisfaction, happiness, and optimism) and found that air pollutants did affect people's subjective well-being. The more polluted the air was, the more it affected a person's mental health.

4.2 Links with Covid-19

Air pollution may increase Covid-19 morbidity and mortality by worsening associated comorbidities. Experimental studies conducted for other respiratory viruses support the hypothesis that air pollution exposure may facilitate the occurrence of Covid-19 infection through a decrease in immune response.⁷⁴

A study of the correlation of wildfires and Covid-19 in California⁷⁵ found -

- a link between particulate matter PM2.5, carbon monoxide (CO) and ozone (O³) generated by the forest fires and the epidemiological dynamics of Covid-19 cases with mortality;
- that particulate matter PM2.5 is an efficient carrier or transport vector for the Covid-19 virus, and also promotes entry by viruses into the respiratory tract where they can cause infections; and
- PM2.5 and CO are highly toxic, exposure to which can result in damage to the lungs. These mechanisms of lung injury due to wildfire-generated pollutants support the hypothesis that

⁷⁰ Darçın M., '[Association between air quality and quality of life](#)' Environ Sci Pollut Res (2014) 21:1954–1959 (DOI 10.1007/s11356-013-2101-3).

⁷¹ Academy of Sciences Malaysia, '[Report of the Forum on the Impact of Haze on Human Health in Malaysia](#)' (2017), p. 21.

⁷² Othman, J.; Sahani, M., et. al. 'Transboundary smoke haze pollution in Malaysia: Inpatient health impacts and economic valuation' Environ. Pollut. (2014) 189, 194–201.

⁷³ Darçın M, '[How Air Pollution Affects Subjective Well-Being](#), and Quality of Life - Medical Perspective', (2017), Mukadder Mollaoglu, IntechOpen, DOI: 10.5772/67742; see also Song Y., Zhou A., et. al., 'Assessing the effects of haze pollution on subjective well-being based on Chinese General Social Survey', Journal of Cleaner Production 235 (2019) 574 - 582 (<https://doi.org/10.1016/j.jclepro.2019.07.021>).

⁷⁴ '[Covid-19 death in the air for children of polluted Indonesia; Your City Has High PM2.5 Levels? You Are Likely To Get COVID-19, Says Study; The impact of outdoor air pollution on COVID-19: a review of evidence from in vitro, animal, and human studies; Wildfire smoke exposure linked to increased risk of contracting Covid-19.](#)

⁷⁵ Meo S. A, Abukhalaf A. A., Alomar A. A., et al., (n 8).

wildfire pollutants PM2.5, CO and O³ resulted in a recent increase in new Covid-19 cases and deaths in California.

There is also evidence that particulate matter could act as carriers of viruses which can then affect the immune system and make people more susceptible to pathogens.⁷⁶

The WHO sees a clear relationship between air pollution and the burden of Covid-19 in places that are very polluted.⁷⁷ Indeed, the Department of Environment and Malaysian Public Health Physicians' Association have expressed concern that an episode of haze pollution can worsen the impacts of Covid-19.⁷⁸

4.3 Impacts on Children

Studies have found that increased levels of air pollution are particularly harmful to children. Children are highly sensitive to air pollution because⁷⁹:

- (i) they breathe more rapidly than adults, and thus take in a relatively higher proportion of pollutants after adjusting for body weight; and
- (ii) their lungs, brains, physical defences and immune systems are not fully developed, making them more susceptible to pollutants.

The UNICEF Report on the Impacts of Climate Change on Children: A Malaysian Perspective⁸⁰ found that exposure to air pollution can cause a child to develop respiratory diseases. Exposure during infancy and early childhood increases the risk of lung damage and can impair lung growth. This can then lead to long-term illnesses like pneumonia, chronic obstructive pulmonary disease and asthma. Even short term exposure to ambient air pollution increases the risk of hospitalisation for respiratory diseases in children, with children ages 5 to 9 being the most vulnerable. The UNICEF Report found that during haze episodes, there was a 31% increase in hospitalisations amongst children due to haze-related illnesses and that children below the age of 14 had a 41% excess risk of respiratory deaths associated with haze pollution.

The UNICEF report also noted that “[c]ertain components of air pollutants may indirectly reduce the availability of sunlight to children”, which may cause children to suffer from vitamin D insufficiency. Indirectly, parents may also be more unwilling to let their children be outdoors during a haze episode, further reducing children’s exposure to necessary sunlight.

Further, air pollution can affect brain development and learning among growing children.⁸¹ Air pollutants have been found to cause neuro-inflammation, neurodegenerative diseases, and loss of or damage to

⁷⁶ Zhou, F., Yu, T., Du, R., Fan, G., Liu, Y., Liu, Z., Xiang, J., Wang, Y., Song, B., Gu, X., Guan, L., Wei, Y., Li, H., Wu, X., Xu, J., Tu, S., Zhang, Y., Chen, H., Cao, B., [‘Clinical course and risk factors for mortality of adult inpatients with COVID-19 in Wuhan, China: a retrospective cohort study’](#) Lancet. (2020) 395, 1054–1062.

⁷⁷ M. Neira, [‘WHO’s Science in 5: Air pollution & Covid-19’](#), 1 October 2021.

⁷⁸ F Zainal, [‘Dreaded annual haze may return’](#), The Star, 10 July 2020.

⁷⁹ UNICEF Report (n 3), p. 14 ([UNICEF CLIMATE CHANGE Summary \(E\) E-Book 2610.indd](#)).

⁸⁰ UNICEF Report (n 3), pp. 14 - 15; see also [Haze: Over 2,000 schools closed, affecting close to 2 million students](#), The Star, 18 September 2019; see further MOH Strategic Framework of the Medical Programme 2021 - 2025, p. 29 (https://www.moh.gov.my/moh/resources/Pelan_Strategik_KKM.pdf).

⁸¹ Rees N, [‘Danger in the air: how air pollution can affect brain development in young children’](#) (2012) New York: UNICEF Division of Data, Research and Policy.

white matter.⁸² Particularly severe haze episodes can also directly affect the learning of school-going children. In 2019, severe haze caused schools to be closed and thereby disrupting schooling for children. The UNICEF Report found that in September 2019, nearly 2,500 schools were closed across Malaysia, affecting at least 1.7 million pupils.⁸³

For an example of how the 2019 transboundary haze episode disrupted teaching at Taylor's University in Subang Jaya, Selangor, see Dr. Benjamin Loh (PhD)'s testimony about the temporary closure of their physical campus in **Appendix E**.

4.4 Economic Impacts

The Academy of Sciences Malaysia observed that the 2015 haze episode was estimated to cost Indonesia USD35 billion in losses, and USD500 million for Singapore.⁸⁴ The Nanyang Technological University has a much higher estimate for Singapore's losses from the 2015 haze episode, approximately SGD1.83 billion, which amounts to 0.45% of the country's GDP.⁸⁵

Haze pollution causes loss of productivity. It was posited that the potential loss from employees calling in sick in Malaysia during the 2019 haze episode was approximately RM400,000 a day⁸⁶ and as the 2019 haze episode lasted for almost 4 months, total estimated loss during that period was approximately RM48.8 million. This figure is however conservative as it does not include economic losses due to disruptions to, e.g. tourism and transportation during the same period or the additional expenditure by the government in their efforts to mitigate the fires contributing to the haze.⁸⁷

For perspective, the 1997 Southeast Asian haze that lasted for about 3 months, had cost the region some USD 9 billion and cost Malaysia an estimated USD 320 million (RM801 million).⁸⁸ Extrapolating this estimate and taking into account inflation, haze pollution would cost Malaysia some RM1.3 billion today.⁸⁹

Haze pollution increases government spending on healthcare. A study found that there was a 20% increase in government expenditure to treat haze related illnesses between 1997 and 2013.⁹⁰ There is also the attendant costs of haze mitigation efforts e.g. cloud seeding which would not have had to be expended but for haze pollution.

⁸² UNICEF Report (n 3), p. 15.

⁸³ Ibid., (n 3), p. 15; see also [Schools in Peninsular Malaysia closed due to haze, King expresses concern over smog](#), The Straits Times, 12 September 2019.

⁸⁴ Academy of Sciences Malaysia (n 4), p. 12.

⁸⁵ Quah E., Chia W. M., et. al, 'Economic impact of 2015 transboundary haze on Singapore' Journal of Asian Economics 75 (2021) 101329.

⁸⁶ [Malaysia could lose millions of ringgit due to haze: Economist](#), The Sun Daily, 20 September 2019

⁸⁷ [MMEA uses 198,000 litres of water to fight forest fire in Miri](#), The Sun Daily, 16 August 2019.

⁸⁸ Othman, J., & Mohd, S. '[Cost of Trans-boundary Haze Externalities](#)' Jurnal Ekonomi Malaysia (1999), 33.

⁸⁹ Academy of Sciences Malaysia (n 4), pp. 31-32.

⁹⁰ Norfazillah Ab Manan et. al. '[The Malaysia Haze and its Health Economic Impact: A Literature Review](#)', Malaysian Journal of Public Health Medicine (2018) Vol. 18 (1): 38-45.

4.5 Environmental and Climate Change Impacts

Deforestation, clearing land with slash and burn methods, and the disturbance of peat forests all contribute significantly to climate change, biodiversity loss and the weakening of ecosystems.⁹¹

Peatlands are carbon sinks as they store CO₂ in their soil and vegetation, acting as a natural coolant for the planet and have been found to be the largest terrestrial carbon store, holding twice as much carbon as all the Earth's forests and more than all the rest of the world's vegetation combined.⁹²

Therefore, peat fires that damage these carbon sinks will unlock carbon and release other greenhouse gasses stored in the soil into the atmosphere. Degraded peatlands are responsible for almost 6% of all greenhouse gas emissions generated by human activity annually.⁹³ This contributes to climate change and global warming. Lands that had been burned previously are more susceptible to future burning because of excessive dryness. Drained peatlands are also highly flammable and peatland fires can burn for months undetected underground, releasing huge amounts of CO₂ and causing dangerous pollution for neighbouring areas. Additionally, frequent and undetected forest burning of any nature will also cause loss of habitat and forest biodiversity.⁹⁴

To put these into numbers, a collaborative study⁹⁵ between the Netherlands, Britain and Indonesia found that 884 million tonnes of CO₂ was emitted in the Southeast Asian region in 2015, with 97% of such emission originating from forest fires in Indonesia. Their study found that regional CO₂ emissions from the fires were 11.3 million tonnes per day in September and October 2015 (compared to the 28-nation EU's daily emissions of 8.9 million tonnes during the same period).

The emissions in 2015 were said to be worse than during the 1997 fires which have been considered the worst on record. This was despite the fact that in 1997, there was an even longer drought and widespread burning due to a stronger El Niño. While not as severe as that in 2015, the Copernicus Atmosphere Monitoring Service (CAMS) found that carbon emissions due to the haze in 2019 was double that of the Amazon forest fires that same year - some 420 million tonnes of CO₂ had been released to the atmosphere by September 2019.⁹⁶

5. Gaps in the Legal Framework

The causes and effects of air pollution, including domestic and transboundary haze pollution, outlined above reveal fundamental gaps in our local and regional legal frameworks for protecting and respecting people's human rights to a safe, clean, healthy and sustainable environment.

⁹¹ R. Akhtar et. al., 'Climate Change and Air Pollution, The Impact on Human Health in Developed and Developing Countries' (2018) Springer International Publishing AG, pp. 244-247.

⁹² [Peatlands and climate change | IUCN](#) (accessed on 18 November 2021).

⁹³ [Peatland Ecosystems | IUCN](#) (accessed on 18 November 2021).

⁹⁴ Academy of Sciences Malaysia (n 4), p. 32.

⁹⁵ Huijnen V., Wooster M. J., et. al, 'Fire carbon emissions over maritime southeast Asia in 2015 largest since 1997' Scientific Reports (2016) | 6:26886 (DOI: 10.1038/srep26886) (<https://www.nature.com/articles/srep26886.pdf>); see also [Indonesia forest fires in 2015 released most carbon since 1997: Scientists](#), The Straits Times, 29 June 2016; see also [Indonesia's Fire Outbreaks Producing More Daily Emissions than Entire US Economy](#) (accessed on 29 November 2019).

⁹⁶ [The Copernicus Atmosphere Monitoring Service tracks extent and pollution from fires across Indonesia | Copernicus](#) (accessed on 29 November 2021).

We hope that SUHAKAM will convene a public inquiry to inquire into these gaps. For starters, the following are some of the most prevalent ones we observe.

These gaps must be considered in the context of the deeply embedded patronage systems that dominate our institutional frameworks, market structures, business culture and public consciousness.⁹⁷ Hence, the critical components for overcoming these gaps, which we will mention below, should be applied intentionally to democratise legal accountability so that we strengthen the rule of law and the protection of and respect for human rights by the Government of Malaysia and private sector actors respectively.

5.1 Basic Gaps in Environmental Rights, Access to Information and Public Participation

Environmental governance in Malaysia is still approached in a top-down manner. There is minimal public participation, whether in decision-making, implementation, or enforcement. Even when the laws and regulations make public consultation mandatory, these exercises are often carried out grudgingly or with little interest to use public input to improve the quality of decisions.⁹⁸

There is very limited public access to information. Without access to information, civil society and members of the public remain emasculated and are unable to comment on any proposed development activity or otherwise participate in public-interest matters.⁹⁹ This in turn is tied to the (lack of) transparency and accountability of administrative bodies entrusted with the tasks of sustainable development and environmental protection.¹⁰⁰

Further, the absence of an express reference to environmental rights in the Federal Constitution has been seen as an indication that people's right to a safe, clean, healthy and sustainable environment does not amount to a fundamental liberty that the state must protect.¹⁰¹ This gap and misperception is not helpful especially when our main environmental laws and regulations are desperately in need of reform and updates to address the multiple ecological crises confronting us.¹⁰² In the meantime, it is challenging to find, within our domestic body of laws, legal bases for concepts like the Polluter Pays Principle, the Precautionary Principle or the three pillars of sound environmental governance set out in Principle 10 of the 1992 Rio Declaration (access to information, access to public participation and access to courts).

When polluters harm or pollute the environment, the only recourse seems to be for the government to investigate and prosecute the polluters. This is an incomplete idea of accountability and governance.

⁹⁷ Discussed in Sub-section 3.4.

⁹⁸ One example is the public consultation conducted by the Atomic Energy Licensing Board in relation to Lynas' temporary operating licence, which the Malaysian Bar called a "sham and charade" (['Malaysian Bar urges govt to revoke AELB decision over Lynas plant'](#), The Edge, 7 February 2012). Another example is the [public furore that ensued from Selangor state government's degazettement of a part of the North Kuala Langat Forest Reserve](#) in August 2021, despite the state government going through the public consultation motions.

⁹⁹ Ainul Jaria Maidin, ['Challenges in implementing and enforcing environmental protection measures in Malaysia'](#) (May 2005).

¹⁰⁰ See the very helpful report (and recommendations) jointly produced by ARTICLE 19, London, and the Centre for Independent Journalism (CIJ), ['A haze of secrecy: Access to environmental information in Malaysia'](#), January 2007.

¹⁰¹ See, for instance, the call by the former Chief Justice Tun Arifin Zakaria for the express inclusion of the right to a clean environment in the Federal Constitution during the 2017 opening of the legal year: Ida Lim, ['Chief Justice moots making clean environment a stated right'](#), Malay Mail, 13 January 2017.

¹⁰² For instance, efforts to draw up a new piece of legislation to replace the Environmental Quality Act 1974 have been initiated by the government since 2018; Malaysia has yet to enact any legislation to combat climate change.

Besides the criminal justice system, the civil justice system should be actively utilised too. Where public expenditure has been incurred or when general damages have been suffered, the government should also initiate civil actions against polluters to ensure that they bear the responsibility of compensating for these losses and damages, in addition to facing criminal sanctions.¹⁰³ Simultaneously, the state should support those who have suffered harm or incurred losses due to the wrongdoing of polluters and wish to bring civil actions against such polluters, especially in providing access to evidence that can establish causal links between wrongdoing and harm (instead of frustrating such attempts by withholding access to information or limiting access to justice).

Citizens do not need permission to go to court to hold polluters to account. However, to effectively do so, they do need well-developed substantive and procedural laws and regulations, access to information and evidence and protection from threats, intimidation and harassment. While many jurisdictions such as the Philippines and India have developed dedicated rules of civil procedure for environmental proceedings, our civil procedure rules urgently need reform to facilitate the hearing of environment-related cases such as better rules on locus standi, procedures for admitting evidence, rules on pre-emptive remedies that embody the Precautionary Principle, mechanisms to manage strategic litigation against public participation and more.¹⁰⁴

Last but not least, the justice system should enable (in fact, facilitate and encourage) citizens to hold administrative bodies to account, whether through grievance mechanisms, public engagement or legal action, if the latter have abused their powers, exercised their judgment unreasonably or neglected their public duties.

5.2 Gaps in Governance of Transboundary Haze Pollution

The member states of ASEAN have entered a legally binding regional agreement in the form of the ASEAN Agreement on Transboundary Haze Pollution of 2002 (“AATHP”). This agreement was a response to rampant transboundary haze pollution arising from more and more serious forest and land fires in the region. However, in line with the “ASEAN way”, its focus is to facilitate regional cooperation for responding to fires rather than provide a regional regime of legal accountability for wrongdoers who contribute to fires.

For private persons in Malaysia, the AATHP remains a regional agreement and lends them no direct assistance. Its contents do not form part of Malaysian law without specific domestic legislation expressly making it so. As such, the AATHP is a tool for the Government of Malaysia (when it engages with its regional neighbours) but not the citizens of Malaysia (who can only engage domestically). It provides no direct legal assistance to the private person in Malaysia who wishes to seek redress against transboundary haze pollution in a Malaysian court.

In Malaysia, when one person causes harm to another, there could be two pathways for justice. One is for the state to commence criminal proceedings against the polluter (a legal action on behalf of society). The other is for the victim to commence a civil claim against the polluter (a legal action for compensation, and perhaps pre-emptive and injunctive remedies). The transboundary nature of the wrongdoing makes both of these avenues virtually unfeasible (as we will show via the scenarios below).

¹⁰³ The Department of Environment does not appear to systematically initiate civil actions against polluters (and all those who aid, abet or otherwise contribute to it) for compensation, as reflected in their Annual Reports which only refer to the compounding of offences and criminal prosecution.

¹⁰⁴ See Tun Richard Malanjum’s speech at the Ensearch K. Kumarasivam Endowment Fund Memorial Public Lecture 2018 entitled [‘Environmental courts: Lessons learned and future direction’](#).

This was why the then government, seeing that the annually recurring haze pollution was a serious problem to its people and economy, announced on 21 February 2020 its decision to enact a domestic legislation that would empower the government to take action against Malaysian businesses operating overseas who cause transboundary haze pollution.¹⁰⁵ It also announced that the legislation would be guided by the precautionary principle and polluter pays principle.

However, following a change of power in late February 2020, the government shelved the tabling of the legislation.¹⁰⁶ This was met with disappointment from civil society and members of the public.¹⁰⁷

We will demonstrate some gaps and challenges in the following scenario. A claimant who lives in Subang Jaya, Malaysia has experienced a 100% increase in the frequency of his asthma attacks during a 4-week haze episode. He tries to claim against a plantation company incorporated and operating in Sumatra, Indonesia (with no business interests in Malaysia) that has been shown by an international NGO to have had fires on its plantation during the same time.

- This would appear to be a novel case. We have carried out a search of reported cases across all major law reports as well as a broader internet search and have not found any precedent of a civil action brought before a Malaysian court for harm caused by transboundary haze pollution.
- The cause of action may likely be the tort of negligence. The legal arguments would be challenging to mount. The claimant would have to first establish that a duty of care was owed by the polluter (located in Indonesia) to the claimant. This will require satisfying a three-fold test (foreseeability of harm to the claimant, proximity of relationship between the parties, and whether imposing a duty would be fair, just and reasonable). Then, the claimant must establish what is a reasonable standard of care in the circumstances (what if the polluter has not been convicted of any wrongdoing in Indonesia? What if the polluter can show that it has conducted itself according to industry best practices?) and prove that the polluter has fallen below that standard. Then, the claimant must prove that the breach of duty caused the claimant to suffer some harm, and further show that the harm was 'not too remote' (unforeseeable).
- The evidential challenge would be monumental. The claimant is in one jurisdiction while the polluter is in another. Ascertaining the basic facts alone would be challenging. For example, the identity of the polluter company, its legal right or control over the plantation land, ascertaining the land particulars and maps of the subject land. The claimant will have to prove that fires occurred on the land, setting out how it happened, and establishing how the polluter's behaviour fell below a reasonable standard of care in that regard. Then, to establish the duration the land was burning, and an estimate of the smoke that was emitted. Then, to establish that said smoke particles were carried by winds to the claimant in Subang Jaya, such that the claimant was exposed to it for a sustained period. The claimant will then have to address the fact that at the same time, there were some 500 other hotspots in the vicinity of the polluter's land. Then, to prove that the claimant experienced an increase in asthma attacks, and establish that this could have only been caused by the inhalation of the haze particles emitted by the polluter.
- If the claimant initiates a claim in Malaysia, and succeeds in obtaining a judgment from a Malaysian court, the judgment would not be enforceable in Indonesia. This is because Indonesia is not a signatory to any multilateral treaties for the reciprocal enforcement of foreign court judgments. The claimant will need to re-litigate the case before an Indonesian court. Though the Malaysian judgment may be taken as prima facie evidence, in an environmental pollution case

¹⁰⁵ Press release of the then Ministry of Energy, Science, Technology, Environment and Climate Change.

¹⁰⁶ N. Daim, '[Tabling of Transboundary Haze Act shelved](#)', New Straits Times, 3 August 2020.

¹⁰⁷ See, for instance, the press release of the Malaysian Bar [calling on the then new government to continue to table the domestic transboundary haze pollution law](#) (7 August 2020).

with a complex chain of causation, the judge in the Indonesian court may require the fresh examination of witnesses and evidence.

- The above example shows how onerous it would be to bring such a litigation, with extremely limited chances of success, in return for negligible compensation and impact. A successful claimant will have to re-litigate the case, with a new set of lawyers eligible to practise in Indonesia. As a foreign litigant in Indonesia, the claimant may be required to provide security for the polluter's costs in case the claimant is unsuccessful.
- These challenges and obstacles make it unreasonably difficult for any victim of haze pollution (whose physical and mental ability and resources may already be diminished by the haze pollution) to seek to hold the polluters to account.¹⁰⁸
- One could therefore say that there is no reasonable avenue for remedy, nor meaningful access to justice.

To demonstrate some other gaps and challenges, we will modify the scenario. This time, the polluter is a company incorporated in Indonesia, but with most of its shares owned by a company incorporated in Malaysia ("Parent company").

- The same challenges exist for the polluter company that is incorporated in Indonesia. However, can the claimant take out a claim against the Parent company for failing to ensure that its 'subsidiary' does not have fires on its plantations?
- To do so in a negligence suit, the claimant must again satisfy the three-fold test for establishing a duty of care. The claimant must investigate into and prove the degree of control the Parent company had over the polluter (shareholding alone does not automatically entail management control, and which laws relating to corporations should apply?). A most challenging hurdle would be arguing that it would be fair and reasonable to impose a duty on the Parent company, without triggering any 'public policy considerations' such as the floodgate argument.¹⁰⁹ In this regard, we should recall the embedded systems of patronage mentioned in Sub-section 3.4.
- If the claimant's case is aimed at seeking compensation, then the culpability of the Parent company, being removed from the actual activities in Indonesia that contributed to the fires would be even lower compared to the polluter company in the earlier scenario. Perhaps multiple claimants could come together (provided they have access to information, and were able to come together and organise themselves) and bring a civil claim for mandatory injunctions, requiring the Parent company (or a group of them) to take constructive action towards ensuring its/their 'subsidiaries' do not engage in practices that contribute to fires. In that case, different challenges and gaps would present themselves.

It would likewise be extremely challenging for people in Indonesia who have suffered from the activities of Malaysia-linked 'subsidiaries' who wish to establish legal accountability against Parent companies that are domiciled in the Malaysian jurisdiction.

All of this reveals serious gaps in the rule of law in Malaysia and across ASEAN. Citizens in one country have extremely limited access to very limited remedies if they have been harmed by transboundary

¹⁰⁸ The themes that emerge invite a consideration of "organised irresponsibility" explored by Ulrich Beck (in 'Risk Society', 1986) and Scott Veitch ('Law and Irresponsibility', 2007).

¹⁰⁹ See, for instance, the discussion in *Lim Teck Kong v. Dr. Abdul Hamid Abdul Rashid & Anor* [2006] 3 MLJ 213, at p. 231 where a court should be reluctant to impose a duty which may give rise to 'endless indeterminate liability' where the number and nature of claims resulting from breach of the proposed duty cannot be realistically calculated.

pollution, even if it amounts to a substantial infringement of their human right. Even, in the event the pollution leads to severe harm to health or premature death.

6. Recommendations We Seek

Based on the above, we respectfully ask SUHAKAM to conduct a public inquiry to examine existing Malaysian (and, if appropriate, regional) legislation, regulations and rules of civil and/or criminal procedure, and to advise and recommend ways to strengthen and protect people's human rights to a safe, clean, healthy and sustainable environment free from air pollution.

We hope that the outcome of the public inquiry will enable SUHAKAM to make findings and recommendations on the following themes and/or issues:

➤ **Strengthening the recognition of environmental rights in Malaysia**

- Recognise that having a clean, healthy and sustainable environment is a human right, as has recently been done by the United Nations Human Rights Council.¹¹⁰ Hence, this is as important as the fundamental liberties recognised in Part II of the Federal Constitution. Make appropriate recommendations that Part II of the Federal Constitution can and ought to be interpreted purposefully to include this recently recognised right to a clean, healthy and sustainable environment and related principles such as the Polluter Pays Principle, No-Harm Principle and Precautionary Principle.
- Recommend reforming the rules of civil and/or criminal procedure so that there are dedicated provisions to facilitate cases that relate to environmental harm and pollution.
- Emphasise that the management of natural resources is best done with the meaningful participation of all, as set out in Principle 10 of the 1992 Rio Declaration and recommend that the Government of Malaysia, state governments and local governments embrace this in form and substance.
- Emphasise Sustainable Development Goal 16 which is to “promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels” through a system of governance and legal framework that uphold environmental justice, where there is fair treatment and meaningful involvement of all people regardless of race, colour, national origin, or income, with respect of the development, implementation, and enforcement of environmental laws, regulations and policies.¹¹¹

➤ **Strengthening Malaysia's air quality governance**

- Make appropriate recommendations to the Government of Malaysia to strengthen Malaysia's air quality legal framework by embracing the general principles of air quality governance and

¹¹⁰ “[Access to a healthy environment, declared a human right by UN rights council](#)”, United Nations Human Rights Council, 8 October 2021.

¹¹¹ Definition of ‘environmental justice’ used by the United States Environmental Protection Agency.

recommendations by the United Nations Environment Programme (UNEP) in its report entitled “Regulating Air Quality: The first global assessment of air pollution legislation”.

➤ **Strengthening governance of transboundary haze pollution**

- Recommend to the Government of Malaysia to enact a domestic transboundary haze pollution law to:
 - empower and require the government to hold polluters, including businesses incorporated in Malaysia, to account via the criminal and civil justice systems; and
 - empower people in Malaysia to hold polluters, including businesses incorporated in Malaysia, to account via the civil justice system, particularly providing access to information, access to public participation and access to remedy.

- Recommend that the Government of Malaysia take regional leadership in the transboundary haze pollution issue by:
 - urging each member state to also enact domestic legislation to empower their citizens in holding their corporations accountable; and
 - establishing cooperation among all relevant agencies across ASEAN so that information and evidence can be shared freely with potential litigants.¹¹²

➤ **Strengthening Business and Human Rights in Malaysia**

- Make appropriate recommendations to the Government of Malaysia and relevant non-state actors to urgently implement the United Nations ‘Protect, Respect and Remedy’ Framework set out in the Guiding Principles on Business and Human Rights.¹¹³

Epilogue

When we fight haze pollution, we are not anti-vegetable, anti-palm oil or anti-paper. We are for better and sustainable businesses.

The palm oil and pulp sectors produce products we need, provides jobs and is of strategic importance to our economy. We appreciate the efforts of palm oil, pulp and other agricultural companies that try to mitigate the adverse impacts of their business operations.

However, there are some businesses that have the opposite attitude. These bad players espouse a parasitic attitude that focuses only on the interests of their investors. They refuse to take ownership of their responsibilities to the society they operate in even when they are aware of the harm they are causing or contributing to.

¹¹² This way, the ASEAN member states would be building a legal framework across the ASEAN region where ASEAN citizens will be able to hold corporations from their own nation to account. This can help avoid the sensitivities of conflicts involving parties of different nationalities.

¹¹³ [Guiding Principles on Business and Human Rights](#): Implementing the United Nations ‘Protect, Respect and Remedy Framework’ (2011).

Such bad players are a burden on society. Their businesses, and the business ecosystems they build around themselves, are designed to defeat the Polluter Pays Principle. Every day that they succeed sees society and the environment paying towards the profits of their investors.

We need to have access to information and establish robust legal frameworks and institutions that are capable of facilitating inclusive, just and effective contestations with such bad players, so that on the whole, the objectives of businesses would be aligned with the aspirations of society.

Date: 7 December 2021

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President,
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Azira Aziz
Committee Member,
Pro-tem Committee of CERAH



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Heng Kiah Chun
Malaysia Campaigner,
Greenpeace Malaysia

Appendix A

In addition to CERAH and Greenpeace Malaysia, the Civil Society Organisations and Non-Governmental Organisations that support this Complaint, as at **7 December 2021**, are as follows:

1. Sahabat Alam Malaysia (SAM)
2. Stop Open Burning in Johan Setia
3. Klima Action Malaysia (KAMY)
4. Pertubuhan Pelindung Khazanah Alam Malaysia (PEKA Malaysia)
5. Suara Rakyat Malaysia (SUARAM)
6. Pertubuhan Alam Sekitar Sejahtera Malaysia (GRASS Malaysia)
7. Environmental Protection Society Malaysia (EPSM)
8. Jaringan Ekologi Dan Iklim (JEDI)
9. Persatuan Pengundi Muda (UNDI 18 - MyHutan)
10. Global Environment Centre (GEC)

Appendix B

Individual testimonies of air pollution and imported plastic waste

Source: Greenpeace Malaysia imported plastic waste investigation 2018-2020

Air pollution complaints in Kuala Langat , Selangor (2018) : Suspected caused by plastic waste recycling facility and haze pollution

1. Pua Lay Peng

Position: Secretary, Kuala Langat Environmental Action Association



Pua, a volunteer, walks past an open burn site at a palm oil estate in Kuala Langat, Selangor, Malaysia, on Feb. 2, 2019. JOSHUA PAUL FOR HUFFPOST

Pua Lay Peng is a chemist. She and her neighbors staying in the agricultural town of Jenjarom began complaining of headaches, respiratory problems, skin allergies and other ailments. An unpleasant odour in the air became routine for residents of Jenjarom. Children were falling sick more often than usual, and one local teacher said she was finding it hard to concentrate at school because of how disturbed her sleep had become. Together with other community members, she wrote many complaint letters to local authorities and usual responses were “the process takes time, local authorities have capacity and cannot do much”. She says: “Air pollution is hard to monitor. At night, their machines were operating at their highest capacity, but you can’t see the polluted air, so what can you do? Even if you can smell it, you can’t trace it.”

If SUHAKAM decides to conduct a public inquiry on air pollution, Lay Peng is happy to share all her experience on this.

Source:

a) <https://www.malaysiakini.com/news/537348>

b) https://www.huffpost.com/entry/malaysia-jenjarom-activists-plastic-recycling_n_5c99e86ce4b0d42ce3606110

2. Patmah binti Sahabu (Fatma) - Jenjarom local resident

My first son who is 13 years old had eye problems, including irritation in which both his eyes were always sore and watery. I took him to the clinic but the doctor could not discover the cause. As for my second child, she was always coughing. I told her not to drink cold drinks and she didn't. She told me that it was always hazy at school in the morning ever since early 2018.

Source:

a) *Greenpeace video documentation.*

3. Kathy Tan Fuang Ling - Jenjarom local resident (Pua Lay Peng's relative)

I always can smell something strange and never knew why. My two children have always had tracheitis. When the air quality changes or if someone burns rubbish, and they inhale the smoke, they will need to see a specialist to be treated with a nebulizer.

If SUHAKAM decides to conduct a public inquiry on air pollution, Kathy is happy to share all her experience.

Source:

a) *Greenpeace video documentation.*

4. Pua Lay Quan - Jenjarom local resident (Pua Lay Peng's sister)

I've been a school bus driver for almost 12 years. I often fetch children from kindergarten, primary and secondary schools around the Jenjarom area. I realised that the school children whom I fetched were always coughing and having dry lips and they were always sick for at least 2 to 3 months. It was very strange as usually those symptoms should be recovered within one or two weeks.

If SUHAKAM decides to conduct a public inquiry on air pollution, Lay Quan is happy to share all her experience.

Source:

a) *Greenpeace video documentation.*

Appendix C

Individual testimonies of air pollution and imported plastic waste

Source: Greenpeace Malaysia imported plastic waste investigation 2018-2020

Air pollution complaints in Sungai Petani, Kedah (2019)

1. **Jean Tei Thong** - Sungai Petani local resident, her child was affected by increased air pollution and suspect it was caused by plastic waste recycling facility



Since March 2019, my daughter started to have the flu, coughing, phlegm and running nose and sometimes bleeding nose. Initially I thought that it's just a normal flu. After I brought her to the doctor during April, she has been admitted to hospital three times. Once she goes outside, she will have red eyes, cough and sleepless nights. She will keep coughing with phlegm. Ever since March, until now (July), she has always been on her medication. During our third visit to the hospital, the doctor had ordered an X-ray on her. He found out that there were white spots on her lungs. The diagnosis was bronchitis. After she was released from hospital for the third time, her condition is still the same and not recovered. She just kept coughing, having flu, phlegm and a runny nose. During her follow up with the doctor, I asked the doctor why her condition is not getting better. The doctor explained that it could be the bad quality of air or the condition in my house. After I came home, I did what I could to clean the whole house. However, after some time, she still has not recovered from the flu and cough. So, I went back to the doctor and asked him why was her condition still the same? Why was she still having a runny nose, coughing with phlegm and flu, and why after all the medications and injections she has still not recovered? Then, the doctor told me that it might be because of the air pollution. I could not bring her to kindergarten as she kept having red eyes. After staying in kindergarten for 15 minutes, the teacher called and told me that she was having red eyes.

If SUHAKAM conducts a public inquiry on air pollution, Jean Tei would be happy to share air pollution experience.

Source:

a) Joan O'Sullivan, '[Plastic wasteland: Where the West sends its rubbish](#)', RTE, 19 Feb 2020

b) Greenpeace video documentation.

2. Renee Ng & her mother, Maggie Mah - Sungai Petani local resident



Renee Ng: I'm Renee Ng, and I live in Bandar Laguna Merbok, Sungai Petani, Kedah Malaysia. I'm 16 years old. I was admitted to the hospital because my asthma attacks became more frequent. It was because of all the smoke and dust from the illegal factories. I'm highly allergic to dust and smoke, that is why I was admitted to the hospital. I got my asthma attack at school, there was a lot of smoke coming from all those factories, so I just got attacked because of that smoke, I didn't do any exercise. I really feel worried about my hometown because the pollution

becomes more serious, everyday becomes more serious. So I really feel worried and this is a very sad case. I wonder why the government didn't take any action on this problem. So I really feel angry with it.

Renee's mother, Maggie Mah: The polluted air has caused my daughter's asthma to worsen. Her asthma attacks also become more frequent. It nearly costs her a life. In fact, she does not deserve to suffer from all these pains, including taking medicines and injections every day. Sometimes she has to take steroid medication. It hurts to know that she is suffering and I could not take this pain from her and bear this pain on her behalf. These have made us live in such an environment that we could not do anything about it. It has forced us to be grounded and stay at home like prison. As you can see, now my daughter barely has the energy to walk. She was not like this previously. Due to the air pollution which she is allergic to, it

makes her sick and worsen her asthma. Even though she is slowly recovering, she needs a long time to gather her energy. Therefore, she can't do anything now, can't even go to school for her studies, as she barely can walk now. I'm actually very furious about it. When I see my daughter with the oxygen mask, my heart hurts so much.

I think that actually all this pollution can be avoided. Those pollution can be avoided, but why didn't the government take action on it? They must stop all those factories, really stop those illegal factories. Nowadays, our air is polluted, even our water is polluted, and after that our soil will also be polluted. So, we really need to stop this, we need to protect our home, we need to protect our earth. The environment can be without humans, but humans cannot without the environment. We need earth to live on it, we have no other planet to live on it. Right? So really, our mother is really really sick now, please stop, just stop polluting. This is our earth, our home, it's where we born and where we die.

If SUHAKAM decides to conduct a public inquiry on air pollution, Renee is happy to share her air pollution experience.

Source:

a) Greenpeace video documentation.

b) SinChew.com.my, 23 July 2019, <https://www.sinchew.com.my/20190723/入加护病房终见好转·黄凯妍：犹如死里逃生/>

3. Dr Sunny Tneoh Shen Jen

Doctor at the Metro hospital, Sungai Petani, also an advisor of Persatuan Tindakan Alam Sekitar Sungai Petani



Some 150 SP residents protesting against a plastic recycling factory next to Taman Songket Indah, Sungai Petani.

In Sungai Petani, Kedah, shortly after the factories arrived in the spring of 2019, more and more people began presenting with breathing difficulties. We noticed a 10-20% increase in the number of respiratory cases admitted to hospital. Our team used to cycle in the area until we discovered the wastes. We have since stopped patronising the terrain due to the choking toxic smell emitted from the wastes.

Dr Sunny is based in Sungai Petani, he is happy to share his experience of air pollution in Sungai Petani Kedah.

Source:

- a) Pradeep Nambiar, Free Malaysia Today, [‘Sungai Petani residents protest over worsening air quality’](#), 16 August 2019
- b) Kwongwah.com.my, [‘空气污染超标 心脏病中风病例激增’ \(Worsening air pollution cardiovascular disease and stroke cases on the rise\)](#), 1 June 2019
- c) Sinchew.com.my, <https://www.sinchew.com.my/?p=2850950>, 7 August 2019
- d) Audrey Dermawan, New Straits Times, [‘Indiscriminate waste disposal continues in Sungai Petani’](#), 7 August 2019

Appendix D

Individual testimonies of haze pollution

Domestic Haze Pollution

Dr. Teckwyn Lim (PhD) and his family

Resident of Kota Kemuning, Shah Alam, Selangor
Technical Director, Resource Stewardship Consultants Sdn Bhd
Adjunct lecturer at the University of Nottingham Malaysia
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Dr. Lim and his family suffered from local haze pollution in the Kota Kemuning area. His mother-in-law is an elderly diabetic while his daughter was an infant.

“The smoke was unbearable. We were woken up by the choking stench in the early morning and also found the smoke appearing late at night. My mother-in-law developed lung cancer. In the end we had no choice but to move out of the area.”

Dr. Lim and his family suffered repeated bouts of air pollution from 2010 till 2020.

“I made around two dozen trips to visit the site of the burning. I made around a dozen reports to the fire department, the Department of the Environment and direct to the federal ministry. I made around half a dozen reports to the media and NGOs, including Greenpeace. I spoke personally with local assembly members and the federal Minister. There has been no positive outcome as far as I can see. The burning continues.”

Dr. Lim observes that the smoke haze in Shah Alam is caused by the burning of peat soil by vegetable farmers in Johan Setia, Klang, several kilometers away from Kota Kemuning. The farmers set fire to the peat soil after each harvest. During the dry season, these fires often spread out of control.

Source:

- a) Interview with CERAH
- b) Mei Mei Chu, The Star, [‘Johan Setia peatfires cause of Klang, Shah Alam haze’](#), 7 August 2017
- c) Mei Mei Chu, The Star, [‘Wan Junaidi: Peatfires an economic issue’](#), 7 August 2017
- d) Dawn Chan, New Straits Times, [‘20 Johan Setia landowners flouted open burning law, 7 served with notices’](#), 1 October 2019
- e) Mei Mei Chu, The Star, [‘Stop the Johan Setia open fires’](#), 23 September 2019
- f) Selangor Journal, [‘Putrajaya, Selangor to strengthen efforts to combat open burning in Johan Setia’](#), 5 February 2020
- g) There is a Facebook community group called [Stop Open Fire in Johan Setia, Klang, Selangor](#)

Appendix E

Individual testimonies of haze pollution

Transboundary Haze Pollution

Dr. Benjamin Loh Yew Hoong (PhD)

Senior Lecturer II at Taylor's University, Subang Jaya, Selangor
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Dr. Benjamin Loh is a senior lecturer at Taylor's University in Selangor. He recalls being affected by the transboundary haze pollution episode in September 2019.

The disruption to the operations of the university was quite big. Students didn't want to come and the university was heavily pressured to close and provide replacement classes. The university had to immediately institute a continuance policy that automatically made classes online.

"We were forced to close for a few days as the University has a lot of open spaces which made being on campus a major hazard for everyone there. The University instituted a temporary shift to online learning to ensure continuity of learning and so students were not impacted by the closure of the physical campus."

Dr. Loh was personally affected by it too as he has asthma.

Source:

a) Interview with CERAH