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‘Seasons of the Anthropocene’: Politicisation of the Haze Season in Southeast Asia

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Abstract

In the last three decades, a new ‘haze season’ has emerged in Indonesian, Malaysian, and Singaporean societies to signify the recurring air pollution episode caused by the widespread burning of tropical peatlands. This study delves into the discursive framework of ‘seasonality’ surrounding the societal perception and response to haze, exploring ‘haze season’ as an adaptation context and ‘haze’ as a mitigation strategy. Deploying a three-step methodology, this paper identifies and analyses key storylines used by various political actors to attribute meaning to haze, namely (1) ‘it keeps coming back’, (2) ‘it will go away’, and (3) ‘it is normal’. Different political actors deploy these storylines for distinct purposes. The objectives of storyline deployment align mostly between governments and corporations seeking to explain, legitimise, and detract from mitigation inefficiencies and adaptation inadequacies, with civil society organisations being the sole challenges and critique of this patronage network structures, where governments and companies tolerate unsustainable agroforestry practices leading to haze. The study underscores the significance of understanding the politics involved in constructing ‘seasons of the Anthropocene’. Divergent framing of seasonality by different actors reveals the underlying mechanisms influencing environmental change mitigation and adaptation. The construction of Anthropocene seasons can be a double-edged sword, with familiarisation enhancing societal preparedness, while normalisation can lead to desensitisation and inertia towards mitigation. Untangling the divergent pathways of politicising Anthropocene seasonalities holds the key to determining whether and how societies can build a ‘liveable future’. By grasping the dynamics of the ‘haze season’ discourse, we can project effective environmental action and address the challenges posed by recurring haze episodes.

Keywords

Transboundary haze, seasonality, politicisation, Anthropocene, environmental governance, Southeast Asia

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Introduction – Setting the Scene



Figure 1. Kuala Lumpur in Haze, photograph by the author, Thomas Smith.

‘Kuala Lumpur is choking. The city’s normally sparkling twin Petronas Towers now are smudged outlines, faint behind a thick layer of smog. As we flew into the Malaysian capital the haze was so dense that we couldn’t see the ground below until we were almost on the tarmac.’ (Robbins, 2019)

The phenomenon of transboundary haze, characterised by yellowish smog and the smell of burning, affects not only Malaysia, as depicted in the quote, but also parts of Indonesia and Singapore (Guindon, 2021; Nichol, 1997; Remember Singapore, 2013). During haze episodes, typically during the tropical ‘dry season’ between June and October, the central business district skyscrapers become invisible, schools close, and governments advise residents to stay indoors (Lee, Seow, et al., 2016; Malay Mail, 2019). In extreme cases, airports suspend take-off and landing due to low visibility (Bloomberg et al., 2015). As haze episodes recur almost every year, discussions of its return take an increasingly prominent place in public discourse (Liu et al., 2023; SIIA, 2020). Preliminary research on public perception and sentiment towards haze argues that the concept of ‘haze season’ has emerged in public discourse at least since 2001, indicating growing public awareness and normalisation of the recurring air pollution in the past decades (Liu et al., 2023).

One example of the social construction of ‘haze season’ is evidenced in a cartoon created by Reggie Lee, a popular Malaysian political cartoonist, during the 2015 haze episode. He satirically depicted the ‘4 seasons in Malaysia’ as consisting of a monsoon season, a dengue season (a possible social construction of nature itself where poor water and drainage management interacts with the reproductive cycles of mosquitoes), a haze season, and a durian season (see Figure 2). While the cartoon humorously highlights the fact that Malaysia, as a tropical country, does not have the four seasons that societies in temperate geographies experience, it also suggests that ‘haze’ is now normalised by society as a new season, with communities organising expectations and activities around its annual recurrence. Indeed, Liu et al. (2023) found that media discourse shifts during ‘haze season’ to focus on adaptation. That is, to cope with the immediate, harmful effects of haze by reducing outdoor activities, wearing masks, and increasing the use of air purifiers and air conditioning to minimise exposure to pollution. Outside of ‘haze season’, the social discourse turns to mitigative solutions that could prevent the next recurrence.

Consequently, the social construction of ‘haze season’ has built a societal expectation of the annual recurrence of the air pollution episode. This impacts how societal actors motivate, galvanise, and justify mitigation and adaptation action, which in turn feeds back to the construction or disappearance of future haze episodes and/or societal resilience towards recurrent or even worsening haze. However, despite clear political implications for the implementation of environmental regulations and resource mobilisation, research has yet to explicitly address what actors have been involved in the construction of ‘haze season’, how they have subsequently deployed ‘seasonality’ in public discourse, and for what purposes.

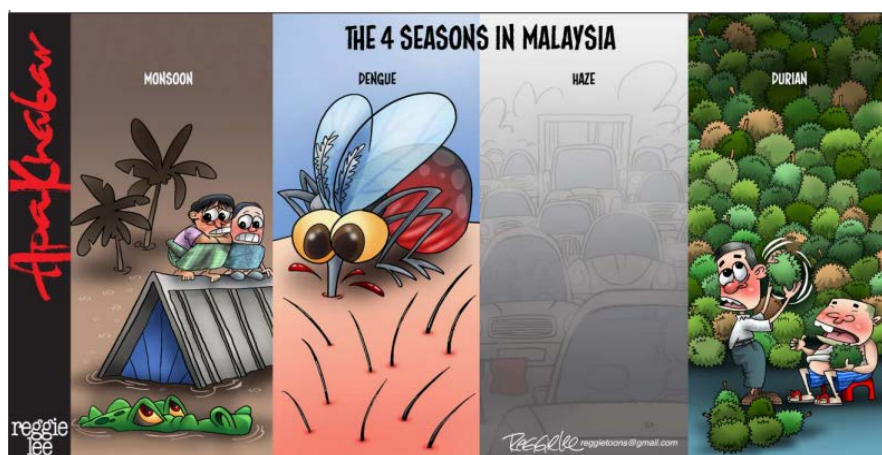


Figure 2. Cartoon appearing in the Malaysian Newspaper The Star (Lee, 2015)

Almost four decades have elapsed since transboundary haze became a regular occurrence since it first emerged. The literature has explained the political gridlock that prevents the eradication of haze by highlighting the complex public-private patronage networks that tolerate the problem (Varkkey 2016), the network's deployment of denialist politics and divergent knowledge (Liu et al. 2020; Goldstein 2016), and distraction by blame attribution (e.g. Jong, 2022). However, to the best of our knowledge, the literature has yet to systematically consider the politics behind the social construction of 'haze season' and the subsequent politicisation of the concept in relation to mitigating future haze episodes and adapting to existing levels of pollution. This deceptively simple framework of 'seasonality' is inherently political, as it directly feeds back to how society constructs the future environment by shaping how political actors perceive the problem and subsequently design, implement, and justify the (non)action taken (Varkkey, 2016). This includes but is not limited to (1) the politics of taking transboundary mitigative action, which entails navigation of diplomatic tension between countries that produce, consume and invest in palm oil and countries affected by haze; (2) politics of supply chain accountability, which entails holding farmers, traders, agroforestry firms and their investors accountable for contributions to forest and peatland degradation; and (3) politics of adaptation, where resources need to be (re)distributed at national and sub-national levels to cope with disruptions caused by haze, including public health service provision, as well as compensating for losses resulting from shutting schools, workplaces, and critical infrastructure.

Taking a discourse analysis approach, this paper will peel back underlying politics in the construction, emergence, and deployment of the 'haze season' to address the following research questions:

1. What is the landscape of actors involved in the construction, emergence, and deployment of the concept of 'haze season'?
2. How is 'haze season' talked about by different groups of political actors, and for what purposes?
3. What implications for mitigating and adapting to haze do these discourses bear?

This paper contributes to the literature in several ways. Firstly, it addresses the issue of transboundary environmental governance in Southeast Asia and how it relates to the north-south tension between agro-commodity consumer/investor nations and producing nations (Choiruzzad et al., 2021). This is an important topic that has received considerable attention in recent years, given the increasing number of regional transboundary environmental issues, including haze. Secondly, the paper highlights the utility of environmental discourse literature

in explaining non-action or bottlenecks in environmental action. This literature provides insight into how different actors construct, frame, and communicate environmental issues and how these discourses shape policy outcomes. By applying a discourse analysis approach to the concept of ‘haze season’, this paper seeks to reveal the underlying politics and power dynamics that shape the construction and deployment of this concept and the implications of these discourses for mitigating and adapting to haze. Finally, the paper introduces the concept of ‘Season of the Anthropocene’ as a tool for making sense of how society organises irreversible (or extremely difficult to mitigate) but recurring anthropogenic environmental changes. This concept acknowledges the unprecedented scale and scope of human impacts on the environment and emphasises the need for adaptive strategies that are flexible, innovative, and responsive to changing conditions. By exploring the emergence and construction of the ‘haze season’, this paper contributes to a growing body of literature on the challenges and opportunities of governing the Anthropocene.

Literature review: Seasonality, Patronage Politics, and Transboundary Environmental Governance

‘Seasons’ have historically been a framework that societies adopt to organise their livelihoods and activities around the expectation of recurrent environmental, social, and cultural events (Krause, 2013). Anthropologists have stretched the conventional conceptualisation of seasons as specific temporal blocks of the year that are typically organised around atmospheric changes to defining seasons as ‘rhythms’ of life cycles (Ingold and Kurttilla, 2000; Krause, 2013; Lefebvre, 2004). This view argues that seasons are human activities interwoven with the rhythms of other more-than-human activities, such as the activities of animals, plant growth and decay, weather and alterations of the timing of day and night (Ingold and Kurttilla, 2000). Once an emergent season has been constructed by society, socio-environmental feedback may lead to changes in the timing and/or severity of the emergent season as society responds with mitigating or adaptive action.

The haze season in Southeast Asia is affected by such feedback (see Figure 3). Haze is caused by the interaction of natural alternation between dry and wet seasons in tropical Southeast Asia and unsustainable agroforestry practices, where peatland is drained to create more usable land for the production of palm oil and paper, causing a traditionally waterlogged landscape to dry up and releasing greenhouse gases into the atmosphere. Additionally, to

minimise cost, fire is sometimes used to clear land for plantation. Drained peatland during the dry season is fire-prone, and smouldering fires are extremely difficult to put out during the dry season when there is a shortage of rainfall. As a result, fires can smoulder for long periods, and the smoke from peatland fires blows across to neighbouring countries. During El Niño years, dry seasons are more severe and stretch for a longer period, which increases the risk of fire and lengthens the burning period. Haze is now considered an annual event in equatorial Southeast Asia that affects the health of millions.

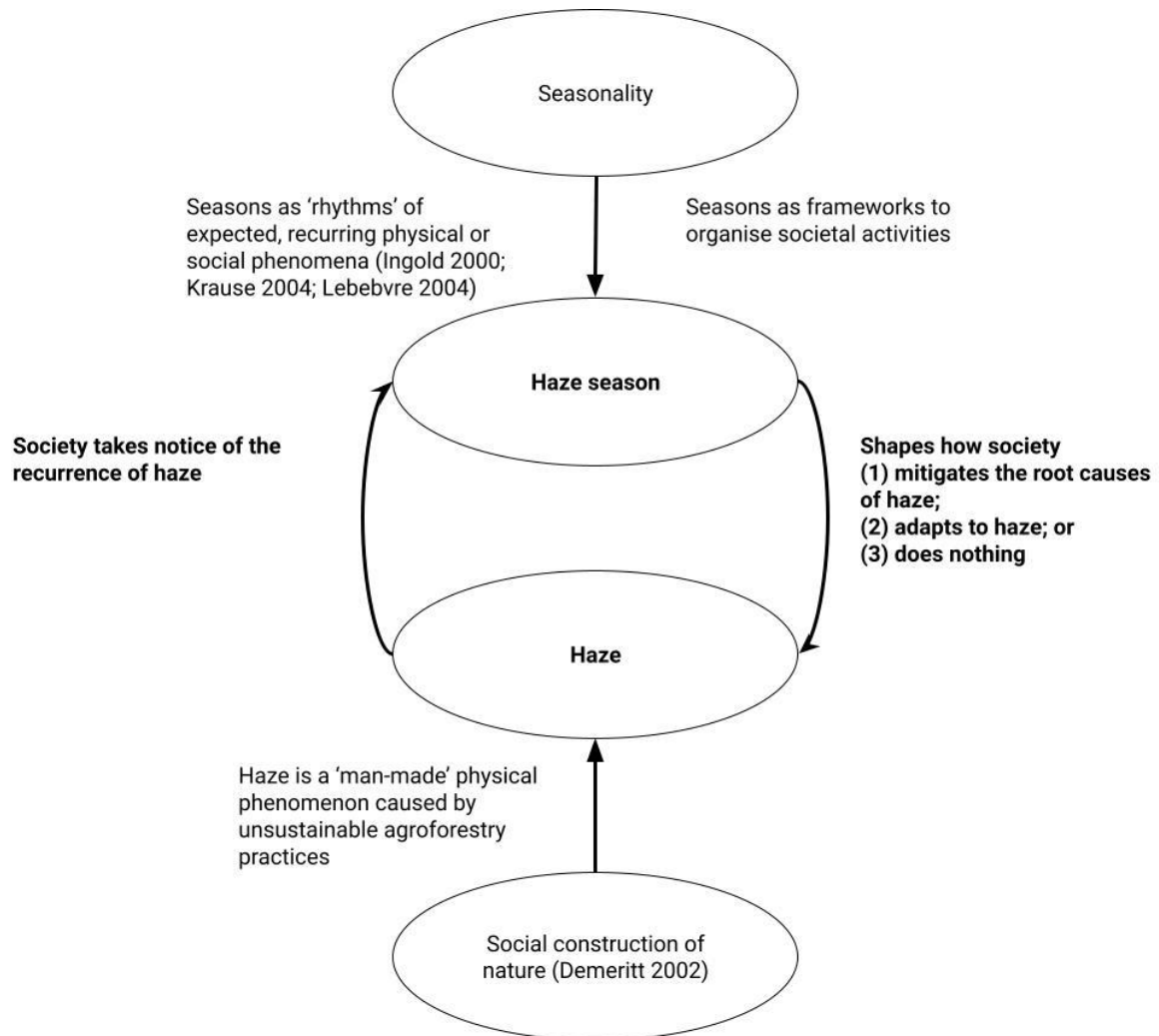


Figure 3. Visual conceptualisation of the social construction of 'haze season' (Liu et al., 2023)

How society explains the emergence of haze and how society subsequently takes (non) action to mitigate or adapt to haze are politically-laden decisions involving the calculation of economic, environmental, and diplomatic considerations at different scales (see right-hand side of Figure 3). The causes of transboundary haze in Indonesia, Malaysia, and Singapore are positioned at the politically-sensitive intersection between tensions arising from the urban-rural

divide (Krishna et al., 2017; Naylor et al., 2019; Rakatama and Pandit, 2020), the hybridity of formal- and informal governance structures (Astuti, 2021; Miller et al., 2020), global north-global south supply and investment chain management (Miller, 2022; Pramudya et al., 2017) and transboundary environmental governance in ASEAN (J. S. H. Lee et al., 2016; Varkkey, 2022). As such, the governance of agroforestry sustainability, particularly the governance of tropical peatlands, is highly political (Varkkey, 2016). In particular, haze eradication is complicated by patronage politics and transboundary environmental governance.

Patronage politics, which creates mutually beneficial relationships between political and corporate elites in the regional palm oil sector, has created a culture of impunity among corporate actors implicated in haze-producing fires (Varkkey, 2016). Patronage networks also mobilise the politics of denial, underpinned by divergent knowledge about the environmental damage of tropical peatland degradation, to shut down critics and deter sustainability reforms (Goldstein, 2016). These messages are often mass-communicated by state-controlled media, which misinforms and disarms the general public from taking appropriate action to hold governments and corporations accountable for causing environmental and public health degradation (Forsyth, 2014; Liu et al., 2020). In the face of peatland exploitation and haze, rural communities are often the worst affected. Ironically, one of the key pillars of the divergent narrative that justifies peatland exploitation is the eradication of rural poverty (Liu et al., 2020). However, research suggests that palm oil production, primarily dominated by transnational corporate actors, comes at the expense of the welfare and rights of local communities (Li, 2018).

At the regional scale, transboundary governance of the root causes of pollution is faced with diplomatic political challenges (Forsyth, 2014; Lee, Jaafar, et al., 2016). Extra-territorial environmental governance often faces coordination and knowledge limitations (Milman et al., 2020) in the face of unstable domestic politics in Indonesia and Malaysia, uneven economic and environmental stakes in haze, and underlying diplomatic tensions between ASEAN nations, introducing effective, coordinated governance measures have proven to be a challenge. In 2014, Singapore implemented the Transboundary Haze Pollution Act that sought to prosecute companies responsible for causing haze (Lee, Jaafar, et al., 2016). However, attributing responsibility within reasonable levels of certainty to be held up in a court of law has proven to be a challenge in long, complex supply chains that involve multiple layers of intermediaries sourcing from a mosaic of smallholder farmers. Moreover, Singapore lacks the extra-jurisdictional power to prosecute Indonesian and Malaysian firms. Despite efforts at the ASEAN level to address haze, it is often a hot topic for finger-pointing between nations,

corporations, and financial institutions (Forsyth, 2014), which results in enhanced diplomatic tension and little progress in addressing the problem at hand.

In sum, eradicating haze and resolving environmental degradation and poor corporate governance underpinning the phenomenon is stuck in political gridlock. The remainder of this paper will deep-dive into how this gridlock came about by unpacking the divergent interpretations of the causes and nature of the issue as well as potential solutions. It explores how political actors navigate the haze crisis and justify its recurrence in a region where environmental authoritarianism advocates for a win-win between economic prosperity and environmental protection and where civil society is heavily censored. It also considers the extent to which haze seasonality undermines the political legitimacy of Southeast Asia's political and business elites and how these elites are constructing the social rhetoric around haze to protect their legitimacy.

Methodology

To answer our research questions, we took a three-step methodological approach to analyse the politicisation of the concept of 'haze season' (Figure 4). Our research design is rooted in environmental discourse analysis. Discourse analysis is an informative approach to investigating complex and contested environmental policy processes, uncovering the underlying power dynamics and political objectives, and explaining any (un)intended environmental outcomes (Hajer, 1995). Other examples of using discourse analysis to unpack different 'framings' of complex, conflicted environmental issues include climate vulnerability, which has both scientific and human security framing. These framings are rooted in different contexts and differ fundamentally in their conceptualisation of the character and causes of vulnerability, and therefore cannot be incorporated under the same framework but rather should be approached through complementary methods (Eriksen and O'Brien, 2007). Environmental discourse analysis has also been deployed to scrutinise class and gendered power dynamics in climate justice by differentiating between elite and grassroots non-governmental organisations (Schlosberg and Collins, 2014).

We identify discursive themes and correlating discursive agents and analyse how the emergence, articulation, popularisation, and demise of different themes construct divergent environmental perceptions, actions, and policies (Hajer, 1993; Leipold et al., 2019). Hajer (1995) introduces storylines as 'a generative sort of narrative that allows actors to draw upon

various discursive categories to give meaning to specific physical or social phenomena'. Various scholars have used the concept of storylines to categorise discursive narratives over a particular issue, for example, Elsasser and Dunlap (2013) for climate change denialism and Thomalla et al. (2018) for disaster recovery. Separately, scholars have conceptualised corporations' climate narratives as storylines (Dahl and Fløttum, 2019; Moezzi et al., 2017; Roe, 1994) that flows from problematisation (the introduction), the actors and actions it involves (the characters) and the suggested solution (the ending). This, in turn, puts boundaries on institutional perceptions of the problem, which follows through to justify the (non)action taken (Stibbe, 2021).

Following this methodological tradition of identifying emergent discourse to uncover the evolving meaning society has given to environmental change, we begin our analysis with a news article search and analysis. We drew from an existing database created in the first phase of our research project, where we identified English-, Bahasa Malaysia-, and Bahasa Indonesia-language articles containing 'haze season' between 1998-2021 published in Indonesia, Malaysia and Singapore from Factiva and LexisNexis (Liu et al., 2023) Media analysis follows past studies of public discourse and social perception of air pollution and the agroforestry sector in Southeast Asia (Forsyth, 2014; Liu et al., 2020; Manzo et al., 2020; Massey, 2000; McLellan, 2001). The media tends to amplify societal matters of concern. In the case of Southeast Asia, the highly regulated and censored media also acts as a government mouthpiece (Forsyth, 2014).

To home in on the politicisation of 'haze season', we focussed on how 'haze season' is articulated by political actors. We adopt the view that every individual is a political being. Therefore, our analysis included quotes from high-ranking politicians and corporate CEOs, NGOs, academics and scientists to citizens in the articles. We identified quotes and paraphrases within these newspaper articles. We recorded the content of the quote, where it appeared in the article, the context in which a statement is made, and to whom statements are directed to determine the orientations and concerns of the speaker and identify their language use. In doing so, we sought to identify the divergence of the objectives and language of different actors and how their narratives interact.

The second step of our methodology entails a document analysis. We used Google Search to identify publicly available documents that contained the phrases 'haze season', 'musim asap' (Bahasa Indonesia) or 'musim jerebu' (Bahasa Malaysia). To exclude media articles and increase the relevance of results, additional keywords like 'Hansard', 'annual report', 'press release', 'MP' (Member of Parliament) and 'pdf' (to indicate the publication of a report or any official documents) were used. We analysed 119 documents, including

parliamentary speeches drawn from Hansards, corporate and government press releases, policy documents, NGO reports, and corporate reports. As in our media analysis, we identified the content, context and language in which ‘haze season’ is mentioned in the document. This step provides the full context and sentiment of policies and advocacy from key political stakeholders. We did exclude 22 documents because they originated from beyond Malaysia, Singapore, and Indonesia (e.g. the Swiss Re’s ‘haze insurance’) from our corpus, but we read, coded, and analysed them for triangulation purposes and to further inform our results.

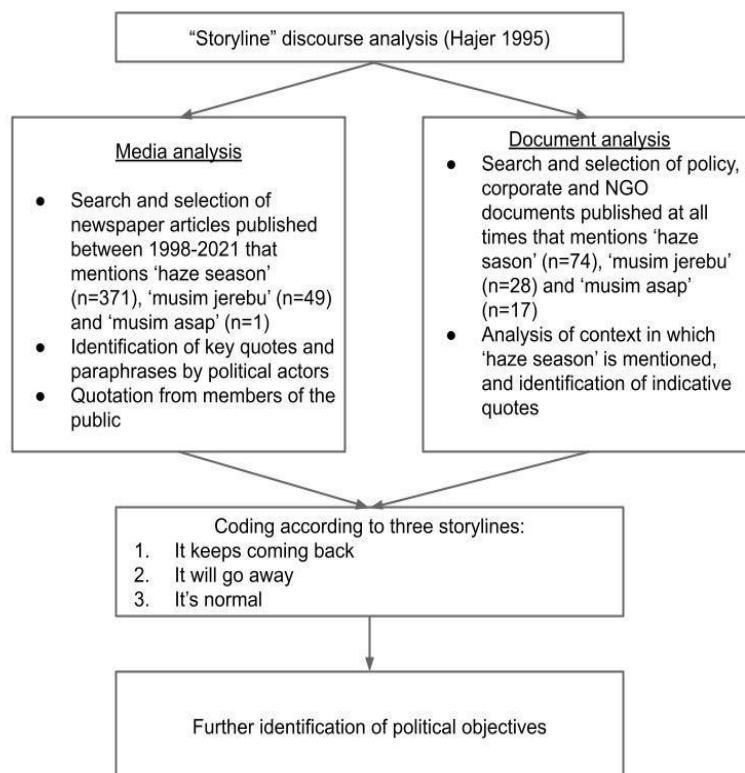


Figure 4. Three-step methodological approach developed to analyse the politicisation of ‘haze season’. Created by the authors.

Subsequently, one pair of researchers openly coded the news articles and documents to identify emergent themes. After the first round of open coding, the first pair of researchers identified three recurrent storylines (see further discussion in Section 4). They also coded the documents for key stakeholders quoted and the contexts in which ‘haze season’ is mentioned. The second pair of researchers then conducted a second round of coding of the news articles and documents according to these storylines. Some news articles and documents were coded to have more than one storyline. This occurred when, for example, the phrase ‘haze season’ is used more than once, in different contexts, within the same piece. Some were found to have no storylines, for example, in very descriptive pieces like infographics (See Supplementary Information).

Results

We identified three key storylines: (1) ‘It Keeps Coming Back’, (2) ‘It Will Go Away’, and (3) ‘It’s Normal’. These storylines describe the recurrence of haze, but they depict three divergent interpretations and reactions to its recurrence. A summary description of the storylines is presented in Table 1. Table 2 presents the tabulation of media articles and documents by country, actor, and storyline.

Storyline	Description
1. ‘It Keeps Coming Back’	<ul style="list-style-type: none"> ● Increase social preparedness ● Can also speak to the failure of environmental policy and implementation among public and private sector actors
2. ‘It Will Go Away’	<ul style="list-style-type: none"> ● Haze is a temporary inconvenience that will be naturally resolved with the arrival of the rain ● Speaks to society’s resilient spirit ● May absolve governments of responsibility for providing adaptation support
3. ‘It’s Normal’	<ul style="list-style-type: none"> ● Society is forgetting a time before haze ● Haze as a new opportunity ● May absolve governments of responsibility for providing mitigation support

Table 1: Summary of Key Storylines

Storyline 1 (It Keeps Coming Back) describes the annual recurrence of haze, despite varying levels of severity year by year. It expresses frustration or even hopelessness over the failure to resolve the issue in the past decades, highlighting the recurrent negative impact on environmental quality, public health, and economic activity. It suggests a level of resignation that haze will not go away, despite being a completely anthropogenic phenomenon. This storyline tends to inform immediate- to short-term adaptation actions that individuals and society collective can take, for example, mask-wearing, and it does not necessarily motivate or empower medium- to short-term mitigation:

‘During the haze season, the government issued instructions to students in West Kalimantan to stay indoors to reduce the risk of developing Acute Respiratory Syndrome (ARS), an infection caused by inhaling high concentrations of Particulate Matter (PM10 and PM2.5) present in the air’ (Suryanata & Ergianto, 2021)

Our analysis found that storyline 1 is the most widely and evenly adopted across media and document types, countries, and actors. This storyline can be seen as a direct reflection of the phenomenon, as it closely matches the understanding of seasons in terms of the ‘rhythms’ of the life cycle. This is an important feature of seasonality, where the cycle shapes the societal expectation of an environmental phenomenon (Lefebvre, 2004; Liu et al., 2023). Understanding and accepting the haze as a recurrent phenomenon akin to a ‘season’ can increase a society’s preparedness to better weather future episodes, as the collective memory of seasons past can inform society on how they should respond to the next haze season. It also reflects that society continues to seek solutions to resolve and eliminate haze. This storyline can also speak to the failure of environmental policy and implementation among government actors. In other words, if environmental policies were better designed and implemented, the haze would not recur so often to the extent that a haze season can be socially constructed.

In contrast to storyline 1, storyline 2 (It Will Go Away) implies that the haze problem is only temporary, and one just has to wait for the arrival of the rain to naturally eradicate haze. It tends to highlight society’s resilient spirit in adapting to haze, as illustrated by a quote from a Letter to the Editor: ‘Our resilient nature has helped us come to terms with haze’ (Brian Yap, 2006)). This storyline does not necessarily encourage or empower mitigative action and may even serve to absolve governments and other responsible parties from the need to act, seeing that haze is only a temporary inconvenience which will resolve itself with time – just like the passing of the four seasons in temperate geographies.

Storyline 2 is the least adopted and sees a much higher use among government actors compared to corporates and civil society. The lower occurrence of this storyline might reflect the unpredictability of the haze season. A common narrative across all storylines is that while the haze season is generally understood to occur around July to October, the onset, duration, intensity and end of the season are unpredictable and vary from year to year. Most quotes coded to this storyline reflect a longer timeframe, spanning several years, with government and civil society actors suggesting that the haze season will no longer be a threat once effective conservation and/or fire prevention measures are put in place. However, this narrative repeats itself over 15 years, especially among government actors who repeatedly claim that the haze issue (and, therefore, the haze season) will cease to exist. For example, Rachmat Witoelar, Indonesia’s Environment Minister in 2006, was quoted as follows in 2006, before the more devastating haze seasons of 2009, 2015, and 2019: ‘Two years forbearance are asked of Indonesia’s neighbours before we see improvements’ (The Straits Times, 2006a).

In turn, storyline 3 (It's normal) represents a society that has forgotten a time before haze: 'It's become such a normal part of our lives that children growing up today might not believe that there was a time that we didn't have to breathe smoke particles at least once a year' (Brian Yap, 2006). It speaks to traditional understandings of seasons as specific temporal blocks of the year organised around atmospheric changes – like winter, spring, summer, and autumn in temperate countries or the wet (monsoon) and dry seasons in tropical geographies. Such seasons are taken as given, and society accepts them as they come, although the expectation of what these seasons look like from one year to the next is fluid: society understands that one summer may be hotter than another, and one monsoon may last longer. Even though there is an increased understanding that the haze issue is anthropogenic, as the haze season becomes increasingly normalised (more severe one year and less so the other, but taken as a given), society may 'forget' that haze is anthropogenic and hence avoidable. Unlike the other two storylines that acknowledge haze as a 'problem', this storyline tends to frame haze as a new political, social, and economic opportunity. Rather than seeking to resolve and reverse the root causes of haze, this storyline images a society that lives and works with haze. This storyline thus may also contribute to absolving governments of responsibility or pressure to mitigate the haze.

Storyline 3 is the second most widely adopted across media and document types and actors, but more so in Singapore and Malaysia and rarely in Indonesia. Note that not all parts of Indonesia experience haze. Importantly, the capital (Jakarta) and wealthier parts of the country (Java) do not experience haze. Haze is not part of their daily life or memory. Therefore, there isn't a need to 'normalise' haze to justify any immediate environmental, public health, or economic threat. Those commenting on the haze season are reacting to questions about its reoccurrence and when it might stop. Normalisation associated with storyline 3 is a deeper, less reactionary narrative that reflects a society that has assimilated the lived experience of haze into its understanding of annual rhythms.

MEDIA CORPUS					DOCUMENTS CORPUS					Grand Total
Storyline	Gov	Cor	CS	Total	Storyline	Gov	Cor	CS	Total	
MY					MY					
1	28	15	5	48	1	14	1	7	22	70
2	6	0	0	6	2	1	0	0	1	7
3	27	10	0	37	3	7	4	0	11	48
SG					SG					
1	26	1	4	31	1	12	0	3	15	46
2	6	2	5	13	2	0	0	0	0	13
3	22	21	4	47	3	2	6	0	8	55
ID					ID					
1	24	2	12	38	1	3	0	10	13	51
2	9	2	1	12	2	0	0	2	2	14
3	6	1	2	9	3	0	1	2	3	12
Grand Total	154	54	33	241	Grand Total	39	12	24	75	316

Table 2: Tabulation of media articles and documents by country, actor (government, corporate, civil society), and storyline

Our analysis identified three main groups of actors using or engaging with the concept of 'haze season' in media articles and other documents: government, corporations, and civil society. Among media articles, the government is the most widely quoted actor category. Most documentation on the haze season also comes from the government. This is unsurprising, as the government is usually the first port of call in delivering information, policy statements, and political decisions on most issues of public concern (Gelders et al., 2007; Gelders and Ihlen, 2010; Howlett, 2009), like haze. While storyline 1 (It Keeps Coming Back) remains the most favoured storyline by the governments of all three countries, storyline 3 (It's Normal) is used more often among Malaysian and Singaporean governments, compared to storyline 2 (It Will Go Away) which is used more often by the Indonesian government.

Following the government is the voice of corporations, both from within media articles and documents. Notably, while corporations are quoted quite regularly in the media, the numbers for documents are comparatively low. Furthermore, corporations not related to haze communicate on this issue much more than corporations perceived to be directly responsible

for haze, like palm oil and pulp and paper plantations. This may speak to the ongoing problem of corporate transparency and disclosure in Southeast Asia, where corporations are usually unwilling to make sensitive information, particularly that related to sustainability, available in the public sphere (Arena et al., 2018; Tran and Beddewela, 2020; Wijayati et al., 2015). While storyline 2 is rarely used by corporations in all countries, Singaporean corporations tend to gravitate towards storyline 3, whereas Malaysian corporations use storylines 1 and 3 almost equally. The voice of Indonesian corporations is comparatively quieter in all three storylines. Finally, all categories of civil society are the least commonly cited group of actors in both media and document corpuses analysed. In line with the common understanding that Indonesia has a more vibrant civil society scene compared to many other countries in Southeast Asia (Fazwan and Farouk, 2011; Varkkey, 2022; Yazid and Pakpahan, 2020), our tabulations show most civil society sources coming from Indonesia. Across the board, however, civil society rarely uses storylines 2 and 3 and prefers to adopt storyline 1.

Discussion

The context in which different societal actors contribute to the construction of haze seasonality through the adoption and deployment of various discourses gives divergent meanings to transboundary haze. Akin to how the concept of 'ecological modernisation' has underpinned the rise of market-based solutions to the acid rain problem in the US and the Netherlands (Hajer, 1995), the 'haze season' bears direct implications on societal (non)action towards mitigation and adaptation. Indeed, Feindt and Oels (2005) posit that 'the articulation of an environmental problem shapes if and how the problem is dealt with'. If actors relate to discourse strategically, the right storyline can become an important form of agency: it can enable these actors by shaping their field of opportunities and policy options (Hajer, 1995). At the same time, how different actors measure, make sense of, and take action towards haze are inherently political decisions that hinge on the conflicting interests of other actors. Similar workings are visible in other hotly contested sustainability realms, like sustainable finance (Strauß, 2021). Scholars have also pointed out how politicians and government actors are often able to strategically 'use' discourse particularly well (Fischer, 2003), especially within the media, where politicians and government actors are often given more importance over other actors like scientists and civil society (Calsamiglia and Ferrero, 2003; Ekayani et al., 2016; Miller and Riechert, 2000). This

may be especially so in countries with limited press freedom like Indonesia, Malaysia, and Singapore (see Forsyth, 2014).

Different actors interpret and engage in 'haze season' discourse based on their contexts and objectives. Countries like Indonesia, Malaysia, and Singapore, though all affected by haze, hold different positions relative to one other. Each group of actors pursues specific political goals in the 'haze season' discourse, leading to various environmental and social outcomes.

Actor deployment of storylines

In Table 3, we developed a schematic of storylines based on our discourse analysis to illustrate how different types of actors interpret and deploy the same storyline differently to achieve different political objectives. We found that governments deploy a mix of storylines to achieve several different objectives: reinforcing legitimacy, managing expectations, and deflecting responsibility, reflecting the position they hold as either a source or recipient country of haze. While corporate plantations use storylines 2 (It Keeps Coming Back) and 3 (It Will Go Away) to deflect responsibility, non-plantation corporations generally use storyline 1 (It Keeps Coming Back) to achieve different objectives, namely risk management and commoditisation. The same storyline 1, however, is used by civil society for mass mobilisation of the public over haze. While the objectives of government and corporate players are often mutually supportive of complementary, the mass mobilisation objective of civil society often conflicts with such objectives.

	Government	Plantation companies	Non-plantation companies	Civil Society
Reinforcing legitimacy	● ▲ ■		●	
Managing expectations	● ▲ ■			
Deflecting responsibility	● ▲ ■	▲ ■		
Commoditisation			● ■	
Mass mobilisation				●

Legend: ● = It keeps coming back; ▲ = It will go away; ■ = It is normal

Table 3: Schematic of storylines deployed by different actors for different political objectives

A large part of government rhetoric around the 'haze season' has been strategically deployed to secure advantageous political position, despite the repeated incidences being an indication of policy, governance, and diplomatic failure on the part of these governments. The strongest political objective that can be seen coming from Indonesian actors is deflecting responsibility, either from its own people or from its neighbours. This is unsurprising considering that Indonesia is the biggest source of regional haze and often suffers from finger-pointing from other governments and civil society actors whenever haze occurs. The Indonesian government has mainly deployed storylines 1 (It Keeps Coming Back) and 2 (It Will Go Away) to achieve this political objective, both at the national and international levels. The Indonesian government has used storyline 1 to highlight that the haze 'keeps coming back' due to the irresponsible behaviour of smallholder farmers (petani-petani) (Marlina, 2017) burning the land, not due to weakness of government policy or enforcement.

At the regional level, Indonesia's Vice President at the time declared, 'Indonesia's neighbours should be grateful for the air quality over the other 11 months of the year' (The Straits Times, 2015) as an example of the deployment of storyline 2. By reminding the region that haze will eventually be replaced by fresh air, Indonesia is deflecting responsibility for the haze by reminding the region that Indonesia is responsible for something much more precious (fresh air) for a much higher duration of time (11 months in a year). In response, Malaysia and Singapore use storyline 1 to deflect responsibility by highlighting the fact they have limited control over the root causes of haze (Malaysia: *'We don't want to pick a fight but we just want to notify them [Indonesia] that the haze is back'*) (The Star, 2016) and to imply that they are prepared to provide assistance to Indonesia, but Indonesia is the country which is not prepared to accept the assistance (Singapore: *'We will see what we can do to help prevent more fires. If Indonesia asks for help, we will see if we can send other kinds of help'*) (The Straits Times, 2006b). As a smaller source of the haze, the Malaysian government also uses storyline 3 to deflect responsibility away from the anthropogenic causes towards 'natural' factors like El Nino and wind direction. For example, in a speech by the Mayor of Kuala Lumpur, he indicated that haze was caused by *'various factors including seasonal changes, namely the South-West monsoon, dry weather and open land burning'* (MBPJ, 2019), with anthropogenic burning listed last. Positioning haze as a natural occurrence, in this case, aims to absolve the Malaysian government from having to take responsibility for mitigating it.

In contrast, the Singaporean and Malaysian governments use all three storylines to highlight what they have done to minimise the short-term harm to health and the economy and propose a way to 'live with haze'. These narratives speak to the broader political objectives of

reinforcing legitimacy and managing expectations. Reinforcing legitimacy involves highlighting what the government has done in response to haze to show the public that the government is, firstly, not complacent in the face of this problem and, secondly, the action being taken is effective. This quote illustrates the Singaporean Environment Minister using storyline 1 to reinforce the effectiveness of Singapore's adaptation actions:

'We were already gearing up for the onset of the haze season – in fact, this is somewhat earlier than the usual haze season in other years. But the situation deteriorated sharply within a short period. Nonetheless, given the circumstances, our officers acted swiftly and worked very hard to detect, give warning and put in place mitigation measures' (Balakrishnan, 2013)

Both governments deploy storyline 3 (It's Normal) to manage public expectations as to what to expect during the haze and the duration of the haze itself. Through policy initiatives such as the Ministry of Health Service Requirement Guidelines, Singapore is making adjustments for its public to 'live with haze': 'Measures can be taken to create barriers between indoor and outdoor air, treatment of outdoor air, and regular maintenance of ventilation systems prior to the haze season' (Ministry of Health Singapore, 2018). Taking a different approach, Malaysia has used this storyline to reduce panic within society:

'The DOE's monitoring results throughout this haze season found that carbon monoxide (CO) concentration readings were low and less than the 'Recommended Malaysia Air Quality Guidelines', which is below 30 ppm (1 hour) or 35 micrograms per cubic meter (1 hour). Therefore, it does not cause the yellow haze phenomenon' (translation, Abdullah, 2015).

Both governments also often use storyline 2 to manage the public's expectations as to when they can expect the haze to end. Illustrative of this are two media articles which, while not using the phrase 'haze season', make reference to seasonal factors, i.e. the monsoon: *'The haze situation [in Malaysia] is estimated to improve once the monsoon wind direction changes at the end of September'* (Ram, 2019) and Singapore *'can expect more rain and less haze in the coming weeks with the south-west monsoon season transitioning into inter-monsoon conditions'* (Teng, 2014).

Followed by governments is the voice of corporations. Unsurprisingly, different types of corporations can be seen to deploy certain storylines to achieve different political objectives, depending on whether or not they are perceived to be directly involved or responsible for the haze. Corporate plantations, whose practices on the ground are often directly or indirectly linked to haze-producing fires, have generally avoided engaging with this issue in the public

sphere, understandably given its sensitive nature. When they do, however, they often use storyline 3 (It's Normal) to deflect responsibility for the haze. Not being viewed as responsible for (or, in many cases, guilty of) causing haze is, of course, important to plantations from an economic (public relations, consumer perception) as well as political governance angle (licensing, enforcement). Non-plantation corporations, on the other hand, view the haze season as a political and economic opportunity and have used storylines 1 (It Keeps Coming Back) and 3 (It's Normal) as a form of CSR to manage risk and for commoditisation. Companies have put out haze season 'to do/don't do lists' and advisories as a form of CSR to help the public cope with haze. This follows the understanding of legitimacy theory, where a corporate organisation needs to maintain a good state of legitimacy through which society allows the organisation its continued existence (Fernando and Lawrence, 2014). In this case, such corporations partake in public discourses around haze to brand themselves as private-sector institutions that care about public health and well-being.

Non-plantation corporations are also seen to deploy both storylines to commoditise the haze season. For example, the Malaysian medical service provider PMCare uses storyline 1 to remind the public to 'take time to discuss with your doctor if you need to make any additional preparations to face the haze season' (PMCare, 2019), which is indirectly encouraging people to use their services. Singaporean companies, however, tend to deploy storyline 3 more often for commoditisation. These corporations seem willing to normalise the 'haze season' to capitalise on it and exploit the business opportunities associated with the season (e.g. health products, medical check-ups, and indoor leisure activities). Rather than focusing on haze as a problem (which they do not deny), they choose to look at the opportunities it brings with the problem. This aligns with Singapore's highly capitalist society (Rodan, 2016; Shatkin, 2014; Williams, 1992). Notably, non-plantation companies in Indonesia do not often engage in the haze season discourse. As haze mainly affects the lesser-developed regions of Sumatra and Kalimantan, it probably does not figure into corporate planning for major Indonesian non-plantation companies, which mostly function out of Jakarta.

Finally, we observe that civil society in all three countries generally views the matter critically, as a systemic failure of the government or as profiteering decisions of corporations:

'the main report also describes the role of the Riau provincial government which is considered slow in dealing with problems that have been repeated for 18 years' (translation, Soenmi, 2015)

'Forest destruction can result in environmental disasters, both floods and droughts and namely the dry and rainy seasons, now they have increased to several seasons, namely apart from the rainy and dry seasons, flood and haze seasons have been added as souvenirs for the development of large-scale oil palm plantations' (translation, Surambo, 2015).

Hence it would be unlikely for civil society to endorse any storylines that trivialise (It Will Go Away) or normalise (It's Normal) the phenomenon. Indeed, it can be seen that they almost exclusively deploy storyline 1 (It Keeps Coming Back) for mass mobilisation. For example, both Klima Action Malaysia (KAMY, 2021) and Greenpeace Malaysia (Greenpeace Malaysia, 2022) use this storyline as a call to action to support their respective campaigns. However, as civil society is relatively weak in Malaysia and Singapore, and the outer islands of Indonesia (compared to Java), the effectiveness of such movements remains to be seen. Furthermore, their relatively weaker political position may confine civil society action to the level of criticism alone, without the opportunity for civil society to be included more meaningfully in decision-making processes towards finding a lasting solution against the haze.

Patronage, politics of denial, and feedback loops

Our findings highlight how divergent deployments of the 'haze season' rhetoric can shape the mechanisms and processes behind effective haze adaptation and mitigation. Actors engage with the same concept differently, working towards their own political objectives within traditional patronage structures. The public arena, where this rhetoric plays out, becomes the arena of a protracted tug-of-war of different objectives as the haze becomes increasingly politicised season after season. Our findings thus support the conceptual relevance of 'seasonality' as a framework for understanding social perception and construction of present and future environmental change.

The political objectives of the government and corporate actors identified above can be seen to be mutually supportive. Both types of actors place political importance on deflecting responsibility for the haze. The haze is often understood as equal parts unsustainable practises of large-scale plantation companies that directly or indirectly cause fires (peatland drainage, improper water management, land conflicts) and the inability or unwillingness of local and regional governments to take necessary measures to prevent these fires from happening (regulatory, enforcement, ASEAN cooperation) (Varkkey, 2016). As the haze season repeatedly returns, the failures of these government and corporate actors are amplified and undermine the

political legitimacy of these elites. Therefore, it is in both actors' interests to deny that they are responsible for the haze, even while both types of actors improve their governance structures and on-the-ground practices. A notable illustration of these mutually supportive patterns is an excerpt from the blog of the current Indonesian Environment Minister: 'If companies can take care of the environment, why can't villagers do it?' (translation, Admin Menteri LHK, 2016). The alignment of government and plantation corporate narratives constitutes a politics of denial, which is described by Liu et al. (2020) as the adoption of 'divergent knowledge' (rather than scientific evidence) (Goldstein 2016), as well as detracting attention away from the urgency and severity of haze. Denialism legitimises ongoing unsustainable agricultural practices, which in turn reflects traditional patterns of patronage networks drawn clear; where government and corporate elites mutually tolerate and encourage low-cost unsustainable agroforestry practices that lead to haze. Motivated by both economic and developmental goals, well-connected corporate elites can act with impunity as regulations are weakly enforced (Varkkey, 2016). As a result, haze, an anthropogenic phenomenon, returns with such regularity to create a new, widely recognised season.

Governmental objectives also align with those of non-plantation corporations. The governments' objectives of reinforcing their legitimacy in highlighting their efforts in safeguarding the public's well-being during haze dovetail with the efforts of non-plantations corporations to show that they are good corporate citizens who care about public health in haze season. Governments' objectives of managing expectations of the public during haze also reinforce non-plantation corporates' objectives of commoditisation. Both of these objectives revolve around the pragmatic understanding that both governments and corporations are making adjustments to 'live with haze'. The ability of governments to manage the public's expectations during haze mutually reinforces the ability of corporations to make a profit out of it and vice versa.

These objectives, of course, are all conflicting with the political objectives of civil society actors. In the patronage literature, it is understood that the symbiotic relationship between the government and corporate elites allows for the pursuit of economic and political gains at the expense of the public good (Varkkey, 2016). In the patronage framework, civil society, and its socio-political interests, remains marginalised. Our analysis of the 'haze season' discourse shows that these civil society actors fully realise their marginalised position, often highlighting how the haze is (re)creating massive public burdens and calling for mass mobilisation in protest. However, the comparatively low prominence of civil society voices in our tabulation highlights underlying issues of censorship and suppression. Quotes like 'millions

of people in Southeast Asia, including Singaporeans, suffer during the annual haze season' (WWF Singapore, 2015) and 'year-in and year-out, the Southeast Asian region prepares ourselves and our masks for the haze season' (Greenpeace Malaysia, 2022) highlight the collective feeling of helplessness even while these civil society groups push for mass mobilisation through petitions and public protests. Given that civil society is the only actor group actively working to break the feedback loop of recurring haze, its marginalised voice lacks the capacity to challenge the rhetoric put forward by the better-resourced government-corporate patronage network.

Conclusion

Our framework, centred around the concept of 'seasons in the Anthropocene,' raises important considerations about how we approach and address environmental change. While a seasonality lens can provide valuable indicators to recognise and understand societal reactions to such events, there is a risk of normalising the problem and hindering effective action. By examining the politicisation of seasonality, we gain insights into the (non)action taken in mitigating and adapting to anthropogenic environmental change. Our findings demonstrate how the imbalanced and divergent deployment of seasonality by different actors contributes to the gridlock in eradicating haze, highlighting the significance of political narratives in shaping environmental responses. Future research on 'haze season' should investigate how 'seasonality' discourse evolves at different political juncture points.

As we anticipate the emergence of new 'seasons of the Anthropocene,' especially in climate-vulnerable regions, it becomes crucial to reflect on the politics behind these constructions of nature and their potential feedback effect for building a liveable future. The construction of new 'seasons' can indicate social awareness, preparedness, and resilience to environmental change events. At the same time, it inadvertently normalises these anthropogenic environmental change phenomena, necessitating critical scrutiny of the objectives, processes, and actors involved in the construction and deliberation of the social meaning of new seasons. By critically evaluating how 'seasonality' shapes social and political discourse and response to environmental change, we can better navigate the complexities of the Anthropocene and strive towards a more resilient and harmonious coexistence with our planet. To this end, we call for an expansion of the scope of 'seasonality' research in geographies facing different types of environmental change with different political structures.

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