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**HAZE CONTROL AND THE OIL PALM FARMER – A REVIEW OF POLICY OPTIONS**

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*LMC International Ltd, Singapore**\*Corresponding author: yuleng@hotmail.com***SUMMARY**

Southeast Asia has arguably seen the worst-ever, certainly the longest, peat-driven haze-smoke pollution between September and November 2015. Over 100,000 fires have burned some two million hectares, apparently worsened by El Nino climatic conditions and the Indonesian electoral cycle. Some 43 million Indonesians were exposed to toxic smog in Kalimantan and Sumatra. Neighbouring countries also endured the haze-smoke drift. This decades-old problem erupted in August 1997, presumably for the expansion of oil palm and other cash crops. This led the Association of Southeast Asian Nations (ASEAN) to sign the 2002 Transboundary Haze Pollution Agreement (ratified by Indonesia in 2014). It gave rise to the Europe-led non-government organisation (NGO) movement for sustainable palm oil. Despite these measures, the problem recurs yearly. We examine the political-economy of the sources and solutions of the problem from the perspective of the palm oil supply chain. Oil palm is a profitable commercial crop established as tolerating peat's wet and acidic conditions. Big companies have often targeted as the land clearing culprits, and many have knuckled down to the Roundtable on Sustainable Palm Oil (RSPO) certification and a few had Indonesian courts impose fines and jail terms for poor fire control efforts. Now, the immediate fire blame is shifting to independent farmers and smallholders as concessionaires have adjusted their practices. Despite the new blame-the-farmer trend, the authorities have started to revoke and freeze concessions. Also, the World Bank reckons that "a few hundred businesses and a few thousand farmers seek to profit from land and plantation speculation practices." We consider various policy options. Reactive policies include boycotts and buying sustainably certified products; these may be counter-productive as expected multi-tier prices, may suppress prices for farmers in the least desired peat zone product origins. Proactive solutions may seek to improve farmer economic outcomes (with consideration of product prices and/or subsidies) and extension services for responsible peat zone development. This paper expands on the authors' work in "Haze Control through the Sustenance of Indonesian Oil Palm Smallholders" in Thinking ASEAN Issue 5 / November 2015, The Habibie Center.

**Keywords:** *Palm oil, smallholder, Indonesia, air pollution, sustainable development*

**INTRODUCTION**

The Southeast Asian region has arguably seen the worst ever, certainly the longest, peat-driven haze-smoke pollution in the months of September till November in 2015.<sup>1</sup> Some 43 million Indonesians were exposed continuously to toxic smog in Kalimantan and Sumatra. In neighbouring Singapore and Malaysia, unhealthy to hazardous levels of haze-smoke were recorded causing the closing of schools and great consternation among the public. A number of Singapore retailers have stopped the sale of some products of alleged haze-causing companies (The Straits Times, 2015). This decades-old problem re-erupted in August 1997 when some 8 million hectares of forests were razed due to slash and burn land clearing of land presumably for oil palm crops and other cash crops (Golver and Jessup, 1999)<sup>2</sup>. The 1997 episode led the Association of Southeast Asian Nations (ASEAN) to sign the 2002 Transboundary Haze Pollution Agreement, which Indonesia ratified in 2014.<sup>3</sup>

This paper examines the political-economy of the sources and solutions for the fire-smoke-haze problem from the perspective of the palm oil supply chain. The dominant narrative of the peat fire and the resulting haze is the role of oil palm expansion into peat zones as the agricultural land frontier closes. Oil palm is regarded as a sure-win crop for companies and smallholders. Big companies have reduced fire burn problems in their concession zones

<sup>1</sup> There was already great concern in 2013 when the seasonal haze-smoke saw PSI readings in Singapore peaking at 226, Khor Reports (2013).

<sup>2</sup> The 1997 Operation Haze saw the involvement of Malaysian and Singapore firefighters on Indonesian soil fighting a desperate battle with the fires raging across Sumatra and Kalimantan over 25 days the numbers of hotspots reaching 37,938 in August 1997 and were it not for monsoon rains, the fires may not have doused.

<sup>3</sup> Status of Ratification, [http://haze.asean.org/?page\\_id=187](http://haze.asean.org/?page_id=187) (accessed 3 Nov 2015)

and the fire are now mostly outside of their boundaries; and many point out that it is hard to control the smallholders who are allowed to use fire under Indonesia regulations. NGOs like Greenpeace cite various problems: oil palm is planted on burnt out land and that in an average year fires cause an estimated 110,000 premature deaths across the region.

The 1997/98 peat fire and haze season gave rise to the Europe-led NGO movement for sustainable palm oil. But despite these efforts, haze-smoke pollution has continued on a yearly basis, due primarily to the burning on peat lands in Sumatra and Kalimantan. In 2015, fires have burnt over 2 million hectares of land, and over 100,000 fires have occurred (Business Times 2015, New York Times 2015a and 2015b). While El Nino climatic conditions exacerbate the situation, scientists consider that it is no longer a controlling factor, given regularity of the problem.<sup>4</sup> Environmental activism is even emerging near the major palm oil processing origins - in Singapore, Kuala Lumpur and Medan. The imperative for growing palm oil under Roundtable on Sustainable Palm Oil (RSPO) and other certifications increases, Indonesian courts have imposed fines and jail terms for poor fire control within concessions, and the immediate fire blame has shifted to independent farmers and smallholders. Despite the blame-the-farmer narrative, the Indonesian government has started to revoke and freeze concessions, and the World Bank reckons that ~~a~~ few hundred businesses and a few thousand farmers seek to profit from land and plantation speculation practices.”

We consider policy options for addressing the peat-haze-smoke problem. Reactive policies include: (i) boycotts – risk being counter-productive, (ii) buying sustainably certified products - of good but still limited reach and expected to create multi-tier prices, with potential to suppress product prices for its less desired peat zone origins and (iii) suing and penalizing companies. We also consider policy options to address a longer-term solution to the problem. Indonesia’s attention has turned to the interests and prospects of its oil palm smallholders. Proactive solutions should seek an understanding of and seek to improve farmer economic outcomes (with consideration of product prices and/or subsidies) and service delivery for responsible peat zone development for sustainable agriculture.

## DISCUSSION

### *Palm oil and concerns about —haze free” products*

The dominant narrative of the peat fire haze-smoke is the role of oil palm expansion into peat zones as the agricultural land frontier closes. Oil palm is a profitable commercial crop established as tolerating peat’s wet and acidic conditions. Its large-scale development on (relatively uninhabited) peat is eased by a lack of native land right claimants.<sup>5</sup> Big companies are often targeted as the culprits behind the land-clearing involving fire, whether they are directly involved in these activities or not.<sup>6</sup> In the past, NGO analysts have placed up to 80% of the responsibility for fires on the corporate players, and only 20 % on small farmers. The 1997/98 peat fire haze-smoke season gave rise to the Europe-led NGO movement for sustainable palm oil. As environmental concerns and the imperative for growing palm oil under RSPO and other certifications<sup>7</sup> increases, and Indonesian courts have imposed fines and jail terms for poor fire control within concessions, the immediate fire blame is shifting to independent farmers and smallholders.

In October 2015, amidst the haze-smoke crisis, there were sudden and unexpected shifts in Indonesia governance and policy over eco-sustainable palm oil. The mandatory Indonesia Sustainable Palm Oil (a re-regulation drive led by a unit of the Ministry of Agriculture and co-funded by the UNDP and others) had a surprise change in leadership. The big business-led Indonesia Palm Oil Pledge (IPOP) was ordered to dilute its efforts. The industry faces sustainability roll-back concerns as the Jokowi administration apparently stepped up concern for smallholder expansion and market access in the face of more restrictive sustainability policies and corporate pledges. Indonesia and Malaysia have also revived palm oil joint-marketing talks.

Consumer concerns are springing up within the region, activated by weeks of haze-smoke disruptions. Medan and Kuala Lumpur (key cities near major palm oil downstream processing and export centers) may join the burgeoning Singapore movement (now centering on boycotts on pulp and paper and heavy scrutiny of palm oil products). Some regional activists talk about —haze-free” products and these points to a difference between regional and international activists. It appears that the former care a bit less about biodiversity and deforestation or carbon stock agendas, which are prioritized by non-resident international NGOs. —Haze free” logically points to the rise of

<sup>4</sup> Universiti Malaya’s AEI-JPAS-CARUM Roundtable on Transboundary Pollution, 5 Nov 2015.

<sup>5</sup> Universiti Malaya’s AEI-JPAS-CARUM Roundtable on Transboundary Pollution, 5 Nov 2015.

<sup>6</sup> See the works of Helena Varkkey, Varkkey (2015a) which provides such a perspective. Varkkey shared her views on the 2015 haze, Varkkey (2015b).

<sup>7</sup> The Roundtable on Sustainable Palm Oil (RSPO), with the participation of the big integrated palm oil groups, was initiated by WWF. It has become the main certification for palm oil (non-fuel use) favoured by buyers in Europe and other developed markets. But it facing intense competition by apparently lower compliance cost ~~traceability~~ alternatives.

jurisdictional-based palm oil marketing efforts as haze-smoke origins are geographically concentrated. This may be at odds with the apparent palm oil “solidarity” reactions of October from national officialdom. Indeed, the 21 October 2015 decision by the Sabah state government (in East Malaysia) for sustainable palm oil within 10 years may trigger other well-positioned sub-national units to do likewise (The Borneo Post, 2015).

#### *Transmigration and small farmers in peat zones*

Recent studies have shown that small, independent growers, who have been encroaching on peat lands in Kalimantan and Sumatra, are a major cause of the haze-smoke. Dr Francis Ng, a botanist who was with the UN's FAO and Centre for International Forestry Research in Bogor, suggested that farmers who settled in Kalimantan through Indonesia's transmigration programme of the 1960s and 1970s may be responsible for peat fires (The Malaysian Insider, 2015). There may be literally millions of impoverished transmigrants, mostly Javanese and also locals including Dayaks, who continue to use fire when growing food like rice paddy, vegetables and fruits as well as rubber and oil palm. Lesley Potter (2012) describes the situation for the transmigrant scheme in Lamunti, Central Kalimantan (part of the abandoned mega rice project on 1.4 million hectares of peat) as follows:

*...a few years later, the rice was constantly failing and in 2006, all the crops failed. To grow fruit, they had first to burn the peat, but if they tried that in the dry season, the fire just spread and could not be contained. Plants that would grow were bananas, pineapple and rubber. One Javanese farmer noted that to succeed with oil palm, he had to use either chicken manure or commercial fertiliser. It was expensive, but as he had no experience with rubber, he preferred to try oil palm. The problems of the transmigrants included the cost of producing crops with limited capital and inconsistent help from district authorities....(they) had been promised they would receive food for five years, but after three years, it ceased. Local Dayaks were still waiting for the outcome of land claims against the government...*

A study by environmental scientists (Marlier *et al.*, 2015) clearly shows that in Sumatra 59% of fire emissions originate from outside timber and oil-palm concession boundaries. While in Kalimantan, non-concession fires play an even bigger role, with fires outside concessions generating 73% of all emissions and 76% of smoke affecting equatorial Southeast Asia has been frequently cited. In fact, recent data from the Global Forest Watch website (for 1 July to 2 November 2015) show that only 10% of fire alerts were on oil palm concession areas (and 26% on pulpwood concession, now driving more Singapore retailers to demand FSC paper products, primarily supplied from Scandinavia). Only 103 of 3,215 of such fires were on RSPO certified concessions. It is good, but its limited reach (RSPO covers about 19% of global palm oil and only about half is bought as such) and the US\$1-2 per tonne basic premium versus its US\$4-12 per tonne cost is disadvantageous (especially for small farmers facing higher costing than large plantations under its system). Such voluntary international standards suffer policy leakage and disintermediation problems. This points to the important role of national mandatory standards such as Indonesia Sustainable Palm Oil or ISPO.

In view of these findings, this article attempts a new narrative in addressing the yearly recurring haze-smoke problem and argues that it could be controlled to a great extent by addressing the plight and the livelihood of independent oil palm growers and the local peoples supplying produce and casual labour to the plantations. Focusing on the former, these small farmers tend to fall outside the “inti-plasma” (core companies-tied smallholders) management system of the Indonesian palm oil concessions, obvious questions arise. Who drains the peat lands? Why do these farmers still resort to the use of fire after many years of haze-smoke? What are the sources of income? How much income does a 2 hectare oil palm plot generate? What role can the middlemen of farmer supply-chains play? In our view, the haze problem has to be approached holistically in terms of the oil palm industry and, most crucially, from the perspective of *sustaining livelihoods, small farmers and their supply-chain should be seen as part of the solution. In this light, boycotts or other consumer-led efforts that ultimately reduce small farmer incomes may be counter-productive, if farmers are then pushed to use more (peat) land areas to achieve their needed income.*

The prevalence of small farmers in haze zones, as shown by studies, is due in part to transmigration. The practice of moving groups of people in heavily populated areas to less populated areas has intensified during the Suharto years as a means to relieve population density in the inner islands such as Java, Bali, and Madura, alleviate poverty, and spur development in the outer islands (Sri Adhiati and Bobsien, 2001). However, a lack of infrastructure, suitable land, and communal tensions has marred the program's overall ability to reach its development goals.

These problems have not gone unnoticed by the Indonesian government, and a policy shift has occurred. In the new transmigration effort, the Ministry introduced the concept of *Kota Terpadu Mandiri* (KTM) or integrated self-sufficient cities to serve rural economic hinterlands. The new policy targets three types of districts: backward areas; districts close to international borders; and strategic, fast-growing districts of high potential. The ‘backward’ areas and Central Kalimantan saw the largest numbers of fast-growing settlement sites followed by South Sumatra (BBC Monitoring, 2005). —The majority of the hinterlands of these planned new towns will be covered with oil palm plantations (Kep 293/ MEN/IX/2009). The aim is to largely use independent transmigrants as a labour force for growing the towns. The payment for KTM developments is supposed to be 30% by the central government, 30%

by the district governments concerned and 40% by investors... to eventually create 186 KTMs and resettle 25,000 transmigrant families (100,000 additional workers) per year” (Potter, 2012).

However, surveys show that transmigrants in several new and earlier sites in Kalimantan still face significant difficulties once relocated. Many transmigrants may be relegated to peat zones with no experience or capital to farm on peat with proper development and methods. In Sumatra’s peat zones, similar issues are faced by many of its small farmers. Thus, it can be hypothesized that transmigrants who often have little infrastructure support and poor income turn to unsustainable agricultural practices on peat land.

It is evident that increased support for transmigrants and rural communities in general, in the form of extension services is crucial to preventing further use of fire in peat zones. An example of extensive support offered to resettled rural communities exists in Malaysia, where landless settlers were administered by the Federal Land Development Authority (FELDA) in schemes with new rural towns not dissimilar to the KTM concept. Settlers in the early FELDA schemes faced similar problems as their Indonesian counterparts in terms of lack of infrastructure and insufficient incomes. Initially, FELDA settlers were given a house lot and 4 hectares to grow rubber, and eventually oil palm for targeted minimum family income. By 1990, settlers were allocated 7 hectares. However, the average FELDA family of 5 would likely need 10 hectares today. In 1986 costing terms, FELDA spent some US\$2.3 billion on settling 120,000 families. Each settlement of 300-500 families had the services of 25-35 onsite staff, mostly agricultural extension services, and one-third on community development (Khor *et al.*, 2015).

Given the yearly haze-smoke problem, there is no escaping question of the need for expanded rural development agencies and extension services for Indonesia’s peat zone smallholders and appropriate peat development policies. We have to assume there would not be large-scale relocation (evacuation) of peat zone smallholders and farmers. Adjoining Kalimantan, Sarawak’s peat development practices (involving among others, a compaction of porous peat with the benefit of higher yield and incomes) has reportedly resulted in reduced fire outcomes in recent years.<sup>8</sup>

Indonesia’s current rapid smallholder development phase has largely been under a corporate neo-liberal framework in which there is a positive role for supply chain middlemen; oil palm fresh fruit bunch (FFB) traders, independent mills and other concession-linked mills. They are integral in buying small farmer oil palm FFB (which needs to be taken to mill within 24 hours for a better quality palm oil). This is not an unsophisticated sector and it can play role as agent of change in promoting decent incomes and better (non-fire) practices by oil palm smallholders and associated rural peoples (supplying labour and food).

## CONCLUSION

Going beyond reactive policies vis-à-vis the haze such as: (i) boycotts – risk being counter-productive, (ii) buying sustainably certified products - of good but still limited reach and expected to create multi-tier prices, with potential to suppress product prices for its less desired peat zone origins and (iii) suing and penalizing companies; we suggest several policy measures which would address a longer-term solution to the problem. In October, Indonesia’s attention rightly turned to the interests and prospects of its oil palm smallholders. At bottom line, what is required to handle the peat haze-smoke problem are proactive solutions, that is, understanding and improving farmer economic outcomes and service delivery and proper peat zone development for sustainable agriculture. If relative poverty is found to be a problem, a policy intervention to increase rural incomes in peat zones by say 50% (with non-fire and non-expansion achievement indicators) within a suitable physical peat landscape that has been rewetted under effective water table management may be considered. For implementation, this will have to be mediated by business-political networks at national and sub-national level within Indonesia’s decentralized political economy and should be well-crafted for this context.

How to pay for it? Welfare economist Ng Yew Kwang asks: "How much compensation would make me indifferent to the (haze) situation?" He postulates that Singaporeans might be willing to forgo 10-15% of their annual salary to make the haze problem go away (The Malaysian Insider, 2013). It is intriguing to consider how much Southeast Asian urbanite might be willing to contribute to really resolve the peat haze-smoke problem at source.

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<sup>8</sup> Interview with Dr Lulie Melling, Tropical Peat Research Laboratory Unit of Sarawak, 6 Oct 2015.

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